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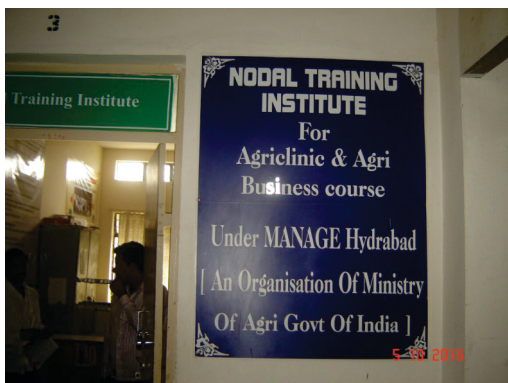
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AERC Report

**Agro-Economic
Research Centre
(AERC)**

"Impact Study on Agricultural Extension Services to farmers By Agri-Clinics and Agri Business Centres (ACABCs Scheme) in Maharashtra"

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Impact Study on Agricultural Extension Services to farmers By Agri-Clinics and Agri Business Centres (ACABCs Scheme) in Maharashtra

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FOREWORD

The demand for knowledge on agricultural practices and technologies has been increasing from farmers. Despite increasing demand for agricultural extension services, the farmer to extension worker ratio in India stands at very low. Recognizing the importance of agricultural extension services to the farmers and in order to tap potential of unemployed agriculture graduates, the Government of India on 9th April, 2002 launched a scheme of setting up of Agri-Clinic and Agri-Business Centres (ACABCs) by agriculture graduates with the financial support of NABARD. It is a subsidy based credit linked scheme for setting up of agri-ventures by unemployed agricultural graduates to strengthen technology transfer and employment generation in rural areas.

Although the ACABC Scheme came into being about one and a half decades ago, the point that merits attention is how far the scheme is successful in encouraging agricultural graduates to undergo training from suitable identified nodal agencies to gain expertise, avail loan and finally start agri-clinics/ ventures.

In view of the above, the Ministry of Agriculture and Farmers' Welfare sponsored a study on "Impact of Agricultural Extension to farmers by Agri-Clinics & Agri-Business Centres". The impact study on ACABC Scheme in India includes four major states and the state of Maharashtra is one among them. The study showed a positive impact of ACABC Scheme in Maharashtra since beneficiaries of the Scheme not only generated substantial income from crop enterprise but also from various animals reared by them.

Although the beneficiaries of ACABC Scheme did benefit from the services of ACABC in terms of suitable extension services and also with respect to purchase of inputs at reasonable prices, the non-beneficiaries in this respect depended on '*Krishi Seva Kendras*' or other sources for purchase of inputs and other extension services. The non-beneficiaries showed concern for the delay in availability of fertilizer and scarcity of water, which caused low yield. As for functioning of Scheme, there is still a need for the ACABCs to increase their outreach so that more farmers can have access to their services and benefit from higher farm productivity and income. Another suggestion is that loans should be made available more easily so that more clinics/ventures may be established.

I hope the findings of the report would assume significance for those farmers who are concerned with raising their income through inputs delivery and extension services.

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Rajas Parchure
Professor and Offg. Director

PREFACE

Around 20 percent of the agricultural extension workers in India are qualified agricultural graduates and the rest become incapable to explain the intricacies of agricultural production system and the linkage of production with complex marketing activities. Recognizing the importance of agricultural extension services to the farmers and in order to tap potential of unemployed agriculture graduates, the Government of India on 9th April, 2002 launched a scheme of setting up of Agri-Clinic and Agri-Business Centres (ACABCs) by agriculture graduates with the financial support of NABARD. It is a subsidy based credit linked scheme for setting up of agricultural ventures by unemployed agricultural graduates, especially to strengthen technology transfer, public extension system and employment generation in rural areas. MANAGE is responsible for providing training to eligible candidates through its nodal training institutes (NTIs). MANAGE also ensures sponsoring of sufficient number of cases to the participating banks for their financial support under the scheme, besides arranging to establish required number of units at the ground level to make the scheme a success.

Although the ACABC Scheme came into being about one and a half decades ago, the point that merits attention is how far the scheme is successful in encouraging agricultural graduates to undergo training from suitable identified nodal agencies so as to gain expertise, avail loan and finally start agri-clinics and ventures. Another important aspect is to ascertain the extent to which farmers have benefited from these agri-clinics and ventures, especially in terms of running their crop enterprise and allied activities.

In view of the above, the Ministry of Agriculture and Farmers' Welfare sponsored a study on "Impact of Agricultural Extension to farmers by Agri- Clinics & Agri-Business Centres". The impact study on ACABC Scheme in India includes four major states and the state of Maharashtra is one among them.

The study showed a positive impact of ACABC Scheme in the state of Maharashtra since beneficiaries of the Scheme not only generated substantial income from crop enterprise but also from various animals reared by them. The beneficiary farmers showed 61 per cent higher annual income generation from crop and allied activities as against non-beneficiary farmers. It is to be noted that while extension officers in the study were found to provide several remedial measures to farmers, especially with respect to low germination of seeds, causes for the damage of crops, and created awareness about indiscriminate use of fertilizers, the input suppliers provided information

to farmers on new ideas developed by agricultural research stations, improved crop varieties, improved water management and also information about plant diseases. These extension services helped beneficiaries to increase their productivity as well as income.

Although the beneficiaries of ACABC Scheme did benefit from the services of ACABC in terms of suitable extension services and also with respect to purchase of inputs at reasonable prices, the non-beneficiaries in this respect depended on Krishi Seva Kendras or other sources for purchase of inputs and other extension services. The non-beneficiaries showed concern for the delay in availability of fertilizer and scarcity of water, which caused low yield. As for functioning of Scheme, there is still a need for the ACABCs to increase their outreach so that more farmers can have access to their services and benefit from higher farm productivity and income. Another suggestion is that loans should be made available more easily so that more clinics/ventures may be established.

At the initial stage of this study, we had fruitful discussions with the senior officials of Nodal Training Institutes of ACABC Scheme located in the district of Ahmednagar and Solapur. We are extremely grateful to Dr. Bhaskar Gaikwad, Programme Coordinator and Mr. Puroshotam Hindre, Scientist, KVK, Ahmednagar, for providing inputs for this study. We are equally grateful to Mr. Sham Kumar Bhandari, District Coordinator and Mrs. Anita Dhobale, Secretary, Mr. Ravi Birajadar, Sriram Prathisthan Mandal, Solapur, for their cooperation and support in conducting the study.

We are greatly indebted to Prof. R.K. Parchure, officiating Director of the Gokhale Institute of Politics and Economics, Pune for his constant encouragement and support during the course of this study. We are also grateful to ESA, Department of Agriculture and Cooperation, Ministry of Agriculture, GOI, for his support and giving approval to conduct the study. We extend special thanks to Prof. Ramendu Roy, Honourary Director, Agro-economic Research Centre, University of Allahabad, Uttar Pradesh, who is Coordinator of this study.

We hereby extend our hearty thanks to Mr. Anil S. Memane for his support in collection, inputting and analysis of data. We also extend our hearty thanks to Shri S. S. Dete for his support in collection of data for this study.

It gives us pleasure in extending thanks to our esteemed colleagues, both faculty members and office staff, for their cooperation and support in completing the study.

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Deepak Shah and Sangeeta Shroff

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CHAPTER – I

INTRODUCTION

1.1 Statement of the Problem

The agricultural sector still continues to be demographically the dominant source of economic activity, despite a seven decade journey for the country since independence. This clearly reveals lack of opportunities in other sectors and limited rural non farm employment. While this sector has experienced technological interventions which have contributed to self sufficiency in foodgrains and diversification to commercial and horticultural crops, the overall scenario in this sector is that of stagnation, underperformance and lack of dynamism. The contribution of agriculture to gross domestic product (GDP) is presently 14 percent (2015-16) while workforce engaged in this sector is 54.6 percent (2011 census). The average size of holding is fast declining and is presently 1.16 hectares with 66.8 percent of holdings being marginal and 18 percent being small (Agricultural Census 2010-11) and therefore constituting 84.8 percent of total holdings. The Eleventh Plan target growth of 4 percent per annum for the agricultural sector could not be achieved as the average growth rate turned out to be 3.67 percent per annum while that of the economy as a whole was 7.9 per cent. Again the Twelfth Plan (2012-17) for agriculture, which is now in its last year has again not shown any encouraging picture. The growth in 2013-14 as against 2012-13 was 4.2 per cent while it was -0.2 percent in 2014-15 as against in 2013-14. It improved to a miniscule 1.1 percent in 2015-16 as against 2014-15. The overall growth of the economy during each year of twelfth Plan was however around 7 percent (www.eaindustry.nic.in).

Although, slower growth of GDP in agriculture compared to other sectors is expected, the main failure has been the inability to reduce the dependence of the workforce on agriculture significantly leading to marginalization of land holdings coupled with low productivity in agriculture.

The productivity per worker in agriculture in 2011-12, (calculated from data in Agricultural Statistics at a glance 2014, Directorate of Economics and Statistics) for most states varies between Rs 10769/- in Orissa to about 38288/- in Uttar Pradesh. However in Gujarat it is Rs 54537/- and higher in states such as Punjab where it is 97370/-, possibly due to availability of irrigation. The important point to note is that with such low productivity per worker in agriculture, the monthly per capita income per worker is obviously even lower which pushes a major part of the workforce below poverty line.

Coupled with low productivity in agriculture is the availability of large number of graduates/ diploma holders in agriculture and related fields, who obtain degrees from State Agricultural Universities or other recognized institutions. Such skilled personnel often do not find suitable employment and at the same time the agricultural sector suffers from poor extension services. Infact a major cause of low productivity in agriculture is lack of appropriate extension services to farmers. The issue of extension services assumes more importance and has severe challenges to face as agriculture is becoming more and more commercialized.

At the grass root level, it is only the agricultural extension services which can provide knowledge support to farmers such as technological, organizational, marketing, entrepreneurial, etc. In India, extension services are provided by public, private, non government organisations (NGOs) and community based initiatives which provide a wide range of agricultural advisory services to farmers. In the public sector, Agricultural Technology Management Agency (ATMA), Krishi Vigyan Kendras (KVKs), State Agricultural Universities and institutions supported by Indian Council of Agricultural Research (ICAR), National Institute for Agricultural Extension Management (MANAGE) etc. are playing an important role in imparting extension services to farmers. In addition, every state has a State Agricultural Management Extension and Training Institute (SAMETI) with a mandate for strengthening extension staff.

Since Indian agriculture is characterized by a large number of land holdings, to the tune of 138.35 million, it is obvious that provision of extension services will always face a major challenge. Lack of resources, reluctance on the part of government personnel to serve in the interiors, etc. are some factors responsible for limited availability of extension services. Therefore, in India, with several constraints faced by public sector to reach out to the farming community, the government began to encourage private sector, NGOs, ICT, Kisan Call Centres, media, etc to fill the vacuum. Accordingly, a number of companies such as seed, fertilizer, pesticide and other such input companies, food processing companies, distributors and even retailers began to play an important role in agricultural extension. Contract farming is also a method by which private sector is providing advisory services to farmers. Despite involvement of both public and private sectors in providing extension services, Indian agriculture is still confronting serious problems such as huge yield gap, imbalance with respect to use of inputs such as fertilizers thus causing water logging and soil salinity, and overall declining productivity. Extension system in India which has a major role to play in order

to address these issues is constrained by financial, infrastructural and human resource limitations. At the same time, as noted earlier, the country is turning out graduates from Agricultural Universities, many of which are unable to find suitable employment. Hence to bring about a synergy between the crying need for extension services and availability of potential youth in providing these services the government undertook public initiatives to promote private sector involvement in agricultural extension. One way of implementing such an initiative and which has the potential to scale up knowledge information to farmers located in interiors, was the launching of a scheme to promote agri-clinics and agri-business ventures.

1.2 (A) Concept of Agri-Clinics and Agri-Business Centres

Several efforts have been made by the government in deploying extension workers at both the district as well as block level under various schemes such as ATMA, KVKs, etc. However, given the size of the agricultural sector, the magnitude of manpower is still insufficient to meet the requirements and therefore the ratio of farm households to extension workers is far from satisfactory. Therefore, the Department of Agriculture, Ministry of Agriculture made concerted efforts to leverage upon unemployed youth with educational background in Agriculture and Allied sector so that they are trained and supported to act as extension workers while running their own ventures. Accordingly, Central Sector Scheme of Agri-Clinic and Agri –Business Centres (ACABC) was launched in 2002 to provide value added extension services at the doorstep of farmers by unemployed agri-professionals (www.agriclinics.net/act-invol-states.pdf).

The concept of agri-clinics stems from the fact that these clinics after being established, can provide expert advice and services to farmers on various technologies including soil health, cropping practices, plant protection, crop insurance, post harvest technology and clinical services for animals, feed and fodder management, prices of various crops in the market, etc. This will enhance productivity of crops/animals and thus ultimately increase the income of farmers. Another concept is the Agri-Business Centres which are commercial units of agri-ventures, established by trained agriculture professionals. Such ventures may include maintenance and custom hiring of farm equipment, sale of inputs and other services in agriculture and allied areas, including post harvest management and market linkages for income generation and entrepreneurship development (agricoop.nic.in/imagedfault1/ACABC.pdf).

The main objectives of the scheme are:

1. To supplement efforts for provision of extension and other services to farmers on payment basis or even free of cost as per business model of the agri-preneur, local needs and affordability of target group of farmers;
2. To support agricultural development;
3. To create gainful self employment opportunities to unemployed agricultural graduates, agricultural diploma holders, intermediate in agriculture and biological science graduates with post graduation in agri-related courses.

The ACABC has been launched by Government of India (GOI) and the National Institute of Agricultural Extension Management (MANAGE) an apex level institute of GOI is the overall implementing agency of this scheme.

1.2 (B): Role of Implementing Agencies in ACABC: MANAGE, NABARD and NTIs

MANAGE is the overall implementing agency for training component and imparting two months training to the agriculture graduates through selected Nodal Institutes (NTIs) across the country. MANAGE makes a press advertisement inviting applications from eligible institutions to be considered as NTIs. The NTIs are selected from public and private sector on the basis of the availability of their infrastructure and skilled personnel in agri-entrepreneurship. MANAGE has to inform Department of Agriculture and Cooperation and Farmers' Welfare about selection of NTIs. After the NTI is selected, it will have to sign a MOU with MANAGE in a prescribed format. Then NTIs can then advertise in local media to seek applications from eligible candidates. After getting sufficient application (atleast 60), each NTI will seek allotment of training programme from MANAGE which will facilitate them to select suitable candidates for training. The training schedule of two months should be as per standards developed by MANAGE. The Nodal Training Institutes include State Agricultural Universities, State Government institutes, NGOs, Agri Business Companies, Institutes of Cooperative Management and Krishi Vigyan Kendras.

The NTIs alongwith their branches total about 144 in number, and till date about 1512 training programmes have been completed. The highest number of programmes have been conducted by Shree Maa Guru Gramodhyog Sansthan, Varanasi which is 109 in number, followed by Krishna Valley Advanced Agriculture Foundation, Sangli district in Maharashtra where 70 programmes have been conducted. In about 31 NTIs only 1 training programme has been conducted and it is less than 5 in 58 NTIs.

MANAGE coordinates scheduling of training in each NTI by sanctioning one or more batches simultaneously, depending upon the availability of selected candidates, infrastructure and logistic facilities. MANAGE may also declare certain NTIs as inactive if they do not conduct a training programme for a year, do not start training within six months of signing MOU, cumulative success rate below 35 percent, not providing handholding activities as per guidelines or violating the norms of MOU.

The NTIs as well as selected candidates have to provide suitable feedback to MANAGE on the training programme and also on the project proposal submitted. Certificates are issued to trainees by MANAGE after successful training of two months. A certificate is also given to a candidate who establishes a venture and successfully runs it for atleast 6 months. This certificate entitles the agripreneurs to be recognized for providing support for public extension (www.agriclinics.net/guidelines/annexure-ii.pdf).

The training programmes of NTIs consist of class room lectures, exposure visits, hands on experience, preparation of detailed project reports and submission to banks for availing loan to start (i) agri enterprises for self employment. In order to start self employment, the trained candidates can set up Agri-clinics to provide expert advice to farmers on various aspects such as soil health, cropping pattern, plant protection, crop insurance, post harvest technology, feed and fodder management, etc, (ii) starting agri businesses such as maintenance, repairs and custom hiring of farm equipment, setting vermiculture units, seed processing units, hatcheries, feed processing and testing units, value addition activities, livestock enterprises, retail marketing outlets for processed agri-products, retail marketing dealerships of farm inputs and outputs, etc. Training also motivates the candidates and aims at creating communication skills, record maintenance, and facilitates the trainee to choose a venture and prepare a proposal.

National Bank for Agriculture and Rural Development (NABARD) is the nodal institute for banks with respect to monitoring the credit support to Agri-clinics and ventures through commercial banks and is also responsible for extending refinance support to the banks under the scheme. NABARD provides 100 percent refinance to the lending institutes. The Department of Agriculture and Cooperation, Government of India extends subsidy through NABARD to the borrowers under ACABC.

The ceiling of project cost for subsidy is Rs 20 lakh for individual project and Rs 100 lakh for group project (5 member group). An additional limit of Rs 5 lakh subsidy is also provided for extremely successful ventures. The margin money is normally 10 to 15 percent and loan is composite with atleast 10 percent of the project cost in the form of

capital investment. The collateral is in the form of hypothecation of assets, mortgage of lands or third party guarantee and is waived of upto Rs 5 lakhs loan. The subsidy is to the tune of 33 percent on a maximum project cost of Rs 20 lakhs for general category and 44 percent for SC, ST and women. The payment of back ended subsidy is linked to extension services provided by the Agripreneur. The repayment period is normally 5 to 10 years and depends upon the nature of activity or venture established (www.agricoop.nic.in).

1.3 Growth in ACABC Scheme (2002-2016)

The ACABC scheme was introduced in 2002 and has completed almost one and half decade. In this section therefore the growth in this scheme with respect to candidates trained and ventures established over the years and across states are observed.

The number of candidates trained in 2002, i.e. in the first year of the inception of the scheme was 1521, and till 2016 the number trained is 51196. The highest number of candidates trained was in 2014 when 5669 candidates were trained. The candidates trained is highest (over the entire period) in the state of Maharashtra (23.13 percent), followed by Uttar Pradesh (20.92 percent). Tamil Nadu ranked third with a share of 11.77 percent. Thus these three states together accounted for 55.82 percent of candidates trained. The same order is observed with respect to number of ventures established during the entire period (from 2002 to 2016) and these three states accounted for 64.25 percent of ventures established.

Table 1.1: Number of Trained Candidates under ACABC Scheme (State-wise and Year –wise)

SL. No.	Name of the State	Year wise Number of Trained Candidates under ACABC Scheme.															Total
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
1	Maharashtra	228	293	278	699	417	477	423	388	908	1452	707	1384	1501	1309	1380	11844
2	Uttar Pradesh	23	329	293	567	635	668	510	511	590	784	807	1243	1726	716	1306	10708
3	Tamil Nadu	137	82	55	131	139	177	233	261	361	603	508	1036	858	657	789	6027
4	Bihar	101	261	295	388	305	552	269	218	159	112	79	148	256	209	169	3521
5	Karnataka	152	278	132	505	265	241	156	199	148	177	200	255	192	170	134	3204
6	Rajasthan	226	323	251	489	141	252	127	104	177	212	69	41	70	176	245	2903
7	Madhya Pradesh	1	232	97	100	33	32	1	18	52	139	104	153	193	174	359	1688
8	Gujarat	122	115	62	56	-	14	24	143	102	193	147	144	90	97	152	1461
9	Jammu and Kashmir	1	55	29	92	24	191	197	238	136	118	81	48	35	59	49	1353
10	Telangana	139	58	53	39	62	55	39	54	49	107	55	165	48	59	83	1065
11	Andhra Pradesh	70	30	36	34	36	37	20	21	67	112	31	170	152	9	21	846
12	West Bengal	-	91	61	77	-	94	-	-	2	1	-	147	156	96	186	911
13	Assam	-	16	20	12	-	74	98	60	54	56	40	60	73	34	69	666
14	Jharkand	31	99	32	22	-	81	60	61	22	26	60	75	14	35	80	698
15	Haryana	41	29	28	-	-	53	35	69	67	59	39	66	31	62	67	646
16	Punjab	28	27	6	-	-	66	30	66	70	67	35	66	35	35	70	601
17	Chattisgarh	-	-	31	60	33	1	34	1	35	34	31	48	121	98	84	611
18	Orissa	113	126	103	66	-	-	-	-	65	32	-	1	-	-	15	521
19	Manipur	-	62	25	32	23	68	32	36	27	23	27	28	30	-	24	437
20	Himachal Pradesh	-	19	-	-	65	104	32	-	68	65	34	30	-	1	-	418
21	Uttaranchal	50	27	28	29	26	2	-	28	-	2	73	47	30	52	60	454
22	Kerala	49	41	26	-	-	-	-	26	-	23	-	17	-	1	2	185
23	Others	9	2	5	1	5	70	73	73	25	35	19	15	58	22	16	428
	India	1521	2595	1946	3399	2209	3309	2393	2575	3184	4432	3146	5387	5669	4071	5360	51196

Source: www.agriclinics.net

Table 1.3: Year wise percent Share of trained candidates under ACABC scheme:

Name of the State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Name of the State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Maharashtra	1.93	2.47	2.35	5.90	3.52	4.03	3.57	3.28	7.67	12.26	5.97	11.69	12.67	11.05	11.65	100
Uttar Pradesh	0.21	3.07	2.74	5.30	5.93	6.24	4.76	4.77	5.51	7.32	7.54	11.61	16.12	6.69	12.20	100
Tamil Nadu	2.27	1.36	0.91	2.17	2.31	2.94	3.87	4.33	5.99	10.00	8.43	17.19	14.24	10.90	13.09	100
Bihar	2.87	7.41	8.38	11.02	8.66	15.68	7.64	6.19	4.52	3.18	2.24	4.20	7.27	5.94	4.80	100
Karnataka	4.74	8.68	4.12	15.76	8.27	7.52	4.87	6.21	4.62	5.52	6.24	7.96	5.99	5.31	4.18	100
Rajasthan	7.79	11.13	8.65	16.84	4.86	8.68	4.37	3.58	6.10	7.30	2.38	1.41	2.41	6.06	8.44	100
Madhya Pradesh	0.06	13.74	5.75	5.92	1.95	1.90	0.06	1.07	3.08	8.23	6.16	9.06	11.43	10.31	21.27	100
Gujarat	8.35	7.87	4.24	3.83	0.00	0.96	1.64	9.79	6.98	13.21	10.06	9.86	6.16	6.64	10.40	100
Jammu and Kashmir	0.07	4.07	2.14	6.80	1.77	14.12	14.56	17.59	10.05	8.72	5.99	3.55	2.59	4.36	3.62	100
Telangana	13.05	5.45	4.98	3.66	5.82	5.16	3.66	5.07	4.60	10.05	5.16	15.49	4.51	5.54	7.79	100
Andhra Pradesh	8.27	3.55	4.26	4.02	4.26	4.37	2.36	2.48	7.92	13.24	3.66	20.09	17.97	1.06	2.48	100
West Bengal	0.00	9.99	6.70	8.45	0.00	10.32	0.00	0.00	0.22	0.11	0.00	16.14	17.12	10.54	20.42	100
Assam	0.00	2.40	3.00	1.80	0.00	11.11	14.71	9.01	8.11	8.41	6.01	9.01	10.96	5.11	10.36	100
Jharkand	4.44	14.18	4.58	3.15	0.00	11.60	8.60	8.74	3.15	3.72	8.60	10.74	2.01	5.01	11.46	100
Haryana	6.35	4.49	4.33	0.00	0.00	8.20	5.42	10.68	10.37	9.13	6.04	10.22	4.80	9.60	10.37	100
Punjab	4.66	4.49	1.00	0.00	0.00	10.98	4.99	10.98	11.65	11.15	5.82	10.98	5.82	5.82	11.65	100
Chattisgarh	0.00	0.00	5.07	9.82	5.40	0.16	5.56	0.16	5.73	5.56	5.07	7.86	19.80	16.04	13.75	100
Orissa	21.69	24.18	19.77	12.67	0.00	0.00	0.00	0.00	12.48	6.14	0.00	0.19	0.00	0.00	2.88	100
Manipur	0.00	14.19	5.72	7.32	5.26	15.56	7.32	8.24	6.18	5.26	6.18	6.41	6.86	0.00	5.49	100
Himachal Pradesh	0.00	4.55	0.00	0.00	15.55	24.88	7.66	0.00	16.27	15.55	8.13	7.18	0.00	0.24	0.00	100
Uttaranchal	11.01	5.95	6.17	6.39	5.73	0.44	0.00	6.17	0.00	0.44	16.08	10.35	6.61	11.45	13.22	100
Kerala	26.49	22.16	14.05	0.00	0.00	0.00	0.00	14.05	0.00	12.43	0.00	9.19	0.00	0.54	1.08	100
Other	2.10	0.47	1.17	0.23	1.17	16.36	17.06	17.06	5.84	8.18	4.44	3.50	13.55	5.14	3.74	100
India	2.97	5.07	3.80	6.64	4.31	6.46	4.67	5.03	6.22	8.66	6.15	10.52	11.07	7.95	10.47	100

Source: calculated from data in www.agriclinics.net

Table 1.2: State-wise Percent share in number of candidates trained under ACABC Scheme:

SL. No.	Name of the State	Year wise Number of Trained Candidates under ACABC Scheme.																						
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Avg							
1	Maharashtra	14.99	11.29	14.29	20.56	18.88	14.42	17.68	15.07	28.52	32.76	22.47	25.69	26.48	32.15	25.75	23.13							
2	Uttar Pradesh	1.51	12.68	15.06	16.68	28.75	20.19	21.31	19.84	18.53	17.69	25.65	23.07	30.45	17.59	24.37	20.92							
3	Tamil Nadu	9.01	3.16	2.83	3.85	6.29	5.35	9.74	10.14	11.34	13.61	16.15	19.23	15.13	16.14	14.72	11.77							
4	Bihar	6.64	10.06	15.16	11.42	13.81	16.68	11.24	8.47	4.99	2.53	2.51	2.75	4.52	5.13	3.15	6.88							
5	Karnataka	9.99	10.71	6.78	14.86	12.00	7.28	6.52	7.73	4.65	3.99	6.36	4.73	3.39	4.18	2.50	6.26							
6	Rajasthan	14.86	12.45	12.90	14.39	6.38	7.62	5.31	4.04	5.56	4.78	2.19	0.76	1.23	4.32	4.57	5.67							
7	Madhya Pradesh	0.07	8.94	4.98	2.94	1.49	0.97	0.04	0.70	1.63	3.14	3.31	2.84	3.40	4.27	6.70	3.30							
8	Gujarat	8.02	4.43	3.19	1.65	0.00	0.42	1.00	5.55	3.20	4.35	4.67	2.67	1.59	2.38	2.84	2.85							
9	Jammu and Kashmir	0.07	2.12	1.49	2.71	1.09	5.77	8.23	9.24	4.27	2.66	2.57	0.89	0.62	1.45	0.91	2.64							
10	Telangana	9.14	2.24	2.72	1.15	2.81	1.66	1.63	2.10	1.54	2.41	1.75	3.06	0.85	1.45	1.55	2.08							
11	Andhra Pradesh	4.60	1.16	1.85	1.00	1.63	1.12	0.84	0.82	2.10	2.53	0.99	3.16	2.68	0.22	0.39	1.65							
12	West Bengal	0.00	3.51	3.13	2.27	0.00	2.84	0.00	0.00	0.06	0.02	0.00	2.73	2.75	2.36	3.47	1.78							
13	Assam	0.00	0.62	1.03	0.35	0.00	2.24	4.10	2.33	1.70	1.26	1.27	1.11	1.29	0.84	1.29	1.30							
14	Jharkand	2.04	3.82	1.64	0.65	0.00	2.45	2.51	2.37	0.69	0.59	1.91	1.39	0.25	0.86	1.49	1.36							
15	Haryana	2.70	1.12	1.44	0.00	0.00	1.60	1.46	2.68	2.10	1.33	1.24	1.23	0.55	1.52	1.25	1.26							
16	Punjab	1.84	1.04	0.31	0.00	0.00	1.99	1.25	2.56	2.20	1.51	1.11	1.23	0.62	0.86	1.31	1.17							
17	Chattisgarh	0.00	0.00	1.59	1.77	1.49	0.03	1.42	0.04	1.10	0.77	0.99	0.89	2.13	2.41	1.57	1.19							
18	Orissa	7.43	4.86	5.29	1.94	0.00	0.00	0.00	0.00	2.04	0.72	0.00	0.02	0.00	0.00	0.28	1.02							
19	Manipur	0.00	2.39	1.28	0.94	1.04	2.06	1.34	1.40	0.85	0.52	0.86	0.52	0.53	0.00	0.45	0.85							
20	Himachal Pradesh	0.00	0.73	0.00	0.00	2.94	3.14	1.34	0.00	2.14	1.47	1.08	0.56	0.00	0.02	0.00	0.82							
21	Uttaranchal	3.29	1.04	1.44	0.85	1.18	0.06	0.00	1.09	0.00	0.05	2.32	0.87	0.53	1.28	1.12	0.89							
22	Kerala	3.22	1.58	1.34	0.00	0.00	0.00	0.00	1.01	0.00	0.52	0.00	0.32	0.00	0.02	0.04	0.36							
23	Others	0.60	0.08	0.25	0.03	0.24	2.12	3.05	2.84	0.79	0.79	0.61	0.28	1.04	0.54	0.30	0.84							
	India	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100							

Source: calculated from data in - www.agriclinics.net

Table 1.4: State Wise Number of Ventures Established

Sl.No.	Name of the State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Maharashtra	13	159	95	357	99	198	173	134	319	557	546	537	743	884	496	5310
2	Uttar Pradesh	4	23	54	263	413	327	195	382	206	251	468	637	636	799	576	5234
3	Tamil Nadu	3	55	1	36	72	94	69	178	200	204	290	563	584	365	286	3000
4	Karnataka	42	115	60	256	98	65	57	72	94	59	62	88	91	109	34	1302
5	Bihar	7	13	40	162	117	205	137	73	54	41	50	51	167	93	36	1246
6	Rajasthan	13	135	57	91	183	99	31	37	97	43	47	34	29	78	66	1040
7	Madhya Pradesh		31	43	23	25	13	2	6	13	38	68	103	92	87	39	583
8	Gujarat	24	20	38	41	5	16		35	32	58	59	76	46	53	54	557
9	Telangana	18	25	4	28	23	37	11	46	15	37	26	41	30	21	1	363
10	Andhra Pradesh	3	24	5	15	20	23	2	15	16	40	20	39	55	37	7	321
11	West Bengal		5	4	37	2		1	1				62	77	27	40	256
12	Chattisgarh			13	29		21		14		41	10	21	47	57		253
13	Assam		4	4	4	3	5	28	38	28	13	20	25	14	14	5	205
14	Haryana		11				10	21	21	22	24	34	15	30	14	5	207
15	Punjab		4	6	2		11	26	12	24	30	15	19	37	17	9	212
16	Jammu and Kashmir		2		8	1	21	12	36	51	6	10	14	10	4	2	177
17	Jharkand		3	4	6	1	7	20	12	24	13	23	21	11	16	2	163
18	Uttaranchal		9		2	23	13					14	16	19	29	15	140
19	Manipur		3	1	12	5	17	6	26	30	4	6	8	2	6	2	128
20	Himachal Pradesh			1		9	29	26	2	12	26	2	1			0	108
21	Orissa	7	25	9	33	1				21	4	4	2			0	106
22	Kerala	3	6	6	6				12			6	12			0	51
23	Other	1	3	3	0	1	3	6	24	11	10	13	14	10	5	10	113
	Total	138	675	448	1411	1101	1214	823	1176	1269	1499	1793	2399	2730	2715	1685	21075

Source: www.agriclimics.net

Table 1.5 State wise Percent Share of Ventures Established:

Sl. No.	Name of the State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Avg
1	Maharashtra	9.42	23.56	21.21	25.30	8.99	16.31	21.02	11.39	25.14	37.16	30.45	22.38	27.22	32.56	29.44	25.20
2	Uttar Pradesh	2.90	3.41	12.05	18.64	37.51	26.94	23.69	32.48	16.23	16.74	26.10	26.55	23.30	29.43	34.18	24.84
3	Tamil Nadu	2.17	8.15	0.22	2.55	6.54	7.74	8.38	15.14	15.76	13.61	16.17	23.47	21.39	13.44	16.97	14.23
4	Karnataka	30.43	17.04	13.39	18.14	8.90	5.35	6.93	6.12	7.41	3.94	3.46	3.67	3.33	4.01	2.02	6.18
5	Bihar	5.07	1.93	8.93	11.48	10.63	16.89	16.65	6.21	4.26	2.74	2.79	2.13	6.12	3.43	2.14	5.91
6	Rajasthan	9.42	20.00	12.72	6.45	16.62	8.15	3.77	3.15	7.64	2.87	2.62	1.42	1.06	2.87	3.92	4.93
7	Madhya Pradesh	0.00	4.59	9.60	1.63	2.27	1.07	0.24	0.51	1.02	2.54	3.79	4.29	3.37	3.20	2.31	2.77
8	Gujarat	17.39	2.96	8.48	2.91	0.45	1.32	0.00	2.98	2.52	3.87	3.29	3.17	1.68	1.95	3.20	2.64
9	Telangana	13.04	3.70	0.89	1.98	2.09	3.05	1.34	3.91	1.18	2.47	1.45	1.71	1.10	0.77	0.06	1.72
10	Andhra Pradesh	2.17	3.56	1.12	1.06	1.82	1.89	0.24	1.28	1.26	2.67	1.12	1.63	2.01	1.36	0.42	1.52
11	West Bengal	0.00	0.74	0.89	2.62	0.18	0.00	0.12	0.09	0.00	0.00	0.00	2.58	2.82	0.99	2.37	1.21
12	Chattisgarh	0.00	0.00	2.90	2.06	0.00	1.73	0.00	1.19	0.00	2.74	0.56	0.88	1.72	2.10	0.00	1.20
13	Assam	0.00	0.59	0.89	0.28	0.27	0.41	3.40	3.23	2.21	0.87	1.12	1.04	0.51	0.52	0.30	0.97
14	Haryana	0.00	1.63	0.00	0.00	0.00	0.82	2.55	1.79	1.73	1.60	1.90	0.63	1.10	0.52	0.30	0.98
15	Punjab	0.00	0.59	1.34	0.14	0.00	0.91	3.16	1.02	1.89	2.00	0.84	0.79	1.36	0.63	0.53	1.01
16	Jammu and Kashmir	0.00	0.30	0.00	0.57	0.09	1.73	1.46	3.06	4.02	0.40	0.56	0.58	0.37	0.15	0.12	0.84
17	Jharkand	0.00	0.44	0.89	0.43	0.09	0.58	2.43	1.02	1.89	0.87	1.28	0.88	0.40	0.59	0.12	0.77
18	Uttaranchal	0.00	1.33	0.00	0.14	2.09	1.07	0.00	0.00	0.00	0.00	0.78	0.67	0.70	1.07	0.89	0.66
19	Manipur	0.00	0.44	0.22	0.85	0.45	1.40	0.73	2.21	2.36	0.27	0.33	0.33	0.07	0.22	0.12	0.61
20	Himachal Pradesh	0.00	0.00	0.22	0.00	0.82	2.39	3.16	0.17	0.95	1.73	0.11	0.04	0.00	0.00	0.00	0.51
21	Orissa	5.07	3.70	2.01	2.34	0.09	0.00	0.00	0.00	1.65	0.27	0.22	0.08	0.00	0.00	0.00	0.50
22	Kerala	2.17	0.89	1.34	0.43	0.00	0.00	0.00	1.02	0.00	0.00	0.33	0.50	0.00	0.00	0.00	0.24
23	Others	0.72	0.44	0.67	0.00	0.09	0.25	0.73	2.04	0.87	0.67	0.73	0.58	0.37	0.18	0.59	0.54
	India	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: calculated from data in www.agriclinics.net

Table 1.6 State wise and Year wise Percent share of ventures established:

Sl. No.	Name of the State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Maharashtra	0.24	2.99	1.79	6.72	1.86	3.73	3.26	2.52	6.01	10.49	10.28	10.11	13.99	16.65	9.34	100
2	Uttar Pradesh	0.08	0.44	1.03	5.02	7.89	6.25	3.73	7.30	3.94	4.80	8.94	12.17	12.15	15.27	11.00	100
3	Tamil Nadu	0.10	1.83	0.03	1.20	2.40	3.13	2.30	5.93	6.67	6.80	9.67	18.77	19.47	12.17	9.53	100
4	Karnataka	3.23	8.83	4.61	19.66	7.53	4.99	4.38	5.53	7.22	4.53	4.76	6.76	6.99	8.37	2.61	100
5	Bihar	0.56	1.04	3.21	13.00	9.39	16.45	11.00	5.86	4.33	3.29	4.01	4.09	13.40	7.46	2.89	100
6	Rajasthan	1.25	12.98	5.48	8.75	17.60	9.52	2.98	3.56	9.33	4.13	4.52	3.27	2.79	7.50	6.35	100
7	Madhya Pradesh	0.00	5.32	7.38	3.95	4.29	2.23	0.34	1.03	2.23	6.52	11.66	17.67	15.78	14.92	6.69	100
8	Gujarat	4.31	3.59	6.82	7.36	0.90	2.87	0.00	6.28	5.75	10.41	10.59	13.64	8.26	9.52	9.69	100
9	Telangana	4.96	6.89	1.10	7.71	6.34	10.19	3.03	12.67	4.13	10.19	7.16	11.29	8.26	5.79	0.28	100
10	Andhra Pradesh	0.93	7.48	1.56	4.67	6.23	7.17	0.62	4.67	4.98	12.46	6.23	12.15	17.13	11.53	2.18	100
11	West Bengal	0.00	1.95	1.56	14.45	0.78	0.00	0.39	0.39	0.00	0.00	0.00	24.22	30.08	10.55	15.63	100
12	Chattisgarh	0.00	0.00	5.14	11.46	0.00	8.30	0.00	5.53	0.00	16.21	3.95	8.30	18.58	22.53	0.00	100
13	Assam	0.00	1.95	1.95	1.95	1.46	2.44	13.66	18.54	13.66	6.34	9.76	12.20	6.83	6.83	2.44	100
14	Haryana	0.00	5.31	0.00	0.00	0.00	4.83	10.14	10.14	10.63	11.59	16.43	7.25	14.49	6.76	2.42	100
15	Punjab	0.00	1.89	2.83	0.94	0.00	5.19	12.26	5.66	11.32	14.15	7.08	8.96	17.45	8.02	4.25	100
16	Jammu and Kashmir	0.00	1.13	0.00	4.52	0.56	11.86	6.78	20.34	28.81	3.39	5.65	7.91	5.65	2.26	1.13	100
17	Jharkand	0.00	1.84	2.45	3.68	0.61	4.29	12.27	7.36	14.72	7.98	14.11	12.88	6.75	9.82	1.23	100
18	Uttaranchal	0.00	6.43	0.00	1.43	16.43	9.29	0.00	0.00	0.00	0.00	10.00	11.43	13.57	20.71	10.71	100
19	Manipur	0.00	2.34	0.78	9.38	3.91	13.28	4.69	20.31	23.44	3.13	4.69	6.25	1.56	4.69	1.56	100
20	Himachal Pradesh	0.00	0.00	0.93	0.00	8.33	26.85	24.07	1.85	11.11	24.07	1.85	0.93	0.00	0.00	0.00	100
21	Orissa	6.60	23.58	8.49	31.13	0.94	0.00	0.00	0.00	19.81	3.77	3.77	1.89	0.00	0.00	0.00	100
22	Kerala	5.88	11.76	11.76	11.76	0.00	0.00	0.00	23.53	0.00	0.00	11.76	23.53	0.00	0.00	0.00	100
23	Others	0.88	2.65	2.65	0.00	0.88	2.65	5.31	21.24	9.73	8.85	11.50	12.39	8.85	4.42	8.85	100
	India	0.65	3.20	2.13	6.70	5.22	5.76	3.91	5.58	6.02	7.11	8.51	11.38	12.95	12.88	8.00	100

Source: calculated from data www.agriclinics.net

Table 1.7: Percent of Ventures established to candidates trained (State-Wise)

SL. No.	Name of the State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Maharashtra	5.70	54.27	34.17	51.07	23.74	41.51	40.90	34.54	35.13	38.36	77.23	38.80	49.50	67.53	35.94	44.83
2	Uttar Pradesh	17.39	6.99	18.43	46.38	65.04	48.95	38.24	74.76	34.92	32.02	57.99	51.25	36.85	111.59	44.10	48.88
3	Tamil Nadu	2.19	67.07	1.82	27.48	51.80	53.11	29.61	68.20	55.40	33.83	57.09	54.34	68.07	55.56	36.25	49.78
4	Bihar	6.93	4.98	13.56	41.75	38.36	37.14	50.93	33.49	33.96	36.61	63.29	34.46	65.23	44.50	21.30	35.39
5	Karnataka	27.63	41.37	45.45	50.69	36.98	26.97	36.54	36.18	63.51	33.33	31.00	34.51	47.40	64.12	25.37	40.64
6	Rajasthan	5.75	41.80	22.71	18.61	129.79	39.29	24.41	35.58	54.80	20.28	68.12	82.93	41.43	44.32	26.94	35.83
7	Madhya Pradesh	0.00	13.36	44.33	23.00	75.76	40.63	200.00	33.33	25.00	27.34	65.38	67.32	47.67	50.00	10.86	34.54
8	Gujarat	19.67	17.39	61.29	73.21	0.00	114.29	0.00	24.48	31.37	30.05	40.14	52.78	51.11	54.64	35.53	38.12
9	Jammu and Kashmir	0.00	3.64	0.00	8.70	4.17	10.99	6.09	15.13	37.50	5.08	12.35	29.17	28.57	6.78	4.08	13.08
10	Telangana	12.95	43.10	7.55	71.79	37.10	67.27	28.21	85.19	30.61	34.58	47.27	24.85	62.50	35.59	1.20	34.08
11	Andhra Pradesh	4.29	80.00	13.89	44.12	55.56	62.16	10.00	71.43	23.88	35.71	64.52	22.94	36.18	411.11	33.33	37.94
12	West Bengal	0.00	5.49	6.56	48.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.18	49.36	28.13	21.51	28.10
13	Assam	0.00	25.00	20.00	33.33	0.00	6.76	28.57	63.33	51.85	23.21	50.00	41.67	19.18	41.18	7.25	30.78
14	Jharkand	0.00	3.03	12.50	27.27	0.00	8.64	33.33	19.67	109.09	50.00	38.33	28.00	78.57	45.71	2.50	23.35
15	Haryana	0.00	37.93	0.00	0.00	0.00	18.87	60.00	30.43	32.84	40.68	87.18	22.73	96.77	22.58	7.46	32.04
16	Punjab	0.00	14.81	100.00	0.00	0.00	16.67	86.67	18.18	34.29	44.78	42.86	28.79	105.71	48.57	12.86	35.27
17	Chattisgarh	0.00	0.00	41.94	48.33	0.00	2100.00	0.00	1400.00	0.00	120.59	32.26	43.75	38.84	58.16	0.00	41.41
18	Orissa	6.19	19.84	8.74	50.00	0.00	0.00	0.00	0.00	32.31	12.50	0.00	200.00	0.00	0.00	0.00	20.35
19	Manipur	0.00	4.84	4.00	37.50	21.74	25.00	18.75	72.22	111.11	17.39	22.22	28.57	6.67	0.00	8.33	29.29
20	Himachal Pradesh	0.00	0.00	0.00	0.00	13.85	27.88	81.25	0.00	17.65	40.00	5.88	3.33	0.00	0.00	0.00	25.84
21	Uttaranchal	0.00	33.33	0.00	6.90	88.46	650.00	0.00	0.00	0.00	0.00	19.18	34.04	63.33	55.77	25.00	30.84
22	Kerala	6.12	14.63	23.08	0.00	0.00	0.00	0.00	46.15	0.00	0.00	0.00	70.59	0.00	0.00	0.00	27.57
23	Others	11.11	50.00	60.00	0.00	20.00	2.86	2.74	13.70	8.00	8.57	0.00	13.33	6.90	22.73	6.25	8.64
	India	9.07	26.01	23.02	41.51	49.84	36.69	34.39	45.67	39.86	33.82	56.99	44.53	48.16	66.69	31.44	41.17

Source: calculated from data in : www.agriclinics.net

The number of ventures established in relation to the number of candidates trained is presented in Table 7. It can be observed that on an average for the country as a whole, out of total candidates trained, 41.17 percent candidates started ventures. It is highest in Tamil Nadu where 49.78 percent of ventures were established to candidates trained. In this respect, Uttar Pradesh ranks second with a corresponding figure of 48.88 percent while the figure for Maharashtra is 44.83 percent. There are several states where ventures established is less than 20 percent of candidates trained.

1.4 Contribution of ACABC Scheme to the Agricultural Economy

It is well established that till date, the agricultural sector is the major source of employment in the economy. This sector suffers from severe underemployment and disguised employment thus leading to very low productivity, marginalization of land holdings and several other constraints. One way to revitalize this sector and promote employment is by strengthening the extension services. Realizing the seriousness of the problem, the ACABC scheme was launched to tap the expertise available in the large pool of Agricultural graduates and diploma holders in agriculture. The scheme aims at training them in suitable skills related to agriculture which will eventually empower them so that they are capable of setting up their own agri clinic or venture through which they are in a position to offer professional extension services to large number of farmers who have no access to information. Thus a major contribution of this scheme is to fill the gap in the availability of extension services which is a major cause of low productivity in agriculture.

After undergoing training, the participants have set up units in varied sectors such as agro based consultancy services, food processing, milk processing, marketing and consultancy, seed testing, green house, post harvest management, tissue culture units, veterinary clinics, nursery, etc. The increase in number of such units will help to strengthen the agricultural sector as farmers will benefit from quality inputs as well as technical expertise which will translate into higher productivity in this sector.

MANAGE regularly brings out success stories of agripreneurs through its e bulletin and has also made a compilation of success stories (Agri-Clinics and Agri-Business Centres, Success Stories of Agripreneurs, 2014). By going through the success stories, it is clear that many participants of the ACABC scheme have been successful in setting up ventures and greatly contributed to extension services and availability of suitable inputs.

Some important contributions by agripreneurs are agricultural mobile schools in Jharkhand and Bihar, which provide services to farmers at their door steps on various issues relating to farming. Thus several farmers in the interiors can get access to information and also required inputs.

Other than mobile services and inputs being provided, agripreneurs have set up consultancy services, conduct training programmes and also provide inputs for various activities such as poultry, livestock, fisheries, bee keeping, horticulture, floriculture, sericulture, etc. Some of the agripreneurs organize groups of farmers in villages and provide them with standardized seeds of high quality. In one instance, an agripreneur from Karnataka state developed a variety of papaya seed to replace the papaya seeds which were imported from Taiwan at exorbitant rates.

ICT is another method used by agripreneurs to give advice to farmers at their location and also provide emergency help if required. Farmers are also encouraged to take up contract farming which gives them an assured market, higher returns, timely supply of inputs and minimal risk. They are thus able to access technology, credit and marketing which more or less ensures them secured returns.

Since inception, about 47954 candidates have been trained under this scheme and 20949 ventures have been started. This indicates that about 44 percent of candidates trained have started ventures. The important point however is that there is a multiplier impact when an agri clinic or agri venture is started as several farmers benefit from advisory services on several aspects of farming from one venture and they in turn can pass on the information to their neighbors, relatives, etc. Infact one agripreneur developed the concept of Digital Agri Media through which he could educate the farming community with the help of e-literature such as AgriMedia films, e-technology packages and presently has about 200 companies as his clients. The scheme through snowballing impact can therefore provide boost to the agricultural economy of the country.

1.5 Need and Scope of the Study

Increasing growth rate and productivity in the agricultural sector is a major factor that remains critical for India's overall development and poverty reduction. India's farm sector faces several challenges and among all inputs, extension services are probably a key input which can play a major role in addressing this challenge.

The public sector has played a role through several institutions to reach out to farmers. The Indian Council of Agricultural Research participated in extension since 1964. With the advent of the green revolution, the 1970s witnessed the launch of Krishi

Vigyan Kendras which aimed at providing advisory services and skill oriented vocational training to farmers. KVKs after field trials, served to bridge the gap between technology developed at research institutions-such as new varieties of crops, improved agricultural practices, etc. and its adoption by farmers. However, despite KVKs spread throughout the country, they still suffer from shortage of manpower and are unable to reach the entire farming community. Other public sector interventions are the ATMA model which deals with groups of farmers and Self Help Groups for the delivery of extension services. Besides public sector, there are several other initiatives such as private extension agencies, producer groups Media, input dealers, NGOs, and even new generation financial institutions which have entered the field of extension. A number of financial institutions in India have realized that only providing credit is not sufficient as farmers lack technical knowledge and are therefore unable to make optimal uses of their financial resources. They may use the financial resources to purchase spurious inputs such as seed or fertilizer or the farmer may be even unaware about the ruling market prices. Hence, even if he is able to access credit, he is unable to reap maximum yields and higher income. Such financial institutions therefore adopt a “credit plus” approach through which they provide not only credit but also inputs and technical information.

Despite all round efforts made to make information available to farmers which will help to bridge yield gaps and economize on input costs, the coverage to the farming community still leaves much to be desired. Infact in the National Sample Survey Organization report (70th Round, 2014) where key indicators of the situation of agricultural households in India was surveyed during the period July to December 2012, it was observed that at all India level 40.6 percent of these households had accessed technical help from sources such as extension agents, KVKs, agricultural universities, private agents, progressive farmers, media, veterinary department of NGOs. The survey showed that progressive farmers and media were the more important sources as compared to others. A similar picture was observed in the survey in January –June 2013. Therefore till date lack of extension services remains a major issue in Indian agriculture. The government besides making an attempt to strengthen its own network and supplement it with private sector and other initiatives, has also brought about public-private convergence of extension services so as to motivate private agripreneurs to provide consultancy to farmers. One such initiative as discussed earlier was the launching of the ACABC scheme in April 2002.

It is now almost one and half decade since this scheme was launched and hence it is important to undertake evaluation of the scheme so as to observe the extent to which the scheme has encouraged educated youth in the field of agriculture to undergo training from suitable identifies nodal agencies, gain expertise, avail of loan and finally start an agri clinic or agri venture. The important point to observe ofcourse is the extent to which these agri clinics and agri ventures have reached out to farmers so as to benefit them in farming and allied activities.

In view of the above, the Ministry of Agriculture and Farmers' Welfare sponsored a study on "Impact of Agricultural Extension to farmers by Agri- Clinics & Agri-Business Centres". This study is being undertaken for the state of Maharashtra.

1.6 Objectives of the Study

The main objectives of the study are:

1. To identify the benefits accrued to farmers through extension services by ACABCs;
2. To observe the extension services received by beneficiary farmers through ACABC scheme with those farmers (non-beneficiaries) who did take benefit of the scheme;
3. To compare the income of farmers who availed of extension scheme through ACABC with that of non-beneficiary farmers;
4. To examine the factors that serve as a constraint for provision of extension services to farmers by ACABCs;
5. 5. To suggest measures which will strengthen extension services to farmers by ACABCs;
6. To suggest policy interventions in imparting extension services to farmers under ACABC Scheme.

1.7 Organization of the Report

The study will be conducted for the state of Maharashtra and organized into six chapters. After Chapter I which is the introductory chapter, in chapter II a review of literature on the subject is attempted. The profile of Maharashtra and status of ACABC scheme in the state with respect to secondary data is observed in chapter III. Since the study deals with primary data also, the sampling design and selection of districts is presented in chapter IV. The analysis of primary data which reveals the impact of the scheme on beneficiary farmers is discussed in chapter V. The policy implications and summary is presented in chapter VI.

CHAPTER – II

REVIEW OF LITERATURE

Agricultural sector still plays a pivotal role in the economic growth and development of India since more than 60 per cent of India's population chiefly depends on agriculture and allied activities for their livelihood security. Despite India having a laudable food security policy, the issue of poverty and sustainability in production still defeat the objectives of food security. The sluggish growth in area as well production of majority of crops cultivated in India in more recent times has led the country to pass through a complex type of situation. This coupled with predominance of small holders and their lack of access to appropriate services, viz., credit, input, market, extension, etc., have resulted in low level of productivity and income, which consequently posed many challenges before agriculture sector of India. The Planning Commission (2011) in its report has clearly indicated poor state of agricultural planning of India at district and lower levels due to stressed natural resources, inadequate rural infrastructure, technology fatigue, run-down delivery system of credit, extension and marketing services. Access to adequate information through agricultural extension services, therefore, may not only increase agricultural production but also address many of these challenges since agriculture extension services at the ground level have the potential to provide knowledge support to farmers and other intermediaries and at the same time support programme implementation (Patel et. al. 2015).

Generally, farmers not only require organizational, marketing, technological, financial and entrepreneurial support but also knowledge based services from different sources, which helps them to integrate production led strategy with market led strategy, and, thereby, overcoming new concurrent challenges. The role of agricultural extension services of late has gone beyond disseminating information on technologies, and includes, organizing user/producer groups, linking farmers to markets, engaging in research planning and technology selection, enable changes in policies and linking producers to a range of other support and service networks (Sulaiman and Hall, 2004, Rivera and Sulaiman, 2009). The demand for knowledge on agricultural practices and technologies has been increasing from farmers. However, public extension services have become supply driven rather than demand driven due to inadequate human and financial resources, bureaucratic nature of extension workers, and huge load of administrative responsibilities on field level workers (FAO, 1989; Sulaiman et. al., 2005). According to

Davis et al. (2010), the farmers to extension worker ratio is very wide in India and stands at 5000:1, as against 1:476 in Ethiopia, and 1:625 in China. However, as per the study conducted by Mukherjee and Maity (2015), the estimated farmers to extension worker ratio in India works out to 2879:1, which takes into account only 91,288 filled-in posts of agricultural extension workers out of total 1,43,863 positions in the Department of Agriculture with 40 per cent posts lying vacant. Under such a veritable scenario, it is extremely difficult for the agriculture extension workers to provide quality extension services to large number of farmers. Further, according to ICAR (1998) report, only around 20 percent of the agricultural extension workers are qualified agricultural graduates and the rest become incapable to explain the intricacies of agricultural production system and the linkage of production with complex marketing activities. Therefore, transferring the emerging technologies to the poor and illiterate farmer at village level becomes a challenging task for these qualified agricultural extension workers. Recognizing the importance of agricultural extension services to the farmers and in order to tap potential of unemployed agriculture graduates, the Government of India on 9th April, 2002 launched a scheme of setting up of Agri Clinic and Agri Business Centres (ACABCs) by agriculture graduates with the financial support of National Bank for Agriculture and Rural Development (NABARD). It is a subsidy based credit linked scheme for setting up of agricultural ventures by unemployed agricultural graduates, especially to strengthen technology transfer, public extension system and employment generation in rural areas. The ACABC scheme was launched with three major objectives, viz., (a) providing extension and other services to farmers on payment basis (b) supplementing agriculture development and entrepreneurship; and (c) promotion of self-employment in agriculture sector.

The initiation of ACABC scheme in the country is a welcome step since it strengthens the support and extension services to the farmers. The scheme is likely to bring in social as well economic transformation among the farming community. The success of ACABCs depends on how well they provide relevant extension services to farmers, particularly in the era of globalization, liberalization, commercialization and diversification of agriculture.

Although ACABC scheme came into being about one and a half decades ago and that so far 47,954 candidates have been trained under the scheme across various states of India with 20,949 candidates turning into ventures/ agripreneurs, there are quite a few studies that have tried to assess the performance of the scheme, especially

in terms of status of ACABC scheme, effectiveness of scheme, success factors, attitudinal changes among agricultural extension workers, entrepreneurial characteristics, problems faced by agripreneurs, and the roles of different entities in the implementation of ACABC scheme in India. The study conducted by Bairwa et. al. (2014) tried to assess performance of ACABC scheme in India after one decade from its inception with focus on states-wise progress, training institutes-wise progress and project-wise progress. The study found southern and western states like Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka to have encouraging progress in terms of number of ventures established and other aspects under ACABC scheme as against northern and eastern states. The study also found that the seven sister states of India encompassing Arunachal Pradesh, Sikkim, Tripura, Manipur, Meghalaya, Nagaland, and Mizoram and union territories like Delhi, Goa and Chandigarh had very poor presence of nodal trainings institutes established under ACABC scheme.

Another study conducted by Shekar et. al. (2014) across 12 districts of Uttar Pradesh examined the effectiveness of paid extension services provided by Agri Clinic entrepreneurs. The study measured the extent of adoption of the recommended management practices provided by Agri Clinics under their integrated extension services. The recommended practices encompassed variety, spacing and major cultural practices, irrigation management practices, nutrient management practices, and plant protection measures. The beneficiary farmers in the study showed significantly high effectiveness index scores since nearly fifty percent of the respondents aired their view in favour of moderate effectiveness of paid extension services and the rest showed high effectiveness of such services rendered by Agri Clinics. The correlation analysis of effectiveness of Agri Clinics with socio personal characteristics of beneficiary farmers showed that while variables like annual income of beneficiary farmers, their social participation, farm machinery owned by them, etc. were significantly negatively correlated/ associated with effectiveness of Agri Clinics, the correlation in this respect stood at positive with respect to family age, education and farm size of beneficiary farmers.

All the beneficiary farmers in the study conducted by Shekar et. al. (2014) were found to adopt hybrids and improved varieties, seed treatment, integrated nutrition management, soluble fertilizers, micro-nutrients, plant growth regulators, bio-fertilizers, integrated pest management, biopesticides, and herbicides, whereas 80 per cent among them adopted soil testing and organic manuring on their field. The finding of this study was in conformity with findings of Chandrashekara and Durga (2007). The study

conducted by Shekar et. al. (2014) also showed a significant rise in yield and profit of 29 selected crops after the adoption of recommended practices with yield expansion being in the range of 10-120 per cent and profit in the range of 20-80 per cent.

The estimates of study carried out by Shekar et. al. (2014) further revealed that the extent of adoption of recommended practices among beneficiary farmers ranged between 67 and 100 per cent with mean extent of adoption score being 79.5 per cent. One of the recommendations/ suggestions of the study was in favour of delivery of inputs and extension services at the village level through mobile clinics rather than establishment of such clinics and input agencies in cities or urban centres.

It deserves mention that shrinking services from public extension system is the root cause of wide extension gaps. This is despite the availability of nearly 15,000 unemployed and fresh agricultural graduates every year who could be successfully utilized to support back and front-end activities of agriculture (Venkattakumar et. al., 2016). The ACABC scheme initiated in 2002, therefore, aimed at supplementing the public extension system, increasing the availability of inputs and services to the farmers and providing gainful employment to the unemployed agricultural graduates (Ahire et al., 2008; Karjagi et al., 2007 and Karjagi et al., 2009).

The nodal training institutes (NTIs) identified by MANAGE so far stand at 82 across India which provide training to unemployed agricultural graduates and help them to become agripreneurs. The Agriclincs related ventures developed by these graduates mainly encompass soil, water and input testing laboratory service centres, information kiosk in rural areas, plant protection service centres, Agri-service centres, extension consultancy services, veterinary dispensaries, food processing and testing units, mobile veterinary clinics, etc. On the other hand, the Agribusiness related ventures established developed by these graduates include micro-propagation units, vermiculture units, units for production of bio-control agents and bio-pesticides, hatcheries and aquaculture, farm level cold chain, storage structures and retail marketing outlets, value addition centres, maintenance and custom-hiring of agricultural implements and machinery, seed processing ventures, bio-fertilizer units, apiaries, agricultural insurance schemes, livestock health cover services, post-harvest management centres, rural marketing dealerships of farm inputs and output, etc. Although the number and type of ventures established by agripreneurs have grown substantially over time, some of the earlier studies had identified slow progress of establishment of business ventures on account of varied reasons.

The major problems faced by the trained agricultural graduates in establishing agriclincs and agribusiness centres were lack of family support, bank finance, subsidy and collateral security, higher initial investment, and fear of collection of money from the farmers for the services rendered (Ahire et al., 2008). Some other factors also played a crucial in discouraging trained graduates to establish agri-ventures, which mainly revolved around lack of business and field experience, lengthy procedure to get bank loan sanctioned, higher risk, seasonal nature of business, employment opportunities from government and private sector, etc. (Karjagi et al., 2009). Lack of link between NTIs and financial organizations extending loans, lack of subsidy facility and lack of training on economically viable projects were also some other reasons for lack of interest shown by agricultural graduates to establish agri-ventures (Karjagi et al., 2007; Karjagi et al., 2009).

There are several critical success factors (CSF) that govern the success of an organization or project/venture/strategy. Therefore, identification of such CSF of ACABC becomes crucial, especially for their effective establishment. There are number of studies around the world that have pinned attention to various CSF for the establishment and smooth functioning of agribusiness ventures. For instance, the study conducted by Gandhi et al (2001) highlighted several factors for the success of Agro-industries in India, which encompassed creation of sufficient incentives for farmers to produce and supply, transparency in providing the services, access to high quality processing technology for farmers, effective market intelligence, etc. Abu-Bakar et al. (2003) reported government support for finance and training along with continuous communication and franchise image as the major factor for the success of entrepreneurs in Malaysia. For the successful functioning of fertilizer industry as well as small and medium enterprises in India, service to the customers/consumers, previous experience of the owners, interpersonal skills, access to capital and hard work were reported as the most important factors (Sharma and Singh, 2006; Dushesnear and Gartner, 1990). On the other hand, the factors responsible for the success of input dealers in India were observed to be effective utilization of information sources, trainings received with respect to agricultural practices, retailing ability, communication skill, sales promotional activities, investment capacity, etc. (Das et al., 2010).

The study conducted by Venkattakumar et. al. (2016) tried to identify factors responsible for successful establishment and sustenance of agribusiness ventures along with prioritization of CSF in terms of their significance to the business success. The study categorically pointed out the need for creating necessary awareness among the NTIs and

the required interventions by NTIs with a view to modify their training approach and the post-training support to agripreneurs. The interventions pointed out in this respect encompassed changes in the selection process of the trainees, redesigning training curriculum, approach to training, engaging credible and competent resource persons for the training, post-training monitoring and evaluation approaches and the overall system evaluation. A systematic implementation of these interventions/ changes by NTIs is expected to increase success rate of ACABC scheme across India.

Another study carried out by Kanwat et. al. (2011) assessed attitudinal changes of agricultural graduates to establish agri-clinics and agribusiness centres in Arunachal Pradesh. The investigation encompassed five agri-clinics and agribusiness centres belonging to five different districts of Arunachal Pradesh viz., West Siang, Upper Subansiri, Lower Subansiri, West Kemeng and Tawang. The agricultural graduates in the study were grouped into three categories i.e. successful entrepreneurs (SE), unsuccessful entrepreneurs (UE) and non-entrepreneurs (NE). The study showed a significant difference in attitude of SE, UE and NE categories of respondents. Majority of the respondents in the study showed favourable attitude towards establishment and functioning of ACABCs. One of the recommendations of the study was in favour of putting more efforts to bring youths under most favourable attitude towards skill development in order to become successful agripreneurs. A similar study conducted by Chargotra and Dangi (2011) tried to assess aspiration level of agricultural graduates towards establishment of agri-clinics and agribusiness centres in the state of Rajasthan. The study encompassed five agri-clinics and agribusiness centres with four in Jaipur and one located in Udaipur district. The study covered three categories of respondents' viz. successful entrepreneurs (EC), unsuccessful entrepreneurs (ED) and agricultural graduates unable to start enterprise (EN). The aspiration level of respondents towards establishment of ACABCs was estimated at 68 per cent with moderate aspiration, 15 per cent with high aspiration and 17 per cent with low level of aspiration. Since majority of respondents showed medium level of aspiration towards their agri-venture, the study emphasized upon provision of attractive packages and financial assistance under the scheme in order to pursue agricultural graduates to become agripreneurs.

The study conducted by Ahmed et. al. (2011) assessed entrepreneurial characteristics of the agripreneurs belonging to the states of Uttarakhand and Punjab. The study covered one training centre from each state viz., College of Agribusiness Management (CABM), Pantnagar and Indian Society of Agribusiness Professional

(ISAP), Amritsar. The study encompassed 120 respondents with 60 from each state. The entrepreneurial characteristics of training for the agripreneurs in the study encompassed achievement motivation, leadership ability, self confidence, risk taking ability, management orientation, and information seeking behaviour. The study showed that while 70 per cent of respondents had medium level of achievement motivation, this proportion with respect to medium level of risk taking ability, leadership ability and medium level of decision making ability stood at 60 per cent. The study also showed that nearly 70 per cent of respondents had medium level of innovativeness towards the developmental activities and new technologies in the Agri-enterprises. The study carried out by Greger and Peterson (2000) also reported innovation being the major factor significantly affecting the leadership qualities of entrepreneurship in the process of development. The findings of Ahmed et. al. (2011) were also found to be in line with the results reported by Murali and Jhamtani (2003), Nagabhushnam (2003) and Palmurugan (2006), who found medium level of innovations followed by majority of the respondents. Similarly, Banerjee and Talukdar (1997), Murali and Jhamtani (2003) and Palmurugan (2006) reported that majority of entrepreneur involved in farming and allied activities followed medium level of risk taking ability. Further, since majority of the agricultural graduates in the study carried out by Ahmed et. al. (2011) were found to have moderate level of entrepreneurial characteristics like achievement motivation, leadership ability, self confidence, decision making ability etc, the study emphasized upon the need to take necessary initiatives to strengthen the entrepreneurial ability.

Another important study carried out by Bairwa et. al. (2015) tried to address various problems faced by agripreneurs in starting and operating agriventures under ACABCs scheme in the state of Rajasthan. The study, conducted during 2011 to 2013, covered a sample of 150 agripreneurs trained by NTIs. The major problems faced by agripreneurs in establishing agriventure were lack of own money to start business, lack of proper handholding support from NTIs, lack of family support, lack of business and field experience, high rate of interest on loan and excessive formalities involved in getting bank loans, whereas operation related problems of agriventure revolved around heavy competition from existing market players, marketing and infrastructural related problems, perishability and seasonality of products, fluctuation in demand and prices of products, illiteracy and lack of knowledge of the farmers and insufficient cash in hand to run the business. The findings of this study were in conformity with the observations of Rao and Rupkumar (2005), who reported lack of funds and risk aversion as the most important

pre-establishment problems faced by the agripreneurs in Maharashtra. Karjagi (2006) and Karjagi et al. (2009) also found heavy competition from well established dealers, non cooperation of farmers and insufficient cash in hand as the major problems in running the agriventures under the ACABCs scheme in South India. Further, Karjagi (2006) and Karjagi et al. (2009) also reported high interest on loan, lack of hand holding support, lack of subsidy and high rate of margin money as the major constraints starting agriventures under the ACABCs scheme in South India.

Although the scheme of agri-clinics and agri-business centres has acquired significant importance for agricultural graduates due to provision of specialized training, credit facility, subsidy and handholding support for the establishment of agri-venture, the success rate of total agri-venture establishment appears to be low as against total candidates trained under ACABC scheme in India (Bairwa et. al., 2014). The low as well poor performance of ACABC scheme is due to lack of coordination and support from different entities, which encompass MANAGE, NTIs, Commercial Banks, and NABARD. Since MANAGE has been appointed by MOA as the implementing agency of ACABC scheme, which broadly performs the activities relating to selection of nodal institutes, preparation of training modules, monitoring the performance of the NTIs, management and release of funds, etc., it is the responsibility of MANAGE to strictly monitor implementation of scheme, and also periodically supervise different component of training programme and activities of NTIs on the basis of their prescribed roles and responsibilities under the scheme (Bairwa et. al., 2014). Equally important is the role of commercial banks in extending financial assistance and credit facilities for the establishment of agri-venture. It has been categorically emphasized by Bairwa et. al. (2014) that there should be proper coordination and cooperation among various entities in order to ensure smooth implementation, monitoring and evaluation of ACABC scheme. There is also a need for the government to incorporate policies in accordance with the requirement of agripreneurs, banks and categories of projects with a view to achieve objectives of ACABC scheme.

CHAPTER – III

GENERAL DESCRIPTION OF THE AREA UNDER STUDY AND STATUS OF ACABC SCHEME THEREIN

This chapter mainly deals with the socio-economic profile Maharashtra state, status of agri-clinics and agri-business centres (ACABC) scheme in the state, the type of agricultural extension services provided to farmers by agri-clinics and agri-business Centres, contribution of ACABC scheme towards agricultural development of the state, an overview on ACABC scheme in the state, and growth trend analysis of ACABC scheme in Maharashtra during the period between 2002 and 2016, aside from providing information on other relevant aspects of ACABC scheme in the state. Thus, this chapter mainly revolves around activities relating ACABC scheme implemented in Maharashtra with focus on district-wise and institute-wise number of candidates trained and ventures developed under the scheme, their status and growth performance over time, and other relevant aspects of the scheme.

3.1 Profile: Maharashtra State

Maharashtra, positioned between 16⁰.4' and 22⁰.1' North Latitude and 72⁰.6' and 80⁰.9' East Longitudes, and located on the west coast abutting the Arabian Sea and carved out as a linguistic entity of Marathi speaking people, is the second largest state in terms of population and the third largest in terms of area. As per 2011 census figures, Maharashtra accounted for 9.42 per cent of total human population of India with its spread over 3,07,713 square kilometers. The per capita income of Maharashtra is estimated to be 40 per cent higher than the all-India average. Secondary and tertiary sectors account for significant share in total annual income of Maharashtra. Agriculture has not only made the state self-sufficient in foodgrains but also an inclination towards cultivation of commercial crops has also given rise to a vibrant agro-processing industry in the state, though mostly confined to sugarcane and to some extent cotton and fruits and vegetables. The extensive cultivation of sugarcane in western region of the state has reduced the scope for equity in sharing a precarious resource, i.e., water for irrigation.

Maharashtra also occupies second position in India in terms of urban population with about 43 out of every 100 persons living in towns and cities. States like Gujarat, Madhya Pradesh, Chhatisgarh, Andhra Pradesh and Karnataka surround the state of Maharashtra. It has 720 km long coastline stretched from Daman in the north to Goa in the south. It falls in the resource development zone called the Western Plateau and Hill

Regions, which is one of the 15 such zones of India divided on the basis of agro-climatic features. Maharashtra's topography is diverse. It is classified into five broad regional groups such as Greater Mumbai, Western Maharashtra, Marathwada, Konkan and Vidarbha, and six revenue divisions for administrative purposes like Navi Mumbai, Nashik, Pune, Aurangabad, Nagpur and Amravati. All the 36 districts of Maharashtra are divided amongst these six divisions.

Konkan division consists of Mumbai, Thane, Raigad, Ratnagiri and Sindhudurg districts on the coast where landholdings are small but evenly distributed with no irrigation facilities. Nashik, Dhule, Nandurbar, Jalgaon and Ahmednagar districts with characteristics like large tribal population, large landholdings, high level of landlessness, forests, a few fertile tracts and good rainfall comprise the Nashik division. Pune division is comprised of Pune, Sangli, Satara, Kolhapur and Solapur districts and witnesses relatively lower rainfall with its smaller landholding being served by canal and wells. The districts belonging to Marathwada region like Aurangabad, Jalna, Parbhani, Hingoli, Nanded, Osmanabad, Beed and Latur constitute the Aurangabad division and are culturally well tied as all of them represent the erstwhile State of Hyderabad. The region is rocky and dry with low and uncertain rainfall, large landholdings and some landlessness. One part of Vidarbha region comprising Buldhana, Akola, Amravati, Washim and Yavatmal districts is administered by Amravati division and rest of this region comprising Nagpur, Wardha, Bhandara, Gondia, Chandrapur and Gadchiroli districts stands governed by Nagpur division. The two divisions of Vidarbha cover part of a plateau characterized by deep block soil, assured rainfall, medium and large landholdings, and high levels of landlessness. The districts like Bhandara, Gondia, Chandrapur and Gadchiroli have a large tribal population and forest cover.

The total human population of Maharashtra stood at 7.89 crore according to 1991 census and 9.69 crore as per 2001 census. The human population of Maharashtra increased to 11.24 crore as per 2011 census, which constitutes 9.3 per cent of the total population of India with 45.2 per cent belonging to urban and 54.8 per cent to rural area. These estimates are concomitant of the fact that there has been 23 per cent rise in human population in Maharashtra in 2001 over 1991 census figures, and 16 per cent rise in the same in 2011 over 2001 census figures. The population density in the state has also grown from 257 persons per square km in 1991 to 315 persons per square km in 2001, and further to 365 persons per square km in 2011.

The state of Maharashtra is comprised of 336 towns, 326 talukas, 43,027 villages and 1,53,44,435 households with 60 per cent belonging to rural and 40 per cent to urban areas. Out of the total human population, around 11.8 per cent belong to scheduled castes and 9.4 per cent to scheduled tribes. The overall literacy rate of Maharashtra is relatively high among males as compared to females. The literacy rate of Maharashtra among males is found to be 88.4 per cent in contrast to 75.9 per cent among females. Further, occupational break-up of Maharashtra reveals that out of the total population, about 57 per cent are non-workers, 4 per cent marginal workers and 39 per cent main workers with 13 per cent cultivators and 11 per cent agricultural labourers. The remaining 15 per cent of total 39 per cent working population of Maharashtra are engaged in other activities such as livestock, forestry, fishing, horticulture, etc., activities, mining and quarrying, manufacturing, processing, repairing, etc., construction, trade and commerce, transport, storage and communication, etc.

The agriculture sector of Maharashtra of late has acquired new dimension where major thrust is being accorded to rise in yield levels of traditional crops, cultivation of high value crops, promotion of inclusive growth, rise in rural income and sustenance of food security. There has been increasing focus on rise in agricultural production and productivity with special attention towards pulses, oilseeds, fruits and vegetables which are crucial for nutritional security. The Government of Maharashtra has been implemented various schemes to improve performance of agriculture with focus on increasing area under irrigation. One of the ambitious projects launched by GOM is '*Jalyukta Shivar Abhiyaan*', which envisages to making state drought free by 2019. In order to cope up with severe water scarcity, drip irrigation is also being promoted, especially for sugarcane cultivation.

Maharashtra's net sown area stands at around 1,77,44,000 hectares, of which 18.5 per cent is irrigated. Well irrigation accounts for around 55 per cent of the total irrigated area of Maharashtra. The lower proportion of area under irrigation renders agriculture vulnerable to draughts, resulting in periodic fluctuation in farm output, which in a normal year is only 90 per cent of the State's total foodgrain requirement. The cropping intensity of Maharashtra is relatively higher than irrigation intensity. In spite of Maharashtra's higher level of economic growth and despite being one of the higher-income States with growth rates exceeding several other States, Maharashtra was ranked third among 17 states in 1991 in terms of Human Development Index (HDI) with a HDI value of 0.532. The HDI value of Maharashtra improved marginally to 0.572 in 2011.

Though India has become self sufficient in foodgrains production in spite of tremendous increase in population, mere self sufficiency in agriculture is not the chief objective of Maharashtra, which accords higher priority to assuring more remunerative net income to the farmers through efficient and sustainable use of available resources. The state has been implementing various schemes from time to time not only to increase agricultural production and exports but also to encourage agro-processing industries with a view to reap the benefits of liberalized economy and global trade. Agricultural department in the state is firmly heading towards economic progress along with self-sufficiency through agriculture with the ultimate goal of achieving important position in the global agriculture produce market. The innovative horticulture plantation scheme under employment guarantee scheme implemented by the state is a part of this policy.

3.2 Status of ACABC Scheme in the State

Although the course of time has witnessed large number of programmes, initiatives and schemes being launched in the state of Maharashtra to improve performance of agriculture sector, dissemination of information on technologies through public extension services is still an area where not much has been achieved. The launching of ACABC scheme by the Government of India on 9th April, 2002 has now paved a way for the agricultural graduates to establish agri-ventures, and thereby extend all possible services to farmers, which not only include elaboration of intricacies of agricultural production system and the linkage of production with complex marketing activities but also transferring the emerging technologies to the poor and illiterate farmer at village level. The social as well economic transformation among the farming community of late depends on strengthening of support and extension services to them.

In terms of number of candidates trained by NTIs and agri-ventures established, the state of Maharashtra ranks first with 11,669 candidates trained and 5,310 agri-ventures developed during the period between 2002 and 2016. During the period between 2002 and 2016, the numerical strength of candidates trained by NTIs in India was worked out at 50,163, whereas number of agri-ventures established stood at 21,039, implying 41.94 per cent of the total candidates trained under ACABC scheme turned into ventures. This proportion turned out to be higher for Maharashtra and stood at 45.51 per cent during the same period. Another state showing significantly high numerical strength of candidates trained and ventures established under ACABC scheme was found to be Uttar Pradesh, which showed 10,361 candidates trained and 5,231 ventures developed under the scheme during the period between 2002 and 2016.

Tamil Nadu was found to be third important state with 5,924 candidates trained by NTIs and 2,966 agri-ventures developed under the scheme during the period between 2002 and 2016. Bihar ranked fourth in this respect with 3,493 candidates trained and 1,246 ventures developed under the scheme during the same period. The ranking of Karnataka was found to be fifth with 3,171 candidates trained and 1,302 ventures developed under ACABC scheme during the given period. The ranking of Rajasthan was sixth with 2,869 candidates trained and 1,040 ventures developed under the scheme during the period between 2002 and 2016. The numerical strength of candidates trained by NTIs and agri-ventures developed under ACABC scheme was found to be low in other states with north eastern states showing the lowest numerical strength in this respect. In general, the states of Maharashtra, Uttar Pradesh and Tamil Nadu put together accounted for 55.73 per cent of the total number of candidates trained under ACABC scheme in India during the period between 2002 and 2016. Similarly, these three states put together showed 64.20 per cent of the total number of agri-ventures established under ACABC scheme in India during the same period.

3.3 Agricultural Extension Services Provided to Farmers by ACABC

The agricultural graduates trained by various NTIs provide wide range of agricultural extension services to farmers, which not only include advices on agricultural practices as well input supply from ventures but also advises on improved production technologies. The agri-clinics related ventures provide various facilities to farmers viz. soil and water quality cum input testing laboratory services, plant/crop protection service, extension consultancy services, services through veterinary dispensaries, food processing and testing units services, mobile veterinary clinics services, plant protection services, etc. The services provided by agricultural extension personal also include advices on adoption of recommended practices, advices on Integrated Nutrient Management (INM), Integrated Pest Management (IPM), application of organic manure, chemical fertilizers, etc. The crop protection services include pest surveillance, diagnostic and control services (with culture rooms, autoclaves, microscopes, etc. for detection of plant pathogens including viruses, fungi, bacteria, nematodes and insect pests).

The agri-business related ventures established by trained agricultural graduates cater to the varied requirements of farmers. The ventures established in this respect under ACABC scheme encompass micro-propagation including plant tissue culture labs and hardening units, production, seed production and processing units, vermiculture units, agricultural insurance services, livestock health cover, veterinary dispensaries and

services, including frozen semen banks and liquid nitrogen supply and artificial insemination, information technology kiosks, value addition centres, maintenance and custom-hiring of agricultural implements and machinery, bio-fertilizer units, apiaries, post-harvest management centres, rural marketing dealerships of farm inputs and output, horticulture clinic, nursery, landscaping, floriculture, sericulture, post harvest management centres for sorting, grading, standardization, storage and packing, food chain including cold storage units, dairy, goatery and poultry units, value addition centres, production, maintenance and custom hiring of agricultural implements and machinery including micro irrigation systems, vegetable production and marketing, retail marketing outlets for processed agricultural products, production and marketing of farm inputs and outputs, crop production and demonstration, etc.

Information relating to unit/project-wise distribution agri-ventures established for providing agri-extension services to farmers in Maharashtra as well as in India during the period between 2002 and 2016 is furnished in Table 3.1.

Table 3.1: Unit/Project-wise Distribution of Agri-Ventures Established for providing Agri.-Extension Services to Farmers in Maharashtra: 2002-2016

Sr. No.	Units/Projects Providing Agri-Extension Services	No. of Agri-Ventures Established		
		Maharashtra	India	% of Maharashtra
1.	Agri-Clinics	943	3306	28.52
2.	Agri-Clinics and Agribusiness Centres	1422	6776	20.99
3.	Agro-Eco Tourism	8	12	66.67
4.	Animal Feed Unit	16	47	34.04
5.	Bio Fertilizer Production and Marketing	30	105	28.57
6.	Contract Farming	2	69	2.90
7.	Cultivation of Medicinal Plants	6	112	5.36
8.	Direct Marketing	66	168	39.29
9.	Farm Machinery Unit	207	713	29.03
10.	Fisheries Development	40	350	11.43
11.	Floriculture	33	108	30.56
12.	Horticulture Clinic	62	170	36.47
13.	Landscaping + Nursery	46	113	40.71
14.	Nursery	170	513	33.14
15.	Organic Production Food Chain	15	90	16.67
16.	Pesticides Production and Marketing	14	41	34.15
17.	Value Addition	122	281	43.42
18.	Fishery Clinic	3	15	20.00
19.	Seed Processing and Marketing	25	338	7.40
20.	Soil Testing Laboratory	17	103	16.50
21.	Tissue Culture Unit	8	28	28.57
22.	Vegetable Production and Marketing	33	252	13.10
23.	Vermicomposting/ Organic Manure	82	496	16.53
24.	Veterinary Clinics	323	875	36.91
25.	Crop Production	41	197	20.81
26.	Dairy/Poultry/Piggery/ Goatary	1629	5577	29.21
27.	Rural Godown	8	49	16.33
28.	Production & Marketing of Bio-Control Agents	4	19	21.05
29.	Agriculture Journalism	3	16	18.75
30.	Sericulture	13	49	26.53
31.	Mushroom Cultivation	3	100	3.00
32.	Apiary	-	101	-
	Total	5394	21189	25.46

Source: ACABCs Cell, MANAGE, Hyderabad (Telengana)

The state of Maharashtra accounts for major share in India in terms of number of units/ projects providing agri-extension services to farmers. During the period between 2002 and 2016, the state of Maharashtra showed a share of 28.52 per cent in India in terms of numerical strength of agri-clinics, 20.99 per cent with respect to agri-clinics and agri-business centres, 66.67 per cent in agro-eco tourism, 34.04 per cent in animal feed unit, 28.57 per cent in bio fertilizer production and marketing, 39.29 per cent in direct marketing, 29.03 per cent in farm machinery unit, 33.14 per cent in nursery related units, 43.42 per cent in value addition projects, 36.91 per cent in veterinary clinics related projects and 29.21 per cent in units/projects related to dairy/poultry, piggery/goatary. During the period between 2002 and 2016, the state of Maharashtra showed altogether 5,394 units/projects being established as against all-India figure of 21,189 for the same, accounting for 25.46 per cent share in number of ventures established in India under ACABC Scheme that are providing various kinds extension services to farmers.

3.4 Contribution of ACABC Scheme to Agricultural Development of the State

The implementation as well as functioning of ACABC scheme has contributed immensely in increasing awareness among the farmers regarding adoption of recommended practices, increasing yield and income levels, enhancing risk bearing ability, leadership ability, decision making ability, information seeking ability, raising self confidence, management orientation, innovativeness, pre-and post harvest management, awareness regarding market forces, scientific production techniques, production and marketing linkages, etc. The scheme has not only led to social as well as economic transformation of the farming community but overall agricultural development of the state. Further, increased awareness among farmers about scientific methods of farming is reported as the major benefit to the farming community by most of the agripreneurs operating in the state. Timely advise and transfer of technology have not only led to increased productivity and cropping intensity but also farm income. The accesses to knowledge and timely availability of inputs have direct impact on increasing productivity and farm income.

Some of the success stories of agripreneurs drawn from Maharashtra reveal positive impact of ACABC scheme towards socio-economic improvement of farmers. For instance, one of the agricultural graduates from Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri, Ahmednagar, Maharashtra, namely Ms. Kavita D. Bidwe, established her own agri-input supply centre in 2005 after undergoing training from Krishi Vigyan

Kendra (KVK), Babhaleshwar on Agri Clinics and Agri Business centres (AC&ABC) Scheme. The venture established by her encompassed a host of services viz. various agricultural inputs at farm gate, library services to farmers by making them available monthly bulletins and agriculture related information in local language against a fee of Rs.50, collection of water and leaf samples from farmers and getting them analyzed at agricultural university and providing recommendations based on lab reports, facility of mobile soil testing kit for on-site recommendations, forming and guiding Self Help Groups and Farmers' Clubs, conducting training for farmers, etc. She has been providing useful tips to entrepreneurs on maintenance, management and marketing of agricultural inputs. She has covered more than 450 farmers belonging to Rahuri Taluka of Ahmednagar district and has an annual turnover of over Rs.40 lakhs. She has plan to expand her business by including clinical services to farmers like soil and water testing, diagnostic services, and farmers' training school.

Another success story of agriprenuer relates to Shri Prashant Manoharrao Madghe, an agricultural graduate, who underwent training under ACABC scheme in the first batch (2007-08) at Krishi Vigyan Kendra (KVK), Durgapur (Badnera), Amravati, Maharashtra. After receiving training, he had established his own venture namely '*Innova Agrochemicals*' in Paratwada Taluka in 2007, and appointed twenty five rural youth and trained them to deliver extension services as '*Krishi Doot*' among orange growers with a view to increase orange productivity and to involve rural youths in agricultural activities. The specific focus of '*Innova Agrochemicals*' is on nutrient management in orange cultivation. The consultancy provided by the venture to the orange growers chiefly confine to of water, fertilizer, pest and disease management. The venture is equipped with a high-tech and modern Agri-clinics and Agribusiness Centre which provides agricultural inputs, agro consultancy and soil testing services. The recommendation of the venture on fertilizer application is based on soil and leaf analysis. The services provided by this venture mainly encompass (a) consultancy services in agricultural activities, (b) imparting short term training and conducting seminars for the farmers, (c) creating awareness about traditional farming vs. scientific farming, and (d) reaching out farmers in remote areas through field visits and newspaper articles.

The extension initiatives undertaken by '*Innova Agrochemicals*' have not only raised quality and productivity of orange crop but also improved economic status of orange growers. The venture is instrumental in providing employment to 45 people with benefit reaching to 7,000 farmers belonging to Amravati and Akola districts of

Maharashtra. The annual turnover of the venture is around Rs.5 crores. The vision of Shri Madghe includes expansion of business to include other cash crops, establishment of Plant Health Clinic for diagnosis of pests and diseases and nutritional deficiency of crops.

In order to achieve higher yield of various crops, Shri Premchand Mahaveer Managave has been guiding farming community to adopt new technologies in place of conventional methods. After completing M. Sc. Agriculture from MPKV, Rahuri in 1990 and thereafter working as Senior Research Associate at the College of Agriculture, Pune, he found a lot of research being carried out and a number of advanced technologies being available in the universities, which some how could not reach the farmers. Therefore, he felt the necessity of dissemination of these technologies to farmers belonging to remote villages. In order to achieve this goal, he underwent training under AC&ABC scheme at Krishna Valley Advanced Agri Foundation, Sangli, and subsequently started greenhouse cultivation, which turned out to be a major solution not only to prevent crop losses due to natural calamities but also to break the seasonality and increase income during off-season. He started cultivation of Gerbera, colored Capsicum and Ginger and later expanded business from cultivation to consultancy services. He has so far covered 1000 farmers under open field cultivation and 50 farmers under greenhouse cultivation with a turnover of Rs.25 lakhs. He happens to be the treasurer of “*Flower Growers’ Association*” of Maharashtra, which has been putting concerted efforts towards development of greenhouse cultivation in Maharashtra, and socio-economic improvement of farmers. He boasts to have received a couple of awards viz. ‘Baliraja’ Award’ from Ashirwad Krishi Vikas Seva Sangha, Korochi, Kolhapur and ‘Hiroji Ulemale Award’ from Baliraja Shikshan Sanstha and Vanrai, Amravati.

MITCON Consultancy Services is one of the NTIs in Maharashtra which has been organizing training on Agri-clinics and Agri-business Centres Scheme. One of the success stories of agriprenuer relates to Shri Srinivas Anant Kher who joined the AC&ABC training program in September, 2007, which was organized by MITCON Consultancy Services, Pune. The two months training programme under ACABC scheme not only helped him to enhance his personality and shaped his attitude and imparted analytical and decision making abilities but also improved his organizational skills in the area of agri-business. The programme also helped him to choose hybrid exotic vegetable trade as a business activity, which was primarily due to location of his village on the outskirts of Pune city. The motivation to adopt hybrid exotic vegetable trade was also due to close proximity of the target market and the availability of cold storage facility which

took care of perishability of vegetables. Since there was not much competition in exotic vegetables trading, business flourished rapidly. The venture not only supplied healthy exotic vegetables to consumers but also provided remunerative prices to farmers. The major exotic vegetables traded by the venture include lettuces, broccoli, capsicum, red cabbage, and cherry tomato, aside from marketing mushrooms and baby corns. In order to cater to the requirement of buyers from other cities, the venture has tied up with 40 progressive farmers from 7-8 villages belonging to Pune, Nasik, Satara, Sangli and Ahmednagar, who mainly grow hybrid vegetables. The annual turnover of the venture stands at Rs.30 lakhs and annual profit at Rs.4.50 lakhs. The venture provides direct employment to 4 persons and generates indirect employment in form of people employed as booking agents, *hamals* at transport point and women farm labourers employed in the vegetable growing fields. Shri Srinivas has been trying to expand his business in other exotic vegetable growing areas like Konkan region of Maharashtra.

One of the post graduates in agriculture namely Shri Anil Deshmukh who turned consultant of pomegranate cultivation feels that the quality of consultancy services provided to farmers is the emerging need for the overall development of agricultural sector. Shri Deshmukh worked as marketing executive with several Agri-business companies dealing with pesticides and fertilizers, and came across several spurious agricultural inputs and understood their adverse impact on crops and farmers. Therefore, in order to start consultancy services to guide farmers to overcome input related problems, he underwent ACABC training at Krishi Vigyan Kendra (PIRENS), Babhaleshwar, Ahmednagar, Maharashtra. After completing training under ACABC scheme, he had registered a firm namely '*Krishi Vishwa Biotech*' by using his own investment capital of Rs.20 lakhs. The firm started manufacturing Bio-fertilizers like Azatobacter, Phosphate Solubilizing Bacteria, Azospirillum, etc. Shri Deshmukh personally visits farmer's field and provides consultancy on farming which him to establish credible rapport with farmers. He has come out with a systematic package of practices which eradicates Oily Spot disease in pomegranate. Shri Deshmukh provides consultancy services to more than 2000 farmers belonging to 50 villages of Ahmednagar district. The annual turnover of the firm stands at Rs.50 lakhs and it has provided permanent employment to six agricultural graduates. The firm has trained ten more executives and appointed them at the village level to overcome problems faced by farmers in their agricultural production activity. Digital tablets are used by the executives to provide solutions to queries raised by the farmers. The suggestions provided with respect to judicious application of bio-fertilizers

and irrigation have resulted in improvement in fruit setting and fruit dropping on the farmer's field/orchard. Further, suggestions in terms of timely application of bio-pesticides have not only controlled pests and diseases but also increased productivity and life span of orchards.

Another important success case of entrepreneur relates to Ms. Sangeeta Deepak Sawalakhe who did her Post Graduation in Agricultural Sciences and later underwent training under ACABC Scheme from Krishi Vigyan Kendra [KVK], Durgapur, Amaravathi, Maharashtra, and subsequently in 2008 established Vidharbha Biotech Laboratory [VBL] which produces Bio pesticides and Bio fertilizers. VBL received ISO-9001-2008 certificate for manufacturing best quality products and for marketing services. The venture also received '*Maharashtra Udyogina Puraskar*' Award from Maharashtra State Government and UNESCO Linked Women's Wing Award for providing services to farmers in the rural areas. The input and service related facilities extended by the venture covers eight districts belonging to Vidarbha region of Maharashtra. Ms. Sawalakhe availed a loan of Rs.34 lakhs from the State Bank of India, Yavatmal in 2010, and, at present, the sales turnover of the venture stands at Rs.70 lakhs with an annual income of Rs.40 lakhs. There are as many as 30 women employed by this venture. The services provided by the venture chiefly encompass (a) manufacturing and marketing of Bio fertilizers, Bio pesticides and Bio control agents, (b) consultancy services on organic farming and training to farmers associations, which resulted into conversion of 5,000 women farmers to organic farming, and (c) providing training through Organic farmers' school under Agricultural Technology Management Agency (ATMA).

In the dairy sector, a veterinary practitioner, Dr. Kishore Mathpati hailing from Phaltan village of Satara district, Maharashtra, has developed a module of scientific dairy management practices titled as '*Tota Mukta Gotha*' which means loss free cowshed. The innovation created by Dr. Kishore led him to receive '*Young Scientist Award*' in 2014 from the Department of Agriculture, Government of Maharashtra. Dr. Kishore has been conserving Gir breed of indigenous cattle which is known for its high milk production potential, heavy built and docile temperament. After completing study in veterinary science, Dr. Kishore started providing Artificial Insemination (AI) and other veterinary services to farmers at their doorstep. One of the observations made by Dr. Kishore was the lack of interest being shown by farmers in rearing indigenous breeds of cattle due to less milk yield and high production cost. In order to address this issue, he had developed the concept of '*Tota Mukta Gotha*', which encompasses cow shed management, selection of

indigenous breeds, fodder and feed management, clean milk production, timely vaccination, etc. However, despite being a veterinary doctor, he found himself to be lacking in convincing skill and other managerial practices to make his concept popular among the dairy farmers. Therefore, Dr. Kishore underwent training under ACABC Scheme from Krishi Vigyan Kendra, Baramati, Satara district, Maharashtra. The training under ACABC Scheme helped him in developing entrepreneurship skills, upgrading his expertise in scientific dairy farms, and improved his managerial skill to sustain his venture. The passion for conservation of Gir cow led him to register his dairy training institute by the name '*Krushna Dugdha Prashikshan Wa Sanshodhan Kendra, Phaltan*'. The three days training programme conducted by his venture includes (a) scientific practices of Gir cow management, (b) bankable project proposal preparation for dairy unit (Gir breed), and (c) management practices to increase the lactation period up to 3-5 years without usage of concentrate feed to cow. The institute boasts to have an annual turnover of Rs.10 lakhs and runs with the help of two employees. Abhinav Farmers' Club, Pune and ATMA of Pune region have collaborated with the institute to conduct training for dairy farmers under the supervision of Dr. Kishore Mathpati.

The success stories of agripreneurs clearly underscore the fact that the ventures established under ACABC scheme have significantly contributed towards overall development of agricultural sector in Maharashtra by way of providing necessary inputs, services and other technology related advices to farming community, which in turn has resulted in raising socio-economic conditions of millions of farmers.

3.5 ACABC Scheme at a Glance in Maharashtra

There has been significant variation in terms of number of candidates trained and ventures established under ACABC scheme across various districts of Maharashtra during the period between 2002 and 2016. While some districts of Maharashtra like Solapur, Kolhapur, Ahmednagar Pune, Sangli and Satara showed marked presence of agri-ventures, the other district were marked low presence in this respect. Further, the districts with higher number of candidates trained under ACABC Scheme also showed higher number of agri-ventures established during the period between 2002 and 2016.

In the state of Maharashtra, the district of Solapur showed the highest number of candidates trained and ventures established under ACABC scheme during the period between 2002 and 2016 (Table 3.2).

Table 3.2: District-wise Status of ACABC Scheme in Maharashtra: 2002 – 2016

Sr. No.	Name of the District	No. of Candidates Trained	No. of Agri-ventures Established	Sr. No.	Name of the District	No. of Candidates Trained	No. of Agri-ventures Established
1.	Mumbai	83	42	18.	Parbhani	131	56
2.	Thane	64	26	19.	Hingoli	80	28
3.	Raigarh	56	24	20.	Beed	248	106
4.	Ratnagiri	269	133	21.	Nanded	182	77
5.	Sindhudurg	245	109	22.	Osmanabad	401	190
6.	Nashik	183	80	23.	Latur	163	49
7.	Dhule	160	75	24.	Buldhana	194	84
8.	Nandurbar	59	19	25.	Akola	238	82
9.	Jalgaon	298	140	26.	Washim	134	54
10.	Ahmednagar	1157	582	27.	Amravati	464	176
11.	Pune	1266	524	28.	Yavatmal	142	57
12.	Satara	739	302	29.	Wardha	72	29
13.	Sangli	996	478	30.	Nagpur	340	176
14.	Solapur	1689	826	31.	Bhandara	88	42
15.	Kolhapur	1211	595	32.	Gondia	48	27
16.	Aurangabad	110	50	33.	Chandrapur	66	32
17.	Jalna	58	22	34.	Gadchiroli	35	17
					Total	11669	5309

The district of Pune ranked second in terms of candidates trained and forth with respect to ventures established under the scheme. During the period between 2002 and 2016, the district of Kolhapur ranked third in terms of candidates trained and second with respect to ventures established under ACABC scheme. The district of Ahmednagar occupied fourth place with respect to candidates trained and third in terms of ventures established under the scheme during the same period. Another district found to have significant presence of candidates trained and ventures established under ACABC scheme was Sangli.

In general, the districts of Ahmednagar, Pune, Sangli, Solapur and Kolhapur put together accounted for 54.15 per cent of the total number of candidates trained under ACABC scheme in the state of Maharashtra during the period between 2002 and 2016. Similarly, these five districts put together accounted for 56.60 per cent of the total number of ventures developed under the scheme in the state of Maharashtra during the same period. These estimates bring us closer to the fact that the candidates trained by NTIs and ventures established under ACABC scheme are mainly confined to western region of Maharashtra. However, some of the districts belonging to Vidarbha region of Maharashtra also showed significant presence of ventures established and candidates trained under ACABC scheme.

Table 3.3: Institute-wise Status of ACABC Scheme in Maharashtra: 2002 – 2016

Sr. No.	Name of Nodal Training Institute (NTI)	No. of Candidates Trained	No. of Agri-ventures Established	Sr. No.	Name of Nodal Training Institute (NTI)	No. of Candidates Trained	No. of Agri-ventures Established
1.	Krishna Valley Advanced Agriculture Foundation, Sangli	2453	1149	11.	Shriram Pratisthan Mandal, Ratnagiri	389	186
2.	Mitcon Consultancy Services Ltd., Pune	1763	764	12.	Krishna Valley Advanced Agriculture Foundation, Pune Regional Centre	379	140
3.	Shriram Pratistan Mandal, Wadala, Solapur	1063	542	13.	Shashwat Sheti Vikas Pratisthan (SSVP)	339	153
4.	Krishna Valley Advance Agriculture Foundation, Uttur	735	357	14.	Shriram Pratisthan Mandal, Akola	264	111
5.	Krishi Vigyan Kendra, Durgapur, Dist Amravati	656	253	15.	Vasant Prakash Vasakh Pratistan , Sangli	187	67
6.	Baramati Agriculture Development Trust Krishi Vigyan Kendra, Baramati	652	253	16.	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	245	94
7.	Krishi Vigyan Kendra, Babhaleshwar	614	326	17.	Krishna Valley Advanced Agriculture Foundation, Jalgaon	209	96
8.	Shriram Pratisthan Mandal, Osmanabad	615	304	18.	Manjara Charitable Trust's KRISHI VIGYAN KENDRA, Latur	13	-
9.	Krishna Valley Advanced Agriculture Foundation, Nagpur	556	276	19.	Krishi Vigyan Kendra, Narayangaon	28	-
10.	Mahatma Phule Krishi Vidyapeeth, Pune	461	205				
					Total	11621	5276

Source: Compiled from ACABC Database

The other NTIs showing 40-50 per cent of their candidates trained turning into agri-ventures were found to be Krishna Valley Advanced Agriculture Foundation, Sangli, Mitcon Consultancy Services Ltd., Pune, Krishna Valley Advance Agriculture Foundation, Uttur, Shriram Pratisthan Mandal, Osmanabad, Krishna Valley Advanced Agriculture Foundation, Nagpur, and Mahatma Phule Krishi Vidyapeeth, Pune.

There are as many as 19 Nodal Training Institutes (NTIs) in Maharashtra, which provide training to unemployed agricultural graduates to establish agri-ventures. The NTIs in Maharashtra providing training to agricultural graduates encompass (a) Krishna Valley Advanced Agriculture Foundation, Sangli, (b) Mitcon Consultancy Services Ltd., Pune, (c) Shriram Pratistan Mandal, Wadala, Solapur, (d) Krishna Valley Advance Agriculture Foundation, Uttur, (e) Krishi Vigyan Kendra, Durgapur, Dist Amravati, (f) Baramati Agriculture Development Trust Krishi Vigyan Kendra, Baramati, (g) Krishi Vigyan Kendra, Babhaleshwar, (h) Shriram Pratisthan Mandal, Osmanabad, (i) Krishna

Valley Advanced Agriculture Foundation, Nagpur, (j) Mahatma Phule Krishi Vidyapeeth, Pune, (k) Shriram Pratisthan Mandal, Ratnagiri, (l) Krishna Valley Advanced Agriculture Foundation, Pune Regional Centre, (m) Shashwat Sheti Vikas Pratisthan (SSVP), (n) Shriram Pratisthan Mandal, Akola, (o) Vasant Prakash Vasakh Pratisthan, Sangli, (p) Krishna Valley Advanced Agriculture Foundation, Sindhudurg, (q) Krishna Valley Advanced Agriculture Foundation, Jalgaon, (r) Manjara Charitable Trust's KRISHI VIGYAN KENDRA, Latur, and (s) Krishi Vigyan Kendra, Narayangaon. Among these NTIs, Shriram Pratisthan Mandal, Wadala, Solapur and Krishi Vigyan Kendra, Babhaleshwar are the most important ones as both of these NTIS have shown more than 50 per cent of their candidates trained turning into agri-ventures (Table 3.3).

The highest number of candidates trained and ventures established was found to be for Krishna Valley Advanced Agriculture Foundation, Sangli, which showed 2,453 of its candidates trained turning into 1,149 agri-ventures. Similarly, Mitcon Consultancy Services Ltd., Pune showed 1,763 of its candidates trained turning into 764 agri-ventures. Shriram Pratisthan Mandal, Wadala, Solapur showed 1,063 of its candidates trained turning into 542 agri-ventures. The NTI located in Rahata Taluka of Ahmednagar district namely Krishi Vigyan Kendra, Babhaleshwar showed 614 of its candidates trained under ACABC scheme turning into 326 agri-ventures. In general, 19 NTIs put together operating in various parts of the state of Maharashtra showed 11,621 of their candidates trained under ACABC scheme turning into 5,276 agri-ventures.

3.6 Trend of Growth in ACABC Scheme in Maharashtra (2002-2016)

The state of Maharashtra has shown significant expansion in numerical strength of candidates trained and ventures established under ACABC Scheme during the period between 2002 and 2016. Bulk of the candidates trained and ventures established under ACABC Scheme belonged to Pune division of Maharashtra, followed by Nasik division, Aurangabad division, Amravati division, Konkan division and Nagpur division.

The number of candidates trained under ACABC Scheme in Pune division increased from 100 in 2002 to 540 in 2010 and 537 in 2016 with a sum of 5,901 during the period between 2002 and 2016 (Table 3.4; Appendix 1 and 2). Similarly, the number of agri-ventures established under ACABC Scheme in Pune division increased from as low as 5 in 2002 to 211 in 2010 and 206 in 2016 with a sum of 2,725 during the period between 2002 and 2016 (Table 3.5; Appendix 3 and 4). The major districts of Pune division showing significant presence of candidates trained and agri-ventures established under ACABC Scheme were noticed to be Solapur, Pune, Kolhapur and Sangli.

Table 3.3: Trend in District-wise Candidates Trained under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1.	Mumbai	9	23	4	6	3	6	2	2	4	5	3	3	1	4	8	83
2.	Thane	2	1	1	3	8	9	3	0	8	6	0	6	5	8	4	64
3.	Raigarh	1	1	2	1	2	7	1	0	0	17	3	0	3	3	15	56
4.	Ratnagiri	1	0	0	7	4	8	9	4	4	48	20	60	63	24	17	269
5.	Sindhudurg	3	1	2	10	1	5	2	2	1	7	2	26	38	79	66	245
	Konkan Div.	16	26	9	27	18	35	17	8	17	83	28	95	110	118	110	717
6.	Nashik	15	2	3	22	9	10	7	13	14	36	6	8	14	9	15	183
7.	Dhule	9	11	8	20	14	11	2	7	12	6	2	4	9	28	17	160
8.	Nandurbar	2	4	1	13	4	5	2	1	0	3	1	0	5	10	8	59
9.	Jalgaon	6	7	3	9	15	12	13	6	6	33	6	10	45	77	50	298
10.	Ahmednagar	24	33	36	103	58	41	52	48	106	155	70	127	133	90	81	1157
	Nashik Div.	56	57	51	167	100	79	76	75	138	233	85	149	206	214	171	1857
11.	Pune	23	40	58	118	85	78	65	73	150	128	75	55	133	50	135	1266
12.	Satara	19	49	28	73	54	65	37	42	39	61	44	46	84	43	55	739
13.	Sangali	34	36	21	69	33	35	44	34	106	176	45	87	97	90	89	996
14.	Solapur	16	18	20	63	41	42	44	44	211	293	118	275	242	144	118	1689
15.	Kolhapur	8	12	18	26	27	32	20	26	34	138	141	213	145	231	140	1211
	Pune Div.	100	155	145	349	240	252	210	219	540	796	423	676	701	558	537	5901
16.	Aurangabad	1	2	3	7	4	1	3	9	3	7	7	8	18	20	17	110
17.	Jalna	0	1	0	2	0	2	3	0	6	5	2	7	17	7	6	58
18.	Parbhani	4	5	5	12	5	6	10	7	4	9	0	17	18	11	18	131
19.	Hingoli	0	1	1	6	1	2	6	2	0	10	1	13	12	15	10	80
20.	Beed	1	1	6	9	12	6	18	7	8	29	13	45	31	30	32	248
21.	Nanded	0	7	9	22	8	6	4	3	9	21	8	24	21	21	19	182
22.	Osmanabad	4	1	6	4	4	9	8	5	22	98	8	118	42	31	41	401
23.	Latur	3	4	11	18	3	12	5	4	6	13	4	16	16	16	32	163
	Auranga bad Div.	13	22	41	80	37	44	57	37	58	192	43	248	175	151	175	1373
24.	Buldhana	3	3	6	11	6	2	6	8	11	2	2	20	47	42	25	194
25.	Akola	8	10	6	9	2	15	7	8	12	13	2	12	57	39	38	238
26.	Washim	3	7	2	9	1	3	6	0	11	6	5	11	35	12	23	134
27.	Amravati	10	4	6	22	4	13	27	27	78	66	16	68	43	46	34	464
28.	Yavatmal	5	5	7	5	4	10	5	2	4	7	1	15	15	28	29	142
	Amravati Div.	29	29	27	56	17	43	51	45	116	94	26	126	197	167	149	1172
29.	Wardha	3	0	1	3	0	3	1	0	12	4	4	4	10	17	10	72
30.	Nagpur	5	3	1	8	1	7	4	1	19	36	76	47	45	49	38	340
31.	Bhandara	1	0	2	6	3	5	5	3	7	9	12	5	13	14	3	88
32.	Gondia	3	1	1	2	0	2	1	0	0	0	8	4	11	10	5	48
33.	Chandrapur	2	0	0	0	0	5	1	0	0	3	2	19	21	7	6	66
34.	Gadchiroli	0	0	0	1	1	2	0	0	1	2	0	11	12	4	1	35
	Nagpur Div.	14	4	5	20	5	24	12	4	39	54	102	90	112	101	63	649
	Total	228	293	278	699	417	477	423	388	908	1452	707	1384	1501	1309	1205	11669

Source: Compiled from ACABC Database

Table 3.4: Trend in District-wise Ventures Established under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	total
1.	Mumbai	1	10	7	11	-	1	1	-	2	5	1	1	-	1	1	42
2.	Thane	-	2	-	3	1	3	4	-	-	5	2	-	-	3	3	26
3.	Raigarh	-	1	-	-	-	1	-	-	-	9	-	2	-	3	8	24
4.	Ratnagiri	-	-	-	2	1	5	2	1	1	9	12	14	40	32	14	133
5.	Sindhudurg	-	2	-	1	1	2	-	4	1	-	5	6	13	45	29	109
	Konkan Div.	1	15	7	17	3	12	7	5	4	28	20	23	53	84	55	334
6.	Nashik	1	5	1	9	3	9	3	2	5	11	9	4	9	5	4	80
7.	Dhule	2	5	6	12	2	3	4	3	4	3	2	5	3	9	12	75
8.	Nandurbar	-	-	1	3	1	-	-	-	-	2	-	1	1	2	8	19
9.	Jalgaon	-	5	1	1	3	8	8	2	3	2	16	6	6	54	25	140
10.	Ahmednagar	2	16	16	61	12	30	14	16	34	97	40	63	85	60	36	582
	Nashik Div.	5	31	25	86	21	50	29	23	46	115	67	79	104	130	85	896
11.	Pune	2	26	14	81	27	32	29	25	33	69	41	28	52	37	28	524
12.	Satara	2	19	12	30	13	31	18	13	15	25	24	23	33	30	14	302
13.	Sangali	-	21	11	45	4	11	15	6	67	66	56	31	61	41	43	478
14.	Solapur	1	6	9	30	12	16	21	15	71	102	136	104	112	123	68	826
15.	Kolhapur	-	6	2	15	3	14	6	4	25	33	97	88	123	126	53	595
	Pune Div.	5	78	48	201	59	104	89	63	211	295	354	274	381	357	206	2725
16.	Aurangabad	-	1	1	5	2	2	2	4	1	3	2	2	7	12	6	50
17.	Jalna	-	-	-	-	-	-	2	-	2	1	1	1	7	6	2	22
18.	Parbhani	-	2	2	4	-	2	5	6	3	3	1	4	10	5	9	56
19.	Hingoli	-	-	-	-	-	1	2	2	-	6	1	3	6	4	3	28
20.	Beed	-	1	1	7	2	2	3	2	7	7	7	13	17	24	13	106
21.	Nanded	-	3	-	11	2	4	2	1	2	7	2	9	9	20	5	77
22.	Osmanabad	-	1	1	2	-	2	3	1	9	29	21	41	50	19	11	190
23.	Latur	-	3	2	4	-	3	-	1	1	4	-	2	12	6	11	49
	Aurangabad Div.	-	11	7	33	6	16	19	17	25	60	35	75	118	96	60	578
24.	Buldhana	-	-	-	2	2	-	4	2	4	2	1	1	11	43	12	84
25.	Akola	1	6	2	2	3	2	6	4	2	1	6	1	2	34	10	82
26.	Washim	-	3	2	4	2	1	-	2	3	3	3	6	3	19	3	54
27.	Amravati	-	4	1	4	-	4	7	13	18	23	13	28	29	25	7	176
28.	Yavatmal	-	2	-	2	2	4	4	2	3	3	2	3	3	20	7	57
	Amravati Div.	1	15	5	14	9	11	21	23	30	32	25	39	48	141	39	453
29.	Wardha	-	3	-	-	-	-	-	-	-	6	1	1	5	8	5	29
30.	Nagpur	-	3	2	2	1	-	3	3	1	17	27	35	17	34	31	176
31.	Bhandara	-	1	1	1	-	2	4	-	2	4	11	3	-	7	6	42
32.	Gondia	-	1	-	3	-	-	1	-	-	-	4	3	1	10	4	27
33.	Chandrapur	-	1	-	-	-	3	-	-	-	-	2	3	12	7	4	32
34.	Gadchiroli	-	-	-	-	-	-	-	-	-	-	-	2	4	10	1	17
	Nagpur Div.	-	9	3	6	1	5	8	3	3	27	45	47	39	76	51	323
	Total Maharashtra	12	159	95	357	99	198	173	134	319	557	546	537	743	884	496	5309

Source: Compiled from ACABC Database

Another division showing significant rise in numerical strength of candidates trained and agri-ventures established under ACABC Scheme was Nasik. The numerical strength of candidates trained under ACABC Scheme in Nasik division increased from 56 in 2002 to 138 in 2010 and further to 171 in 2016 with a sum of 1,857 during the period between 2002 and 2016. The numerical strength of agri-ventures established in Nasik division increased from 5 in 2002 to 46 in 2010 and further to 85 in 2016 with a sum of 896 during the period between 2002 and 2016. Ahmednagar was found to be the only district belonging to Nasik division, which showed very high concentration of candidates trained and agri-ventures established under ACABC Scheme.

In fact, during the period between 2002 and 2016, Pune and Nasik divisions put together accounted for 66.48 per cent share in total number of candidates trained under ACABC Scheme in Maharashtra. Similarly, during the same period, these two divisions put together accounted for 68.20 per cent share in total number of agri-ventures established under ACABC Scheme in Maharashtra. Further, more than 55 per cent of the candidates trained and agri-ventures established were found to be concentrated across five districts of Maharashtra namely Ahmednagar, Pune, Sangli, Solapur and Kolhapur.

The Aurangabad division of Maharashtra ranked third in terms of numerical strength of candidates trained and ventures established under ACABC Scheme. The number of candidates trained under ACABC Scheme in Aurangabad division increased from 13 in 2002 to 58 in 2010 and further to 175 in 2016 with a sum of 1,373 during the period between 2002 and 2016. The numerical strength of agri-ventures established in Aurangabad division increased from 11 in 2003 to 25 in 2010 and 60 in 2016 with a sum of 578 during the period between 2002 and 2016.

The fourth important division of Maharashtra showing significant presence of candidates trained and agri-ventures established under ACABC was noticed to be Amravati. The numerical strength of candidates trained under ACABC Scheme in Amravati division increased from 29 in 2002 to 116 in 2010 and further to 149 in 2016 with a sum of 1,172 during the period between 2002 and 2016. The numerical strength of agri-ventures established in Amravati division rose from as low as 1 in 2002 to 30 in 2010 and 39 in 2016 with a sum of 453 during the period between 2002 and 2016.

Konkan division of Maharashtra ranked fifth with respect to numerical strength of candidates trained and ventures established under ACABC Scheme. The number of candidates trained in Konkan division of Maharashtra remained by and large same at 16-17 between 2002 and 2016 with a sharp increase in the same to 110 in 2016 with a sum

Table 3.5: Trend in Institute-wise Candidates Trained under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the Venture	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Krishna Valley Advanced Agriculture Foundation, Sangli	73	101	61	207	171	175	138	140	206	345	105	242	210	174	105	2453
2	Mitcon Consultancy Services Ltd., Pune	28	66	63	137	175	210	175	175	280	385	69	-	-	-		1763
3	Shriram Pratistan Mandal, Wadala, Solapur	-	-	-	-	-	-	-	-	209	210	68	239	169	100	68	1063
4	Krishna Valley Advance Agriculture Foundation, Uttur	-	-	-	-	-	-	-	-	-	70	105	175	105	175	105	735
5	Krishi Vigyan Kendra, Durgapur, Dist Amravati	-	-	-	-	-	-	35	36	127	103	26	121	70	76	62	656
6	Baramati Agriculture Development Trust Krishi Vigyan Kendra, Baramati	-	-	-	-	44	62	47	39	56	35	103	62	136		68	652
7	Krishi Vigyan Kendra, Babhaleshwar	-	-	24	58	28	29	29		32	61	63	104	101	49	36	614
8	Shriram Pratishthan Mandal, Osmanabad	-	-	-	-	-	-	-	-	-	105	32	203	101	69	105	615
9	Krishna Valley Advanced Agriculture Foundation, Nagpur	-	-	-	-	-	-	-	-	-	35	104	104	138	105	70	556
10	Mahatma Phule Krishi Vidyapeeth, Pune	80	66	70	245	-	-	-	-	-	-	-	-	-	-		461
11	Shriram Pratisthan Mandal, Ratnagiri	-	-	-	-	-	-	-	-	-	70	34	99	92	32	62	389
12	Krishna Valley Advanced Agriculture Foundation, Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	35	105	105	134	379
13	Shashwat Sheti Vikas Pratisthan (SSVP)	-	-	-	-	-	-	-	-	-	-	-	-	105	129	105	339
14	Shriram Pratisthan Mandal, Akola	-	-	-	-	-	-	-	-	-	-	-	-	101	93	70	264
15	Vasant Prakash Vasakh Pratistan, Sangli	40	31	64	52	-	-	-	-	-	-	-	-	-	-		187
16	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	-	-	-	-	-	-	-	-	-	-	-	-	35	105	105	245
17	Krishna Valley Advanced Agriculture Foundation, Jalgaon	-	-	-	-	-	-	-	-	-	-	-	-	34	105	70	209
18	Manjara Charitable Trust's KRISHI VIGYAN KENDRA, Latur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13
19	Krishi Vigyan Kendra, Narayangaon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	28
	Total	221	264	282	699	418	476	424	390	910	1419	709	1384	1502	1317	1206	11621

Source: Compiled from ACABC Database

Table 3.6: Trend in Institute-wise Ventures Established under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the Venture	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Krishna Valley Advanced Agriculture Foundation, Sangli	1	50	44	86	22	60	74	34	120	141	140	85	150	70	72	1149
2	Mitcon Consultancy Services Ltd. Pune	-	19	5	92	55	78	74	62	107	157	103	11	1	-	-	764
3	Shriram Pratishthan Mandal, Wadala, Solapur	-	-	-	-	-	-	-	-	55	89	92	77	83	94	52	542
4	Krishna Valley Advanced Agriculture Foundation, Uttur	-	-	-	-	-	-	-	-	-	-	62	74	89	106	26	357
5	Krishi Vigyan Kendra, Babhaleshwar	-	-	12	36	5	30	-	-	-	54	20	54	65	23	27	326
6	Shriram Pratishthan Mandal, Osmanabad	-	-	-	-	-	-	-	-	-	19	22	80	88	52	43	304
7	Krishna Valley Advanced Agriculture Foundation, Nagpur	-	-	-	-	-	-	-	-	-	-	37	46	42	96	55	276
8	Krishi Vigyan Kendra, Durgapur, Amravati	-	-	-	-	-	-	5	20	27	34	27	41	38	48	13	253
9	Baramati Agriculture Development Trusts Krishi Vigyan Kendra, Baramati	-	-	-	-	-	29	20	20	12	29	25	43	30	30	15	253
10	Mahatma Fule Krishi Vidhyapeeth Pune	9	48	32	97	17	-	-	-	-	1	-	-	-	-	1	205
11	Shriram Pratishthan Mandal, Ratnagiri	-	-	-	-	-	-	-	-	-	17	17	25	61	35	31	186
12	Shashwat Sheti Vikas Pratishthan (SSVP)	-	-	-	-	-	-	-	-	-	-	-	-	48	66	39	153
13	Baramati Agriculture Development Trusts Krishi Vigyan Kendra, Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Shriram Pratishthan Mandal, Akola	-	-	-	-	-	-	-	-	-	-	-	-	4	88	19	111
15	Krishna Valley Advanced Agriculture Foundation, Jalgaon	-	-	-	-	-	-	-	-	-	-	-	-	-	57	39	96
16	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	-	-	-	-	-	-	-	-	-	-	-	-	-	57	37	94
17	Vasant Prakash Vasakh Pratishthan, Sangli	-	30	-	35	2	-	-	-	-	-	-	-	-	-	-	67
18	Krishna Valley Advance Agriculture Foundation Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	-	45	64	31	140
	Total	10	147	93	346	101	197	173	136	321	541	545	536	744	886	500	5276

Source: Compiled from ACABC Database

of 717 during the period between 2002 and 2016. Similarly, the number of ventures established in Konkan division increased from 1 in 2002 to 4 in 2010 and further to 55 in 2016 with a sum of 334 during the period between 2002 and 2016.

The ranking of Nagpur division of Maharashtra was found to be sixth in terms of numerical strength of candidates trained and agri-ventures developed. The number of candidates trained in Nagpur division increased from 14 in 2002 to 54 in 2010 and further to 63 in 2016 with a sum of 649 during the period between 2002 and 2016. However, the number of agri-ventures established in Nagpur division of Maharashtra decreased from 9 in 2003 to 3 in 2010 and with rise in the same to 51 in 2016.

In general, the state of Maharashtra showed leaps and bound rise in candidates trained and agri-ventures established under ACABC Scheme during the period between 2002 and 2016. The numerical strength of candidates trained under ACABC Scheme in Maharashtra increased from as low as 228 in 2002 to 908 in 2010 and 1205 in 2016 with a sum of 11,669 during the period between 2002 and 2016. The numerical strength of agri-ventures established in Maharashtra rose from as low as 12 in 2002 to 319 in 2010 and 496 in 2016 with a sum of 5,309 during the period between 2002 and 2016.

The trend in institute-wise candidates trained under ACABC Scheme in Maharashtra during the period between 2002 and 2016 is brought out in Table 3.6 with horizontal and vertical proportions being shown in Appendix 5 and 6. Similarly, the trend in institute-wise agri-ventures established under ACABC Scheme in Maharashtra is shown in Table 3.5 with horizontal and vertical proportions being shown in Appendix 7 and 8. Although as many as 19 NTIs in Maharashtra provide training to agricultural graduates under ACABC Scheme, the bulk of the candidates confined to few major NTIs.

Krishna Valley Advanced Agriculture Foundation, Sangli has been organizing training on ACABC Scheme ever since this scheme came into being in India on 9th April 2002. The number of agricultural graduates trained on ACABC Scheme by this NTI has grown rapidly from as low as 73 in 2002 to 345 in 2011 with a steady decline in the same to 105 in 2016 (Table 3.6) The total number of candidates trained on ACABC Scheme by this NTI was worked out at 2,453 during the period between 2002 and 2016. In fact, Krishna Valley Foundation alone accounted for 21.10 per cent share in total number of candidates trained under ACABC Scheme in Maharashtra. The number of agri-ventures established by Krishna Valley Foundation also increased rapidly from merely 1 in 2002 to 141 in 2011 with a steady decline in the same to 72 in 2016. The total number of agri-ventures established by this NTI was estimated at 1,149 during the period between 2002

and 2016 (Table 3.7). Further, Krishna Valley Foundation showed a share of 21.78 per cent in total number of agri-ventures established under ACABC Scheme in Maharashtra.

Another major NTI organizing training on ACABC Scheme was noticed to be MITCON Consultancy Services Ltd., Pune, which showed a significant rise in candidates trained on ACABC Scheme from 28 in 2002 to 280 in 2010 with a decline in the same to 69 in 2012. MITCON is not found to organise training on ACABC Scheme for the past few years. However, the total number of candidates trained on ACABC Scheme by MITCON was found to be 1,763 during the period between 2002 and 2016. The number of agri-ventures established by MITCON increased from 19 in 2003 to 157 in 2011 with a sharp decline in the same to merely 1 in 2014. Despite withdrawal of training on ACABC Scheme, MITCON was found to be instrumental in establishing 764 agri-ventures during the period between 2002 and 2016.

Although Shriram Pratishtan Mandal, Wadala, Solapur started organizing training on ACABC Scheme only from 2010, the total number of candidates trained by this NTI on ACABC scheme was found to be substantial and stood at 1,063 during the period between 2010 and 2016. Similarly, this NTI was found to be instrumental in establishing as many as 542 agri-ventures during the period between 2010 and 2016.

Krishi Vigyan Kendra (KVK), Babhaleshwar, Ahmednagar is found to be another NTI which has been successfully organizing training on ACABC Scheme since 2004. The number of agricultural graduates trained by this NTI/KVK on ACABC Scheme increased from 24 in 2004 to as many as 104 in 2013 with a decline in the same to 36 in 2016. The total number of candidates trained by this NTI during the period between 2004 and 2016 stood at 614. The number of agri-ventures established with the help of this NTI increased from 12 in 2004 to 65 in 2014 with a decline in the same to 27 in 2016. However, this NTI was instrumental in establishing 336 agri-ventures during the period between 2004 and 2016.

Baramati Agriculture Development Trust Krishi Vigyan Kendra, Baramati is another NTI which is conducting training on ACABC Scheme since 2006. The number of candidates trained by this NTI on ACABC Scheme increased from 44 in 2006 to 103 in 2012 with a decline in the same to 68 in 2016. The total number of candidates trained by this NTI on ACABC Scheme stood at 652 during the period between 2006 and 2016. Further, this NTI was instrumental in establishing 253 agri-ventures during the period between 2002 and 2016.

Krishi Vigyan Kendra, Durgapur, Dist Amravati started organizing training on ACABC Scheme in 2008 and so far it has trained 656 agricultural graduates on ACABC Scheme. This NTI is also instrumental in establishing 253 agri-ventures during the period between 2002 and 2016.

There are many other NTIs in Maharashtra which either started organizing training on ACABC in more recent times or stopped organizing the same after few years of the initiation of the Scheme. Important among the NTIs organizing training on ACABC Scheme which came into being in more recent times are: Krishna Valley Advance Agriculture Foundation, Uttur, Shriram Pratishtan Mandal, Osmanabad, Krishna Valley Advanced Agriculture Foundation, Nagpur, Shriram Pratisthan Mandal, Ratnagiri, Krishna Valley Advanced Agriculture Foundation, Pune Regional Centre, Shashwat Sheti Vikas Pratisthan (SSVP), Shriram Pratishtan Mandal, Akola, Krishna Valley Advanced Agriculture Foundation, Sindhudurg, and Krishna Valley Advanced Agriculture Foundation, Jalgaon. On the other hand, the NTIs which stopped organizing training on ACABC Scheme after few years beginning 2002 are noticed to be Mahatma Phule Krishi Vidyapeeth, Pune and Vasant Prakash Vasakh Pratistan, Sangli.

In general, various NTIs operating in Maharashtra put together were seen to provide training on ACABC Scheme to some 11,621 agricultural graduates during the period between 2002 and 2016. These NTIs were instrumental in establishing 5,276 agri-ventures in Maharashtra during the same period.

Table 3.7: Annual Compound Growth Estimates for Division-wise Candidates Trained and Ventures Established under ACABC Scheme in Maharashtra: 2002 – 2016

Division	ACGR (%)					
	Candidates Trained			Ventures Established		
	2002-09	2010-16	2002-16	2002-09	2010-16	2002-16
Konkan	-3.86	31.53 ^{**}	16.67 [*]	9.13	48.31 [*]	22.38 [*]
Nashik	5.23	4.97	9.16 [*]	14.02	9.44	15.70 [*]
Pune	10.37	-0.79	13.28 [*]	26.11	1.38	21.74 [*]
Aurangabad	5.96	16.33	15.52 [*]	9.65	18.62	21.27 [*]
Amravati	7.53	15.05	14.86 [*]	35.56 ^{**}	17.04	23.92 [*]
Nagpur	7.15	10.46	29.80 [*]	-5.27	45.12 ^{**}	29.19 [*]
Maharashtra	8.25	5.11	13.87 [*]	24.24	9.56	22.17 [*]

Note: 1) For Aurangabad and Nagpur divisions, growth rate estimates with respect to candidates trained and ventures established are for the period between 2003 and 2016

2) * and ** - represent significance of growth rates at 1 and 5 per cent level of probability.

The estimates brought out in Table 3.3 and Table 3.4 show year-wise trend in number of candidates trained and agri-ventures established under ACABC Scheme across various districts as well as divisions of Maharashtra during the period between 2002 and 2016. These estimates are further analysed by computing annual compound growth rates

with respect to division-wise number of agricultural graduates trained and agri-ventures established under ACABC Scheme during the period between 2002 and 2016. The growth rate estimates with respect to division-wise number of agricultural graduates trained and agri-ventures established in Maharashtra during the period between 2002 and 2016 are shown in Table 3.8.

During the period between 2002 and 2016, the number of candidates trained under ACABC Scheme increased at an annual growth rate of 16.67 per cent in Konkan division, 9.16 per cent in Nasik division, 13.28 per cent in Pune division, 15.52 per cent in Aurangabad division, 14.86 per cent in Amravati division and 29.30 per cent in Nagpur division. During the same period, the number of agri-ventures established under ACABC Scheme increased at annual growth rate of 23.38 per cent in Konkan division, 15.70 per cent in Nasik division, 21.74 per cent in Pune division, 21.27 per cent in Aurangabad division, 23.92 per cent in Amravati division and 29.19 per cent in Nagpur division. In general, the state of Maharashtra showed 13.87 per cent annual growth in candidates trained under ACABC Scheme during the period between 2002 and 2016. The number of agri-ventures established in Maharashtra increased at an annual growth rate of 22.17 per cent during the same period. Thus, the growth in agri-ventures established was faster than growth in candidates trained under ACABC Scheme in Maharashtra between 2002 and 2016. This held true for almost all the divisions of Maharashtra. Further, there was slowing down in terms of candidates trained and agri-ventures established during 2010-16 period as against 2002-09 period.

It deserves mention that some of the divisions of Maharashtra showed erratic annual growth rate estimates for 2002-09, 2010-16 and 2002-16 periods. The cases in point are Nasik, Pune and Nagpur divisions in terms of candidates trained and Aurangabad division with respect to agri-ventures established. Even the state of Maharashtra showed erratic growth in terms of candidates trained during 2002-09, 2010-16 and 2002-16 periods. The major reason for erratic growth rate was weak base or terminal year, which resulted in higher growth for the overall period as against first and second period. However, in general, all the divisions of Maharashtra showed remarkable annual growth in candidates trained and agri-ventures established under ACABC Scheme during the period between 2002 and 2016.

3.7 All Other Relevant Latest Information Relating to ACABC Scheme in Maharashtra

The estimates relating to number of training programmes completed/ on-going, projects sanctioned by banks and projects pending by banks under ACABC Scheme for

various Nodal Training Institutes (NTIs) encompassing the period between 2002 and 2016 are brought out in Table 3.9.

There are as many as 355 training programmes conducted by various NTIs on ACABC Scheme in Maharashtra during the period between 2002 and 2016 with Krishna Valley Advanced Agriculture Foundation, Sangli showing the highest number of training programmes completed in this respect followed by Mitcon Consultancy Services Ltd., Pune and Shriram Pratishthan Mandal, Wadala, Solapur. These NTIs were found to complete 32-72 training programmes under ACABC Scheme during the given period. On the other end of the spectrum, some of the NTIs in Maharashtra completed less than 10 training programmes under ACABC Scheme, and these NTIs encompassed Shriram Pratishthan Mandal, Akola, Vasant Prakash Vasakh Pratistan , Sangli, Krishna Valley Advanced Agriculture Foundation, Jalgaon, Krishna Valley Advanced Agriculture Foundation, Sindhudurg, Krishi Vigyan Kendra, Narayangaon and Manjara Charitable Trust's Krishi Vigyan Kendra, Latur. Further, the given period of time showed only 10 on-going training programmes under ACABC Scheme in Maharashtra.

Table 3.9: Institute-wise No. of Training Completed/On Going, Projects Sanctioned by Banks and Projects Pending by Banks under ACABC Scheme in Maharashtra: 2002 to 2016

Sr. No.	Name of the Institute	No. of Training Completed/ On Going	No. of Projects Sanctioned	No. of Projects Pending
1	Krishna Valley Advanced Agriculture Foundation, Sangli	72 / 2	38	935
2	Mitcon Consultancy Services Ltd., Pune	51 / 0	2	515
3	Shriram Pratishthan Mandal, Wadala, Solapur	32 / 0	13	636
4	Baramati Agricultural Development Trusts Krishi Vigyan Kendra, Baramati	22 / 0	-	314
5	Krishna Valley Advanced Agriculture Foundation , Uttur	21 / 2	39	476
6	Krishi Vigyan Kendra, Babhaleshwar	21 / 0	53	118
7	Krishi vigyan Kendra, Durgapur, dist Amravati	21 / 0	4	315
8	Shriram Pratishthan Mandal, Osmanabad	19 / 0	-	473
9	Krishna Valley Advanced Agriculture Foundation , Nagpur	17 / 0	2	475
10	Mahatma Phule Krishi Vidyapeeth , Pune	14 / 0	1	-
11	Shriram Pratishthan Mandal, Ratnagiri.	13 / 0	13	241
12	Krishna Valley Advanced Agriculture Foundation , Pune Regional Centre	11 / 1	-	140
13	Shashwat Sheti Vikas Pratishthan (SSVP)	10 / 2	6	330
14	Shriram Pratishthan Mandal, Akola	8 / 1	2	227
15	Vasant Prakash Vasakh Pratistan , Sangli	7 / 0	-	-
16	Krishna Valley Advanced Agriculture Foundation, Jalgaon	7 / 0	-	174
17	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	7 / 1	-	175
18	Krishi Vigyan Kendra, Narayangaon	1 / 1	-	-
19	Manjara Charitable Trust's Krishi Vigyan Kendra, Latur	1 / 0	-	-
	Total	355 / 10	166	5544

Source: Compiled from ACABC Database

The estimates shown in Table 3.9 also revealed that there were 166 projects sanctioned by banks under ACABC Scheme in Maharashtra during the period between 2002 and 2016 with Krishi Vigyan Kendra, Babhaleshwar showing the highest number of projects sanctioned followed by Krishna Valley Advanced Agriculture Foundation , Uttur and Krishna Valley Advanced Agriculture Foundation, Sangli. The pending projects by banks under ACABC Scheme in Maharashtra were as many as 5,544 during the period between 2002 and 2016, which encompassed 935 pending projects for Krishna Valley Advanced Agriculture Foundation, Sangli, 636 for Shriram Pratisthan Mandal, Wadala, Solapur, 515 for Mitcon Consultancy Services Ltd., Pune and 476 for Krishna Valley Advanced Agriculture Foundation , Uttur.

In general, various agri-ventures established under ACABC in Maharashtra are noticed to have significant positive impact on farming community since awareness among them created by agri-ventures on scientific methods of farming has resulted in increased cropping intensity, yield, crop production, income and employment generation.

Notably, one of the objectives of the ACABC Scheme is to strengthen and support the existing extension activities. The benefits received by farming community from extension services have not only augmented crop yield but also farm income. Another objective of ACABC Scheme relates to providing technical knowledge and know-how to farmers, apart from providing proper guidance, good quality seed and farm implements. The objective of technology transfer, guidance and input supply has not only led the farmers to improve their entire production system but also other market related activities.

CHAPTER – IV

METHOD AND PROCEDURES OF THE STUDY

This chapter provides an insight into the methodology adopted for the present investigation with respect to procedures followed for the selection of sampled districts, agri-ventures, beneficiary and non-beneficiary farmers, method of investigation and survey of the study area, method of data analysis, sampling design, and information on other relevant parameters covered under the present investigation.

4.1 Method of Study

The diversification, specialization and modernization of agricultural practices chiefly depend on augmenting support and extension services to farmers. In order to ensure adoption of improved techniques and better methods of farming for each farmer across the country, the Ministry of Agriculture and Farmers welfare, Government of India on 9th April, 2002 launched a unique programme of setting up of Agri-Clinics and Agri-Business centres (ACABC) by agriculture graduates with the financial support from NABARD, and MANAGE being entrusted with the task of providing training to eligible candidates through its NTIs. It is to be noted that MANAGE also ensures sponsoring of sufficient number of cases to the participating banks for financing under the scheme and arranges to establish required number of units at the ground level with an overall objective of making the scheme a success.

In order to evaluate the success of ACABC Scheme in terms of training provided and agri-ventures established under the Scheme in varied areas related to agriculture and allied activities, and to assess the impact of ACABC Scheme on farming community, the Directorate of Economics and Statistics, Government of India, Ministry of Agriculture and Farmers welfare entrusted AERC, University of Allahabad, U.P. with a task to coordinate and prepare an All India Research Study Proposal entitled ‘Impact Study on Agricultural Extension Services to Farmers By Agri-Clinics & Agri-Business Centres (ACABC Scheme)’ which encompasses evaluation study to be carried out for four major states of India viz. Maharashtra, Uttar Pradesh, Assam and Telengana.

4.2 Sampling Design

The sampling design for the present investigation chiefly encompasses procedure for the selection of state/districts, selection of agri-ventures and sampled beneficiary and non-beneficiary farmers.

4.2.1 Selection of State/Districts

The present impact evaluation study on ACABC Scheme was conducted in the state of Maharashtra, which accounts for the highest number of candidates trained under the Scheme in India during the period between 2002 and 2016. The state of Maharashtra also shows the maximum number agri-ventures established under the Scheme during the same period. During the period between 2002 and 2016, the state of Maharashtra showed 23.26 per cent share in total number of candidates trained under ACABC Scheme in India. Similarly, during the same period, the state of Maharashtra showed 25.24 per cent share in total number of agri-ventures established under ACABC Scheme in India.

The present study was conducted in Solapur and Ahmednagar districts of Maharashtra. Among various districts of Maharashtra, the district of Solapur showed the highest number of candidates trained and ventures established under ACABC scheme during the period between 2002 and 2016. Although the district of Ahmednagar occupied fourth place in Maharashtra with respect to candidates trained and third in terms of ventures established under the scheme during the same period, the district has been engaged in conducting training on ACABC Scheme and in establishing agri-ventures ever since the Scheme came into being in 2002.

4.2.2 Selection of Agri-Ventures

The study is confined to selection of two Nodal Training Institutes (NTIs) engaged in conducting training on ACABC Scheme, which included one from the district of Solapur and another one from Ahmednagar. For the present investigation, Shriram Pratistan Mandal, Wadala was selected as one of the NTIs from Solapur district. The other selected NTI namely, Krishi Vigyan Kendra, Babhaleshwar, belonged to the district of Ahmednagar. It was further decided to select five agri-ventures randomly from each of the selected districts, which had been established with the help of selected NTIs subject to the condition that these agri-ventures encompassed higher number of farmers benefited from them. The selected five agri-ventures from Solapur district included: (a) Vasundhara Agro Services, (b) Mahalaxmi Krishi Kendra, (c) Penulakar Nursury, (d) Kamdhenu Dairy Farm, and (e) Matoshri Goat Farm, whereas the selected five agri-ventures from Ahmednagar district encompassed: (a) Parivar Agro Seva, (b) Datta Agro Seva, (c) Trimurty Agro Nursury, (d) Radheya Poultry Farm, and (e) Unimax.

4.2.3 Selection of Sampled Beneficiary and Non-Beneficiary Farmers

A list of beneficiary farmers was collected from each of the selected agri-ventures in order to further categorize them into beneficiaries engaged in availing proper

agricultural services and allied agricultural services. It was decided to select 10 beneficiary farmers from each of the five selected agri-ventures from each of the two sampled districts. Thus, a sample of 50 beneficiary farmers was selected from Solapur district and another 50 from Ahmednagar district with a sum of 100 beneficiary farmers selected from the two sampled districts of Maharashtra. As control group, 5 non-beneficiary farmers were selected from each of the five selected agri-ventures from each of the two sampled districts. Therefore, a sample of 25 non-beneficiary farmers was also selected from Solapur district and another 25 from Ahmednagar district with a sum of 50 non-beneficiary farmers selected from the two sampled districts of Maharashtra. In all, the study covered 150 sampled beneficiary and non-beneficiary farmers. The impact of ACABC Scheme was evaluated by comparing income and other relevant parameters for beneficiary and non-beneficiary farmers.

4.3 Method of Investigation and Survey of the Area under Study

Primary data from the sampled farmers belonging to the districts of Solapur and Ahmednagar were collected through the well structured schedule by personal interview method. The schedules were constructed separately for beneficiary and non-beneficiary farmers. In-depth information related to economic and educational status, cropping pattern, irrigated and cropped area during different seasons, irrigation status, net and gross irrigated area, irrigation intensity, details of input cost and output value for various crops grown during different seasons, input, output and net income details for various crops, input, output and net income for milch animals, input and output details for draft and other animals, details of extension services received from agri-ventures, details of hiring machinery and implements from agri-ventures, details of inputs received on payment basis from agri-ventures, details of training received from agri-ventures, other support, extension services and expert advises received from agri-ventures, details on increase in income through production of crops and animals, details of input sale and other services extended by agri-ventures, etc. was collected from each of the sampled beneficiary farmers drawn from the districts of Solapur and Ahmednagar.

The information collected from non-beneficiary farmers belonging to the districts of Solapur and Ahmednagar encompassed economic and educational status, cropping pattern, irrigated and cropped area during different seasons, irrigation status, net and gross irrigated area, irrigation intensity, details of input cost and output value for various crops grown during different seasons, input, output and net income details for various crops, input, output and net income for milch animals, input and output details for draft

and other animals, some relevant question regarding awareness of ACABC Scheme, source of procurement of inputs, details of extension services received, satisfaction level with respect to inputs and outputs, etc.

In addition to the collection of primary data from the sampled beneficiary and non-beneficiary farmers, secondary data related to various performance indicators viz. state-wise number of candidates trained and agri-ventures established under ACABC Scheme, district-wise number of candidates trained and agri-ventures established under ACABC Scheme in Maharashtra, number of training programmes conducted under ACABC Scheme in Maharashtra, etc. encompassing the period between 2002 and 2016 were collected from ACABC Portal: <http://www.agriclinics.net/>, which provides Database related to ACABC Scheme.

4.4 Method of Analysis of Data

Although simple tabular analysis is used to present the findings of the present investigation., exponential trend equations have also been fitted to the time series data obtained with respect to division-wise number of candidates trained and agri-ventures established under ACABC Scheme in Maharashtra in order to compute compound rates of growth that were also tested for their significance by the student 't' statistics

4.5 Reference Period of the Study

The reference period for the primary data survey was the agricultural year 2015-16. However, the analysis with respect to secondary data is performed for the period between 2002 and 2016.

4.6 Table of Sampling Design

The venture-wise and service-wise total number of sampled beneficiary and non-beneficiary farmers selected under each of the four land holding size categories from each of the ten villages belonging to the districts of Solapur and Ahmednagar is shown in Table 4.1 and Table 4.2.

The number of sampled beneficiary farmers selected from Solapur district encompassed 14 in marginal category, 17 in small, 15 in medium and 4 in large category with a sum of 50 beneficiary farmers drawn from the district of Solapur. Similarly, the number of sampled beneficiary farmers selected from Ahmednagar district encompassed 6 in marginal category, 20 in small, 14 in medium and 10 in large category with a sum of 50 beneficiary farmers drawn from the district of Ahmednagar. Thus, altogether 100 sampled beneficiary farmers were selected from the districts of Solapur and Ahmednagar which encompassed 20 in marginal, 37 in small, 29 in medium and 14 in large category.

It is to be noted that the sampled beneficiary farmers belonging to the category of proper agriculture services were very less since majority of the beneficiary farmers practiced both agriculture and allied activities. This held true for both the sampled districts of Solapur and Ahmednagar. Therefore, the sampled beneficiary farmers mainly belonged to the category of agriculture and allied services put together (Table 4.1).

Table 4.1: Venture-wise and Service-wise Distribution of Sampled Beneficiary Farmers

District	Name of Taluka	Name of Village	Name of Venture	Sampled Farmers				
				Marginal	Small	Medium	Large	Total
Solapur	Proper Agriculture Services							
	Barshi	Vairag	Vasundhara Agro Services	1	1	-	-	2
	Mohol	Shirapur	Mahalaxmi Krishi Kendra	-	1	2	-	3
	Tuljapur	Akole Bk.	Penulakar Nursury	-	-	-	-	-
	Madha	Kurdu	Kamdhenu Dairy Farm	-	-	-	-	-
	Madha	Bembla	Matoshri Goat Farm	-	-	-	-	-
			Sub Total	1	2	2	-	5
	Both Agriculture and Allied Services							
	Barshi	Vairag	Vasundhara Agro Services	1	2	2	3	8
	Mohol	Shirapur	Mahalaxmi Krishi Kendra	1	2	4	-	7
	Madha	Bembla	Penulakar Nursury	3	4	3	-	10
	Madha	Kurdu	Kamdhenu Dairy Farm	7	2	1	-	10
	Tuljapur	Akole Bk.	Matoshri Goat Farm	1	5	3	1	10
			Sub Total	13	15	13	4	45
		Total	14	17	15	4	50	
Ahmednagar	Proper Agriculture Services							
	Rahata	Pimpri Nirmal	Parivar Agro Seva	-	1	2	-	3
	Rahuri	Yeawala Akhada	Datta Agro Seva	2	-	-	-	2
	Shrirampur	Shrirampur	Trimurthy Agro Nursury	-	1	1	-	2
	Rahata	Kelwad	Radheya Poultry Farm	-	-	-	1	1
	Rahata	Rahata	Unimax	-	-	-	-	-
			Sub Total	2	2	3	1	8
	Both Agriculture and Allied Services							
	Rahata	Pimpri Nirmal	Parivar Agro Seva	-	3	-	4	7
	Rahuri	Yeawala Akhada	Datta Agro Seva	2	1	5	-	8
	Shrirampur	Shrirampur	Trimurthy Agro Nursury	2	5	-	1	8
	Rahata	Kelwad	Radheya Poultry Farm	-	7	2	-	9
	Rahata	Rahata	Unimax	-	2	4	4	10
			Sub Total	4	18	11	9	42
		Total	6	20	14	10	50	
		Grand Total	20	37	29	14	100	

The number of sampled non-beneficiary farmers selected from Solapur district included 12 in marginal category, 3 in small, 6 in medium and 4 in large category with a sum of 25 non-beneficiary farmers drawn from the district of Solapur. Similarly, the number of sampled non-beneficiary farmers selected from Ahmednagar district included 3 in marginal category, 10 in small, 9 in medium and 3 in large category with a sum of 25 non-beneficiary farmers drawn from the district of Ahmednagar. Thus, altogether 50 sampled non-beneficiary farmers were selected from the districts of Solapur and Ahmednagar which encompassed 15 in marginal, 13 in small, 15 in medium and 7 in large category (Table 4.2).

Table 4.2: Venture-wise and Service-wise Distribution of Sampled Non-Beneficiary Farmers

District	Name of Taluka	Name of Village	Name of Venture	Sampled Farmers				
				Marginal	Small	Medium	Large	Total
Solapur	Proper Agriculture Services							
	Barshi	Vairag	Vasundhara Agro Services	1	1	-	-	2
	Mohol	Shirapur	Mahalaxmi Krishi Kendra	-	-	1		1
	Tuljapur	Akole Bk.	Penulakar Nursury	-	-	-	1	1
	Madha	Kurdu	Kamdhenu Dairy Farm	-	-	-	-	-
	Madha	Bembla	Matoshri Goat Farm	-	-	-	-	-
			Sub Total	1	1	1	1	4
	Both Agriculture and Allied Services							
	Barshi	Vairag	Vasundhara Agro Services	2	-	1	-	3
	Mohol	Shirapur	Mahalaxmi Krishi Kendra	1	-	2	1	4
	Madha	Bembla	Penulakar Nursury	2	-	-	2	4
	Madha	Kurdu	Kamdhenu Dairy Farm	3	-	2	-	5
	Tuljapur	Akole Bk.	Matoshri Goat Farm	3	2	-	-	5
			Sub Total	11	2	5	3	21
		Total	12	3	6	4	25	
Ahmednagar	Proper Agriculture Services							
	Rahata	Pimpri Nirmal	Parivar Agro Seva	-	1	-	-	1
	Rahuri	Yeawala Akhada	Datta Agro Seva	-	1	-	-	1
	Shrirampur	Shrirampur	Trimurty Agro Nursury	1	-	-	-	1
	Rahata	Kelwad	Radheya Poultry Farm	-	-	-	-	-
	Rahata	Rahata	Unimax	-	-	1	-	1
			Sub Total	1	2	1	-	4
	Both Agriculture and Allied Services							
	Rahata	Pimpri Nirmal	Parivar Agro Seva	-	2	2	-	4
	Rahuri	Yeawala Akhada	Datta Agro Seva	1	2	-	1	4
	Shrirampur	Shrirampur	Trimurty Agro Nursury	-	1	3	-	4
	Rahata	Kelwad	Radheya Poultry Farm	-	3	1	1	5
	Rahata	Rahata	Unimax	1	-	2	1	4
			Sub Total	2	8	8	3	21
		Total	3	10	9	3	25	
		Grand Total	15	13	15	7	50	

Thus, altogether the study covered 150 sampled farmers with 100 beneficiary and 50 non-beneficiary farmers. It is to be noted that the sampled non-beneficiary farmers belonging to the category of proper agriculture services drawn from both Solapur and Ahmednagar districts were very few since majority of them practiced both agriculture and allied activities. Hence, the sampled non-beneficiary farmers also mainly belonged to the category of agriculture and allied services put together.

CHAPTER – V

RESULTS AND DISCUSSION

This chapter mainly deals with the socio-economic profile of sampled beneficiary and non-beneficiary farmers of the ACABC Scheme in Maharashtra. The socio-economic status and resource endowments have been compared for different categories of beneficiary and non-beneficiary farmers. The information relating to economic and social status, caste composition, education status, cropping pattern, irrigated area, value of input and output for various crops cultivated during different seasons, value of input and output for various animals, etc. has been analysed and discussed for various categories of sampled beneficiary and non-beneficiary farmers. The knowledge of the background of the sampled farmers is essential since the viability of any enterprise heavily depends on the favorable attitudinal changes towards adoption of superior technical inputs or technique of production, which in turn, depends on technical skills and resource position of the farmers. Apart from providing general background information of the sampled farmers, this chapter also provides details regarding extension services received by beneficiaries under ACABC Scheme, hiring of machines and implements from ventures, receipt of inputs, training and other support from ventures established under ACABC Scheme, awareness of non-beneficiary farmers regarding ACABC Scheme, sources of procuring inputs, extension services received by non-beneficiaries, etc.

5.1 Economic Status, Cropping Pattern, Input Cost, Output Value and Income Generation for Beneficiary Farmers

This section revolves around analysing economic and social status, caste composition, education status, cropping pattern, irrigated area, value of input and output for various crops cultivated during different seasons, value of input and output for various animals, etc. of sampled beneficiary farmers.

5.1.1 Economic Status of Beneficiary Farmers

The socio-economic characteristics of farmers have a profound influence on the decision making process and profitability of crop enterprise as well as enterprises relating to allied sectors. The details regarding economic status of various categories of sampled beneficiary farmers with focus on their land holding size, membership of agencies/ventures, subsidiary and main occupation under the category of proper agricultural services, allied agricultural services and proper and allied agricultural services put together are provided in Table 5.1.

The information furnished in Table 5.1 clearly underscored the fact that 70 per cent of the sampled beneficiary farmers belonged to the category of proper agricultural services 30 per cent of them belonged to the category of allied agricultural services. The estimates further revealed that while agriculture was the main occupation of sampled beneficiary farmers, the subsidiary occupation practiced by them revolved around dairy and goat farming. However, while 20 of beneficiary farmers practiced dairy farming as the main subsidiary occupation, 10 per cent of them practiced goat farming.

Table 5.1: Category-wise Details of the Economic Status of Sample Beneficiary Farmers of the ACABC Scheme Area of Maharashtra

(Area in Hectare per Beneficiary)

Category of Sample Beneficiary Farmers	No. of Samples	Area (Hectare)	Benefits Availed 2014-15	Membership of Agencies	Subsidiary Occupation (Number)			Main Occupation Agri (Number)
					Dairy	Goat	Total	
Proper Agri. Services (I)								
Marginal Farmers	10	0.61	10	Yes (10); No (0)	-	-	-	10
Small Farmers	24	1.49	24	Yes (24); No (0)	-	-	-	24
Medium Farmers	23	2.88	23	Yes (23); No (0)	-	-	-	23
Large Farmers	13	6.30	13	Yes (13) No (0)	-	-	-	13
Total Proper Agri Services	70	2.71	70	Yes (70); No (0)	-	-	-	70
Allied Agri. Services (II)								
Marginal Farmers	10	0.76	10	Yes (10) ; No (0)	Yes (7) No (3)	Yes (3); No (7)	Yes (10); No (0)	10
Small Farmers	13	1.61	13	Yes (13); No (0)	Yes (9); No (4)	Yes (4); No (9)	Yes (13); No (0)	13
Medium Farmers	6	3.16	6	Yes (6); No (0)	Yes (3); No (3)	Yes (3); No (3)	Yes (6); No (0)	6
Large Farmers	1	4.24	1	Yes (1); No (0)	Yes (1); No (0)	-	Yes (1); No (0)	1
Total Allied Agri Services	30	1.73	30	Yes (30); No (0)	Yes (20); No (10)	Yes (10); No (20)	Yes (30); No (0)	30
Both Proper Agri. + Allied Services (I + II)								
Marginal Farmers	20	0.68	20	Yes (20); No (0)	Yes (7); No (13)	Yes (3); No (13)	Yes (10); No (10)	20
Small Farmers	37	1.53	37	Yes (37); No (0)	Yes (9); No (28)	Yes (4); No (33)	Yes (13); No (24)	37
Medium Farmers	29	2.93	29	Yes (29); No (0)	Yes (3); No (26)	Yes (3); No (26)	Yes (6); No (23)	29
Large Farmers	14	6.15	14	Yes (14); No (0)	Yes (1); No (13)	-	Yes (1); No (13)	14
Total Proper Agri + Allied Services	100	2.41	100	Yes (100); No (0)	Yes (20); No (80)	Yes (10); No (90)	Yes (30); No (70)	100

The average land holding size of sampled beneficiary farmers with proper agricultural services and allied services put together was estimated at 0.68 hectare for marginal category, 1.53 hectares for small, 2.93 hectares for medium and 6.15 hectares for large category with an average of 2.41 hectares for the average category of farmers. Further, all the sampled beneficiary farmers were noticed to be members of ventures and availed benefit from them during 2014-15.

5.1.2 Social Group Status of Beneficiary Farmers

The sampled beneficiary farmers belonged to different social groups. Information relating to social group status of various categories of sampled beneficiary farmers under the broad category of proper agricultural services and allied agricultural services is provided in Table 5.2.

Majority of sampled beneficiary farmers belonged to General category since 56 out of 70 under proper agricultural services and 19 out of 30 under allied agricultural services belonged to this category (Table 5.2). In general, 75 out of 100 sampled beneficiary farmers belonged to the social group of General category. The number of sampled beneficiary farmers belonging to Other Backward Class (OBC), Scheduled Caste (SC) and Notified Tribes (NT) was 17, 4 and 4, respectively.

Table 5.2: Category-wise Details of Social Group Status of the Sample Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Beneficiary Farmers	No of Samples	General	OBC	SC	ST	N.T.	Total
Proper Agri. Services (I)							
Marginal Farmers	10	9	-	1	-	-	10
Small Farmers	24	17	5	-	-	2	24
Medium Farmers	23	18	3	2	-	-	23
Large Farmers	13	12	1	-	-	-	13
Total Proper Agri Services	70	56	9	3	-	2	70
Allied Agri. Services (II)							
Marginal Farmers	10	4	6	-	-	-	10
Small Farmers	13	9	2	1	-	1	13
Medium Farmers	6	5	-	-	-	1	6
Large Farmers	1	1	-	-	-	-	1
Total Allied Agri Services	30	19	8	1	-	2	30
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	20	13	6	1	-	-	20
Small Farmers	37	26	7	1	-	3	37
Medium Farmers	29	23	3	2	-	1	29
Large Farmers	14	13	1	-	-	-	14
Total Proper Agri + Allied Services	100	75	17	4	-	4	100

Table 5.2 (a): % Distribution of Category-wise Details of Social Group Status of the Sample Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Beneficiary Farmers	No of Samples	General	OBC	SC	ST	N.T.	Total
Proper Agri. Services (I)							
Marginal Farmers	10	90.00	-	10.00	-	-	100.00
Small Farmers	24	70.83	20.83	0.00	-	8.33	100.00
Medium Farmers	23	78.26	13.04	8.70	-	-	100.00
Large Farmers	13	92.31	7.69	-	-	-	100.00
Total Proper Agri Services	70	80.00	12.86	4.29	-	2.86	100.00
Allied Agri. Services (II)							
Marginal Farmers	10	40.00	60.00	-	-	-	100.00
Small Farmers	13	69.23	15.38	7.69	-	7.69	100.00
Medium Farmers	6	83.33	-	-	-	16.67	100.00
Large Farmers	1	100.00	-	-	-	-	100.00
Total Allied Agri Services	30	63.33	26.67	3.33	-	6.67	100.00
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	20	65.00	30.00	5.00	-	-	100.00
Small Farmers	37	70.27	18.92	2.70	-	8.11	100.00
Medium Farmers	29	79.31	10.34	6.90	-	3.45	100.00
Large Farmers	14	92.86	7.14	-	-	-	100.00
Total Proper Agri + Allied Services	100	75.00	17.00	4.00	-	4.00	100.00

A further analysis with respect to social group status revealed that 75 per cent of the total sampled beneficiary farmers belonged to General category, 17 per cent to OBC, 4 per cent to SC, and another 4 per cent to NT category (Table 5.2 (a)). Among large farmers, 92 per cent farmers under proper agricultural services and 100 per cent under allied agricultural services belonged to the social group of General category.

5.1.3 Caste Status of Beneficiary Farmers

Information relating to caste composition of various categories of sampled beneficiary farmers under the broad category of proper agricultural services and allied agricultural services is provided in Table 5.3. Although there are numerous caste categories prevalent in Maharashtra, the sampled beneficiaries chiefly belonged to the caste category of Maratha since 75 out of 100 beneficiaries belonged to this caste category. The other major castes of beneficiaries were Mali, Mahar, Dhangar, Wani, etc.

Table 5.3: Category-wise Details of Social Group Status (Cast Category) of the Sample Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Beneficiary Farmers	No of Samples	Mahar	Dhangar	Kumbhar	Mali	Maratha	Wani	Total
Proper Agri. Services (I)								
Marginal Farmers	10	1	-	-	-	9	-	10
Small Farmers	24	1	2	-	2	17	2	24
Medium Farmers	23	1	-	1	3	18	-	23
Large Farmers	13	-	-	-	1	12	-	13
Total Proper Agri Services	70	3	2	1	6	56	2	70
Allied Agri. Services (II)								
Marginal Farmers	10	-	-	-	6	4	-	10
Small Farmers	13	1	1	-	2	9	-	13
Medium Farmers	6	-	1	-	-	5	-	6
Large Farmers	1	-	-	-	-	1	-	1
Total Allied Agri Services	30	1	2	-	8	19	-	30
Both Proper Agri. + Allied Services (I + II)								
Marginal Farmers	20	1	-	-	6	13	-	20
Small Farmers	37	2	3	-	4	26	2	37
Medium Farmers	29	1	1	1	3	23	-	29
Large Farmers	14	-	-	-	1	13	-	14
Total Proper Agri + Allied Services	100	4	4	1	14	75	2	100

The percentage distribution also showed 75 per cent of sampled beneficiary farmers belonging to the caste category of Maratha, 14 per cent to Mali, 4 per cent to Mahar, another 4 per cent to Dhangar, 2 per cent to Wani and 1 per cent to Kumbhar (Table 5.3 (a)). Further, the proportion of sampled beneficiary farmers belonging to the caste category of Maratha increased with the increase in land holding size of farmers.

Table 5.3 (a): % Distribution of Category-wise Details of Social Group Status (Cast Category) of the Sample Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Beneficiary Farmers	No of Samples	Mahar	Dhangar	Kumbhar	Mali	Maratha	Wani	Total
Proper Agri. Services (I)								
Marginal Farmers	10	10.00	-	-	-	90.00	-	100.00
Small Farmers	24	4.17	8.33	-	8.33	70.83	8.33	100.00
Medium Farmers	23	4.35	-	4.35	13.04	78.26	-	100.00
Large Farmers	13	-	-	-	7.69	92.31	-	100.00
Total Proper Agri Services	70	4.29	2.86	1.43	8.57	80.00	2.86	100.00
Allied Agri. Services (II)								
Marginal Farmers	10	-	-	-	60.00	40.00	-	100.00
Small Farmers	13	7.69	7.69	-	15.38	69.23	-	100.00
Medium Farmers	6	-	16.67	-	-	83.33	-	100.00
Large Farmers	1	-	-	-	-	100.00	-	100.00
Total Allied Agri Services	30	3.33	6.67	-	26.67	63.33	-	100.00
Both Proper Agri. + Allied Services (I + II)								
Marginal Farmers	20	5.00	-	-	30.00	65.00	-	100.00
Small Farmers	37	5.41	8.11	-	10.81	70.27	5.41	100.00
Medium Farmers	29	3.45	3.45	3.45	10.34	79.31	-	100.00
Large Farmers	14	-	-	-	7.14	92.86	-	100.00
Total Proper Agri + Allied Services	100	4.00	4.00	1.00	14.00	75.00	2.00	100.00

The marginal and large category of sampled beneficiary farmers showed about 90 per cent of them belonging to the caste category of Maratha under the broad category of proper agricultural services.

5.1.4 Educational Status of Beneficiary Farmers

In a village set up, the decision maker of a family is usually either its head or any other elderly economically active person of this family. All decisions regarding primary and secondary occupations that should be practiced by a family are taken by such a person. Since such decision makers have important roles in determining the health of any enterprise, it was thought prudent and desirable to ascertain the education level of sampled beneficiary and non-beneficiary farmers of ACABC Scheme.

Information relating to the educational status of head of the household for various categories of sampled beneficiary farmers under the broad category of proper agricultural services and allied agricultural services is provided in Table 5.4.

The educational status of sampled beneficiary farmers was found to be quite high since 39 out of 100 heads of households' attained education up to secondary level, 14 attained education up to higher secondary level and 24 were graduates or above (Table 5.4). Among various categories of sampled beneficiary farmers, the medium and large category showed higher number of their heads attaining education up to secondary and higher level as compared marginal and small category. There were 15 heads of

households among sampled beneficiaries who attained education only up to primary level. The estimates also showed that 8 heads of households among sampled beneficiaries did not receive any education and turned out to be illiterate.

Table 5.4: Category-wise Details of Social Group Status (Education) of the Sample Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Beneficiary Farmers	No of Samples	Illiterate	Primary	Secondary	Higher Secondary	Graduate & Above	Total
Proper Agri. Services (I)							
Marginal Farmers	10	-	1	4	2	3	10
Small Farmers	24	-	3	13	2	6	24
Medium Farmers	23	1	2	8	5	7	23
Large Farmers	13	2	1	4	2	4	13
Total Proper Agri Services	70	3	7	28	11	20	70
Allied Agri. Services (II)							
Marginal Farmers	10	2	3	2	2	1	10
Small Farmers	13	2	4	5	1	1	13
Medium Farmers	6	1	1	2	-	2	6
Large Farmers	1	-	-	1	-	-	1
Total Allied Agri Services	30	5	8	10	3	4	30
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	20	2	4	6	4	4	20
Small Farmers	37	2	7	18	3	7	37
Medium Farmers	29	2	3	10	5	9	29
Large Farmers	14	2	1	5	2	4	14
Total Proper Agri + Allied Services	100	8	15	39	14	24	100

Table 5.4 (a): % Distribution of Category-wise Details of Social Group Status (Education) of the Sample Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Beneficiary Farmers	No of Samples	Illiterate	Primary	Secondary	Higher Secondary	Graduate & Above	Total
Proper Agri. Services (I)							
Marginal Farmers	10	-	10.00	40.00	20.00	30.00	100.00
Small Farmers	24	-	12.50	54.17	8.33	25.00	100.00
Medium Farmers	23	4.35	8.70	34.78	21.74	30.43	100.00
Large Farmers	13	15.38	7.69	30.77	15.38	30.77	100.00
Total Proper Agri Services	70	4.29	10.00	41.43	15.71	28.57	100.00
Allied Agri. Services (II)							
Marginal Farmers	10	20.00	30.00	20.00	20.00	10.00	100.00
Small Farmers	13	15.38	30.77	38.46	7.69	7.69	100.00
Medium Farmers	6	16.67	16.67	33.33	-	33.33	100.00
Large Farmers	1	-	-	100.00	-	-	100.00
Total Allied Agri Services	30	16.67	26.67	33.33	10.00	13.33	100.00
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	20	10.00	20.00	30.00	20.00	20.00	100.00
Small Farmers	37	5.41	18.92	48.65	8.11	18.92	100.00
Medium Farmers	29	6.90	10.34	34.48	17.24	31.03	100.00
Large Farmers	14	14.29	7.14	35.71	14.29	28.57	100.00
Total Proper Agri + Allied Services	100	8.00	15.00	39.00	14.00	24.00	100.00

As for educational status of beneficiary farmers, 70 per cent heads of households in marginal category, 76 per cent in small, 83 per cent in medium and 79 per cent in large category attained education up to secondary and higher level (Table 5.4 (a)). The general trend showed that 77 per cent heads of households among beneficiaries had attained education up to secondary and above level, 15 per cent up to primary level and 8 per cent did not attain any education and turned out to be illiterate.

5.1.5 Cropping Pattern of Beneficiary Farmers

Cropping pattern assumes considerable significance in determining farmer's net annual income through crop husbandry. Though farmers prefer to grow those crops that yield higher net returns, they are constrained to grow several low value field crops due to varied agro-climatic conditions as well as topography and soil type across various regions or within the same region. In general, the cropping pattern of irrigated area differs from the cropping pattern of un-irrigated area. While on one hand, high value commercial field crops are usually grown under irrigated conditions, low value subsistence crops, on the other hand, find place under rainfed conditions. However, there are several important course cereal and pulses crops like *jowar*, *mung*, *tur*, *etc.* that find place in terms of output and area allocation even under dry or rainfed conditions. The area allocation of beneficiary farmers during kharif, rabi, summer seasons and under perennial crops is presented separately.

5.1.5.1 Cropping Pattern in Kharif Season

The information on area allocation under different crops grown during kharif season by the beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services is provided in Table 5.5.

In the case of sampled beneficiary farmers, the cropping pattern during kharif season was seen to be in favour of cultivating various cereal and oilseed crops since area allocation under pulses and other crops stood at quite low. All the categories of sampled beneficiary farmers put together showed a total net sown area of 110.28 hectares in kharif season, which encompassed 52.71 hectares of area under cereal crops, 9.21 hectares under pulses, 35.96 hectares under oilseeds and 12.40 hectares under other kharif crops (Table 5.5). The estimates also showed that 49.43 per cent of the net sown area in kharif season was under irrigation. The irrigated area in kharif season with all the categories of sampled beneficiary farmers put together was estimated at 54.51 hectares, which encompassed 23.31 hectares of area under cereals, 4.65 hectares under pulses, 15.35 hectares under oilseeds and 11.19 hectares under other kharif crops.

Table 5.5: Category-wise Details of Crops Grown in Kharif Season by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Area in Hectare)

Category of Sample Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	1.21	1.82	1.01	1.01	-	0.81	0.20	0.71	2.42	4.34
Small Farmers	24	5.56	7.58	0.40	1.23	2.63	3.84	2.63	2.63	11.21	15.27
Medium Farmers	23	5.94	11.39	2.42	4.55	6.46	9.09	4.12	4.73	18.95	29.76
Large Farmers	13	2.02	13.33	0.81	2.42	4.65	12.73	1.62	1.62	9.09	30.10
Total Proper Agri Services	70	14.73	34.12	4.65	9.21	13.74	26.46	8.57	9.68	41.68	79.47
Allied Agri. Services (II)											
Marginal Farmers	10	1.82	1.92	-	-	0.00	1.01	0.61	0.71	2.42	3.64
Small Farmers	13	4.65	10.30	-	-	1.62	4.24	1.21	1.21	7.47	15.76
Medium Farmers	6	2.12	5.15	-	-	-	1.82	0.81	0.81	2.93	7.78
Large Farmers	1	-	1.21	-	-	-	2.42	-	-	-	3.64
Total Allied Agri Services	30	8.59	18.59	-	-	1.62	9.49	2.63	2.73	12.83	30.81
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	3.03	3.74	1.01	1.01	-	1.82	0.81	1.41	4.85	7.98
Small Farmers	37	10.20	17.88	0.40	1.23	4.24	8.08	3.84	3.84	18.69	31.03
Medium Farmers	29	8.06	16.55	2.42	4.55	6.46	10.91	4.93	5.54	21.88	37.54
Large Farmers	14	2.02	14.55	0.81	2.42	4.65	15.15	1.62	1.62	9.09	33.74
Total Proper Agri + Allied Services	100	23.31	52.71	4.65	9.21	15.35	35.96	11.19	12.40	54.51	110.28

Note: Other crops include cotton, fodder (jowar) and vegetable crops

Table 5.5 (a): % Distribution of Category-wise Details of Crops Grown in Kharif Season by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	50.00	41.86	41.67	23.26	-	18.60	8.33	16.28	100.00	100.00
Small Farmers	24	49.55	49.60	3.60	8.07	23.42	25.13	23.42	17.20	100.00	100.00
Medium Farmers	23	31.34	38.29	12.79	15.27	34.12	30.55	21.75	15.89	100.00	100.00
Large Farmers	13	22.22	44.30	8.89	8.05	51.11	42.28	17.78	5.37	100.00	100.00
Total Proper Agri Services	70	35.34	42.93	11.15	11.59	32.96	33.30	20.55	12.18	100.00	100.00
Allied Agri. Services (II)											
Marginal Farmers	10	75.00	52.78	-	-	-	27.78	25.00	19.44	100.00	100.00
Small Farmers	13	62.16	65.38	-	-	21.62	26.92	16.22	7.69	100.00	100.00
Medium Farmers	6	72.41	66.23	-	-	-	23.38	27.59	10.39	100.00	100.00
Large Farmers	1	-	33.33	-	-	-	66.67	-	-	-	100.00
Total Allied Agri Services	30	66.93	60.33	-	-	12.60	30.82	20.47	8.85	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	62.50	46.84	20.83	12.66	-	22.78	16.67	17.72	100.00	100.00
Small Farmers	37	54.59	57.62	2.16	3.97	22.70	26.04	20.54	12.37	100.00	100.00
Medium Farmers	29	36.84	44.08	11.08	12.11	29.55	29.06	22.53	14.75	100.00	100.00
Large Farmers	14	22.22	43.11	8.89	7.19	51.11	44.91	17.78	4.79	100.00	100.00
Total Proper Agri + Allied Services	100	42.77	47.79	8.52	8.35	28.17	32.61	20.53	11.25	100.00	100.00

Note: Other crops include cotton, fodder (jowar) and vegetable crops

Thus, cereal and oilseed crops dominated the cropping pattern of sampled beneficiary farmers during kharif season since all the categories of beneficiary farmers put together showed 48 per cent of their net sown area under cereal crops and 33 per cent under oilseeds crops in kharif season (Table 5.5 (a)). The other crops that dominated the cropping pattern of sampled beneficiary farmers in kharif season were cotton, fodder and

vegetable crops, which showed a share of 11 per cent in the net sown area of sampled beneficiary farmers. On the other hand, pulse crops in kharif season showed a share of 8 per cent in net sown area of the beneficiary farmers.

The proportion of area under various crops in net sown area and in net irrigated area differed significantly in kharif season. This is concomitant from the fact that, in general, cereal crops in kharif season accounted for 48 per cent share in net sown area and 43 per cent share in net irrigated area. Similarly, oilseed crops in kharif season accounted for 33 per cent share in net sown area and 28 per cent share in net irrigated area. Incidentally, the proportion of area under oilseed crops in net sown area and in net irrigated area increased with the increase in land holding size of beneficiary farmers.

5.1.5.2 Cropping Pattern in Rabi Season

The estimates relating to area allocation under different crops grown during rabi season by the beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.6.

The cropping pattern of sampled beneficiary farmers in rabi season was seen to be in favour of cultivating various cereal, pulses and some other crop. The net sown area in rabi season with all the sampled beneficiary farmers put together was estimated at 83.76 hectares, which encompassed 58.10 hectares of area under cereal crops, 8.38 hectares under pulses, 0.20 hectare under oilseeds and 17.07 hectares under other crops like jowar fodder, Lucerne and vegetables (Table 5.6).

Table 5.6: Category-wise Details of Crops Grown in Rabi Season by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Area in Hectare)

Category of Sample Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	0.40	1.21	0.40	0.40	-	-	0.20	0.20	1.01	1.82
Small Farmers	24	7.37	9.82	0.40	0.40	0.20	0.20	3.03	3.64	11.01	14.06
Medium Farmers	23	14.75	15.35	3.43	3.84	-	-	2.63	3.23	20.81	22.42
Large Farmers	13	10.91	15.35	1.82	3.43	-	-	5.25	5.66	17.98	24.44
Total Proper Agri Services	70	33.43	41.74	6.06	8.08	0.20	0.20	11.11	12.73	50.81	62.75
Allied Agri. Services (II)											
Marginal Farmers	10	1.41	3.23	-	0.10	-	-	0.61	0.61	2.02	3.94
Small Farmers	13	3.23	7.88	0.20	0.20	-	-	0.81	0.81	4.24	8.89
Medium Farmers	6	1.62	5.25	-	-	-	-	2.73	2.93	4.34	8.18
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	6.26	16.36	0.20	0.30	-	-	4.14	4.34	10.61	21.01
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	1.82	4.44	0.40	0.51	-	-	0.81	0.81	3.03	5.76
Small Farmers	37	10.61	17.70	0.61	0.61	0.20	0.20	3.84	4.44	15.25	22.95
Medium Farmers	29	16.36	20.61	3.43	3.84	-	-	5.35	6.16	25.15	30.61
Large Farmers	14	10.91	15.35	1.82	3.43	-	-	5.25	5.66	17.98	24.44
Total Proper Agri + Allied Services	100	39.70	58.10	6.26	8.38	0.20	0.20	15.25	17.07	61.41	83.76

Note: Other crops include fodder (jowar), Lucerne and vegetable crops

Table 5.6 (a): % Distribution of Category-wise Details of Crops Grown in Rabi Season by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	40.00	66.67	40.00	22.22	-	-	20.00	11.11	100.00	100.00
Small Farmers	24	66.97	69.83	3.67	2.87	1.83	1.44	27.52	25.86	100.00	100.00
Medium Farmers	23	70.87	68.47	16.50	17.12	-	-	12.62	14.41	100.00	100.00
Large Farmers	13	60.67	62.81	10.11	14.05	-	-	29.21	23.14	100.00	100.00
Total Proper Agri Services	70	65.81	66.52	11.93	12.88	0.40	0.32	21.87	20.28	100.00	100.00
Allied Agri. Services (II)											
Marginal Farmers	10	70.00	82.05	-	2.56	-	-	30.00	15.38	100.00	100.00
Small Farmers	13	76.19	88.64	4.76	2.27	-	-	19.05	9.09	100.00	100.00
Medium Farmers	6	37.21	64.20	-	-	-	-	62.79	35.80	100.00	100.00
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	59.05	77.88	1.90	1.44	-	-	39.05	20.67	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	60.00	77.19	13.33	8.77	-	-	26.67	14.04	100.00	100.00
Small Farmers	37	69.54	77.11	3.97	2.64	1.32	0.88	25.17	19.37	100.00	100.00
Medium Farmers	29	65.06	67.33	13.65	12.54	-	-	21.29	20.13	100.00	100.00
Large Farmers	14	60.67	62.81	10.11	14.05	-	-	29.21	23.14	100.00	100.00
Total Proper Agri + Allied Services	100	64.64	69.37	10.20	10.01	0.33	0.24	24.84	20.38	100.00	100.00

Note: Other crops include fodder (jowar), Lucerne and vegetable crops

The estimates clearly showed negligible area under oilseeds in rabi season. The irrigated area in rabi season with all the sampled beneficiary farmers put together was estimated at 61.41 hectares, which encompassed 39.70 hectares of area under cereal crops, 6.26 hectares under pulses, 0.20 hectare under oilseeds and 15.25 hectares under other crops. Thus, 73.32 per cent of the net sown area in rabi season with all the sampled farmers put together was under irrigation.

The estimates further showed that, in general, about 69 per cent of the net sown area in rabi season was under cereal crops, 10 per cent under pulses and 20 per cent under other rabi crops (Table 5.6 (a)). The area allocation under different crops as proportion of irrigated area and net sown area differed. This is concomitant from the fact that, in general about 65 per cent of the net irrigated area in rabi season was under cereal crops, 10 per cent under pulses and 25 per cent under other crops. Interestingly, the proportion of area allocation under cereal crops declined with the increase in land holding size of sampled beneficiary farmers (Table 5.6 (a)).

5.1.5.3 Cropping Pattern in Zaid Season

The estimates relating to area allocation under different crops grown during zaid season (summer) by the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.7.

The sampled beneficiary farmers were seen to cultivate very few crops during zaid season, which included some summer oilseed crops and other crops like fodder and ginger. The area allocation under zaid season with all the sampled beneficiary farmers put together was estimated at only 2.41 hectares, which encompassed 0.40 hectare under oilseeds and 2.02 hectares under other summer crops (Table 5.7).

Table 5.7: Category-wise Details of Crops Grown in Zaid Season by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Area in Hectare)

Category of Sample Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
Small Farmers	24	-	-	-	-	-	-	0.81	0.81	0.81	0.81
Medium Farmers	23	-	-	-	-	0.40	0.40	-	-	0.40	0.40
Large Farmers	13	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	70	-	-	-	-	0.40	0.40	0.81	0.81	1.21	1.21
Allied Agri. Services (II)											
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
Small Farmers	13	-	-	-	-	-	-	1.01	1.01	1.01	1.01
Medium Farmers	6	-	-	-	-	-	-	0.20	0.20	0.20	0.20
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	-	-	-	-	-	-	1.21	1.21	1.21	1.21
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	-	-	-	-	-	-	-	-	-	-
Small Farmers	37	-	-	-	-	-	-	1.82	1.82	1.82	1.82
Medium Farmers	29	-	-	-	-	0.40	0.40	0.20	0.20	0.60	0.60
Large Farmers	14	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	100	-	-	-	-	0.40	0.40	2.02	2.02	2.42	2.42

Note: Other crops include fodder (jowar) and ginger

Table 5.7 (a): % Distribution of Category-wise Details of Crops Grown in Zaid Season by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
Small Farmers	24	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Medium Farmers	23	-	-	-	-	100.00	100.00	-	-	100.00	100.00
Large Farmers	13	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	70	-	-	-	-	33.33	33.33	66.67	66.67	100.00	100.00
Allied Agri. Services (II)											
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
Small Farmers	13	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Medium Farmers	6	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	-	-	-	-	-	-	-	-	-	-
Small Farmers	37	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Medium Farmers	29	-	-	-	-	66.67	66.67	33.33	33.33	100.00	100.00
Large Farmers	14	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	100	-	-	-	-	16.67	16.67	83.33	83.33	100.00	100.00

Note: Other crops include fodder (jowar) and ginger

The entire net sown area of beneficiary farmers in zaid season was found to be under irrigation. Among various beneficiaries, only small and medium categories of farmers were seen to allocate some area under zaid crops. The marginal and large category of sampled beneficiary farmers did not allocate any area under zaid season.

The estimates furnished in able 5.7 (a)) further showed that sampled beneficiary farmers in general allocated 17 per cent of net sown area in zaid season under oilseed crops and 83 per cent under other zaid crops like fodder and ginger. Among various sampled beneficiaries, small category of farmers allocated entire area in zaid season under other crops like fodder and ginger. On the other hand, medium category of sampled beneficiary farmers allocated 67 per cent of the net sown area in zaid season under oilseed crops and 33 per cent under other zaid crops. Thus, unlike kharif and rabi seasons, the cropping pattern in zaid season differed completely for the sampled beneficiaries.

5.1.5.4 Area under Perennial Crops

The estimates relating to area allocation under various perennial crops for the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.8.

Table 5.8: Category-wise Details of Area under Perennial Crops for the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Beneficiary Farmers	No. of Sample	Sugarcane		Pomegranate		Banana		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	2.02	2.53	0.51	0.51	-	-	-	-	2.53	3.03
Small Farmers	24	8.08	8.48	6.46	7.27	0.40	0.40	2.22	2.22	17.17	18.38
Medium Farmers	23	20.81	20.81	6.87	6.87	0.81	0.81	1.41	1.41	29.90	29.90
Large Farmers	13	11.72	11.72	22.22	22.22	-	-	0.81	0.81	34.75	34.75
Total Proper Agri Services	70	42.63	43.54	36.06	36.87	1.21	1.21	4.44	4.44	84.34	86.06
Allied Agri. Services (II)											
Marginal Farmers	10	0.61	0.61	-	-	-	-	1.21	1.21	1.82	1.82
Small Farmers	13	2.42	2.42	-	-	0.40	0.40	-	-	2.83	2.83
Medium Farmers	6	6.87	6.87	1.01	1.01	-	-	-	-	7.88	7.88
Large Farmers	1	-	-	-	0.40	-	-	-	-	-	0.40
Total Allied Agri Services	30	9.90	9.90	1.01	1.41	0.40	0.40	1.21	1.21	12.53	12.93
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	2.63	3.13	0.51	0.51	-	-	1.21	1.21	4.34	4.85
Small Farmers	37	10.51	10.91	6.46	7.27	0.81	0.81	2.22	2.22	20.00	21.21
Medium Farmers	29	27.68	27.68	7.88	7.88	0.81	0.81	1.41	1.41	37.78	37.78
Large Farmers	14	11.72	11.72	22.22	22.63	-	-	0.81	0.81	34.75	35.15
Total Proper Agri + Allied Services	100	52.53	53.43	37.07	38.28	1.62	1.62	5.66	5.66	96.87	98.99

Note: Other perennial crops include papaya, grape, mango, lemon, chiku, and guava

The sampled beneficiary farmers were found to cultivate large number of perennial crops on their farms, aside from various field crops grown during kharif, rabi and zaid seasons. The important perennial crops cultivated by sampled beneficiary farmers were, sugarcane, pomegranate, banana, papaya, grape, lemon, chiku and guava.

The area allocation under perennial crops with all the sample beneficiary farmers put together was estimated at 98.99 hectares, which encompassed 53.43 hectares of area under sugarcane, 38.28 hectares under pomegranate, 1.62 hectares under banana, and 5.66 hectares under other perennial crops (Table 5.8). Further, in general, the sampled beneficiary farmers showed about 98 per cent of the perennial cropped area under irrigation. Among various beneficiaries, medium category of farmers not only showed entire perennial cropped area under irrigation but also highest area under perennial crops as against large and other categories.

Table 5.8 (a): % Distribution of Category-wise Details of Area under Perennial Crops for the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Beneficiary Farmers	No. of Sample	Sugarcane		Pomegranate		Banana		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	10	80.00	83.33	20.00	16.67	-	-	-	-	100.00	100.00
Small Farmers	24	47.06	46.15	37.65	39.56	2.35	2.20	12.94	12.09	100.00	100.00
Medium Farmers	23	69.59	69.59	22.97	22.97	2.70	2.70	4.73	4.73	100.00	100.00
Large Farmers	13	33.72	33.72	63.95	63.95	-	-	2.33	2.33	100.00	100.00
Total Proper Agri Services	70	50.54	50.59	42.75	42.84	1.44	1.41	5.27	5.16	100.00	100.00
Allied Agri. Services (II)											
Marginal Farmers	10	33.33	33.33	-	-	-	-	66.67	66.67	100.00	100.00
Small Farmers	13	85.71	85.71	-	-	14.29	14.29	-	-	100.00	100.00
Medium Farmers	6	87.18	87.18	12.82	12.82	-	-	-	-	100.00	100.00
Large Farmers	1	-	-	-	100.00	-	-	-	-	-	100.00
Total Allied Agri Services	30	79.03	76.56	8.06	10.94	3.23	3.13	9.68	9.38	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	60.47	64.58	11.63	10.42	-	-	27.91	25.00	100.00	100.00
Small Farmers	37	52.53	51.43	32.32	34.29	4.04	3.81	11.11	10.48	100.00	100.00
Medium Farmers	29	73.26	73.26	20.86	20.86	2.14	2.14	3.74	3.74	100.00	100.00
Large Farmers	14	33.72	33.33	63.95	64.37	-	-	2.33	2.30	100.00	100.00
Total Proper Agri + Allied Services	100	54.22	53.98	38.27	38.67	1.67	1.63	5.84	5.71	100.00	100.00

Note: Other perennial crops include papaya, grape, mango, lemon, chiku, and guava

The estimates shown in Table 5.8 (a) further revealed that about 54 per cent of the perennial cropped area of sampled beneficiary farmers was under sugarcane, 39 per cent under pomegranate, 2 per cent under banana, and 6 per cent under other perennial crops such as papaya, grape, lemon, chiku and guava. Among various beneficiaries, medium category of farmers showed the highest proportion of perennial cropped area under sugarcane. On the other hand, large category of beneficiaries showed the highest proportion of perennial cropped area under pomegranate.

5.1.5.5 Irrigated and Gross Cropped Area

The estimates relating to area allocation under different seasons as well as gross cropped area and total irrigated area for the sampled beneficiary farmers of the ACABC

Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.9.

All the sampled beneficiary farmers put together showed a gross cropped area (GCA) of 295.45 hectares, which encompassed 110.28 hectares of area under kharif crops, 83.76 hectares under rabi crops, 2.42 hectares under summer (zaid) crops and 98.99 hectares under perennial crops (Table 5.9). Thus, the area allocation of sample beneficiary farmers was the highest under kharif crops, followed by perennial crops, and rabi crops. The area allocation of sampled beneficiary farmers under summer crops was minuscule. Further, the gross irrigated area (GIA) with all sampled beneficiary farmers put together was estimated at 215.21 hectares, which encompassed 54.51 hectares of area under kharif crops, 61.41 hectares under rabi crops, 2.42 hectares under summer crops, and 96.87 hectares under perennial crops. Thus, in general, gross irrigated area was estimated at 73 per cent of the gross cropped area.

Table 5.9: Category-Wise Details of Seasonal Total Irrigated and Cropped Area on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

(Area in Hectare)

Category of Sample Beneficiary Farmers	No. of Sample	Total Irrigated Area				Gross Irrigated Area	Total Cropped Area				Gross Cropped Area
		Kharif	Rabi	Zaid	Perennial		Kharif	Rabi	Zaid	Perennial	
Proper Agri. Services (I)											
Marginal Farmers	10	2.42	1.01	-	2.53	5.96	4.34	1.82	-	3.03	9.19
Small Farmers	24	11.21	11.01	0.81	17.17	40.2	15.27	14.06	0.81	18.38	48.52
Medium Farmers	23	18.95	20.81	0.40	29.90	70.06	29.76	22.42	0.40	29.90	82.48
Large Farmers	13	9.09	17.98	-	34.75	61.82	30.10	24.44	-	34.75	89.29
Total Proper Agri Services	70	41.68	50.81	1.21	84.34	178.04	79.47	62.75	1.21	86.06	229.49
Allied Agri. Services (II)											
Marginal Farmers	10	2.42	2.02	-	1.82	6.26	3.64	3.94	-	1.82	9.4
Small Farmers	13	7.47	4.24	1.01	2.83	15.55	15.76	8.89	1.01	2.83	28.49
Medium Farmers	6	2.93	4.34	0.20	7.88	15.35	7.78	8.18	0.20	7.88	24.04
Large Farmers	1	-	-	-	-	-	3.64	-	-	0.40	4.04
Total Allied Agri Services	30	12.83	10.61	1.21	12.53	37.18	30.81	21.01	1.21	12.93	65.96
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	4.85	3.03	-	4.34	12.22	7.98	5.76	-	4.85	18.59
Small Farmers	37	18.69	15.25	1.82	20.00	55.76	31.03	22.95	1.82	21.21	77.01
Medium Farmers	29	21.88	25.15	0.61	37.78	85.42	37.54	30.61	0.61	37.78	106.54
Large Farmers	14	9.09	17.98	-	34.75	61.82	33.74	24.44	-	35.15	93.33
Total Proper Agri + Allied Services	100	54.51	61.41	2.42	96.87	215.21	110.28	83.76	2.42	98.99	295.45

The percentage distribution of area under different seasons showed that 37.33 of the gross cropped area of the average category of sampled beneficiary farmer was under kharif season, 28.35 per cent under rabi season, 0.82 per cent under summer season and 35.50 per cent under perennial crops (Table 5.9 (a)). In general, the average category of sampled beneficiary farmer showed 25.33 per cent of GIA under kharif crops, 28.53 per

cent under rabi crops, 1.12 per cent under summer crops and 45.01 per cent under perennial crops.

Table 5.9 (a): % Distribution of Category-Wise Details of Seasonal Total Irrigated and Cropped Area on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra
(in per cent)

Category of Sample Beneficiary Farmers	No. of Sample	Total Irrigated Area				Gross Irrigated Area	Total Cropped Area				Gross Cropped Area
		Kharif	Rabi	Zaid	Perennial		Kharif	Rabi	Zaid	Perennial	
Proper Agri. Services (I)											
Marginal Farmers	10	40.60	16.95	-	42.45	100.00	47.23	19.80	-	32.97	100.00
Small Farmers	24	27.89	27.39	2.01	42.71	100.00	31.47	28.98	1.67	37.88	100.00
Medium Farmers	23	27.05	29.70	0.57	42.68	100.00	36.08	27.18	0.48	36.25	100.00
Large Farmers	13	14.70	29.08	-	56.21	100.00	33.71	27.37	-	38.92	100.00
Total Proper Agri Services	70	23.41	28.54	0.68	47.37	100.00	34.63	27.34	0.53	37.50	100.00
Allied Agri. Services (II)											
Marginal Farmers	10	38.66	32.27	-	29.07	100.00	38.72	41.91	-	19.36	100.00
Small Farmers	13	48.04	27.27	6.50	18.20	100.00	55.32	31.20	3.55	9.93	100.00
Medium Farmers	6	19.09	28.27	1.30	51.34	100.00	32.36	34.03	0.83	32.78	100.00
Large Farmers	1	-	-	-	-	-	90.10	-	-	9.90	100.00
Total Allied Agri Services	30	34.51	28.54	3.25	33.70	100.00	46.71	31.85	1.83	19.60	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	39.69	24.80	-	35.52	100.00	42.93	30.98	-	26.09	100.00
Small Farmers	37	33.52	27.35	3.26	35.87	100.00	40.29	29.80	2.36	27.54	100.00
Medium Farmers	29	25.61	29.44	0.71	44.23	100.00	35.24	28.73	0.57	35.46	100.00
Large Farmers	14	14.70	29.08	-	56.21	100.00	36.15	26.19	-	37.66	100.00
Total Proper Agri + Allied Services	100	25.33	28.53	1.12	45.01	100.00	37.33	28.35	0.82	33.50	100.00

It is to be noted that proportion of GCA and GIA under perennial crops increased with the increase in land holding size sampled beneficiary farmers. On the other hand by and large the proportion of GCA under rabi and kharif crops decreased with the increase in land holding size sampled beneficiary farmers. The proportion of GIA under kharif crops also decreased with the increase in land holding size sampled beneficiary farmers.

5.1.6 Input Cost, Output Value and Income from Crops

It has been widely argued that in the typical rural setting, maximization of net return is the ultimate goal of the producer which largely depends on the cost structure to be followed by such enterprising household. However, maximization of profit requires a balance between the increase in the production and various components of costs. In fact, it is the structure of cost and returns that is most crucial not only for the producers but also for the consumers and policy makers since these two key elements provide an effective linkage between the producer and consumers for rational fixation of prices of the produce. It is, therefore, essential to broadly evaluate not only various components of input costs but also output value for various crops cultivated during kharif season by various categories of sampled beneficiary farmers of ACABC Scheme. The input costs and output value for various crops cultivated during kharif, rabi, and summer seasons as well as for perennial crops are brought out for sampled beneficiary farmers of ACABC

scheme. The estimates relating to input costs and output value have helped in computing income generation from various crops cultivated during various seasons by sampled beneficiary farmers.

5.1.6.1 Input Cost and Output Value for Kharif Crops

The estimates relating to per hectare and per household input costs and output value for various crops cultivated in kharif season for the beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.10. The information relating to total input cost and output value for various crops cultivated in kharif season for all the beneficiary farmers put together for various land holding size categories is presented in **Appendix 9**.

The estimates brought out in Table 5.10 clearly showed considerable difference in per hectare input cost for cereal, pulses, oilseeds and other crops cultivated during kharif season. The per hectare input cost in kharif season for the average category of sampled beneficiary farmer was estimated at Rs.13,337 for cereals, Rs.15,147 for pulses, Rs.11,618 for oilseeds and Rs.45460 for other crops with an average of Rs.16,540 for all the kharif crops put together. The other crops showed very high element of input cost in kharif season, which was mainly due to the fact that sampled beneficiary farmers cultivated several high value crops in kharif season like cotton, onion, chili, brinjal, potato, cabbage, drumstick, tomato, carrot, etc. The cost of cultivation for these high value crops cultivated in kharif season was significantly high.

It is to be further noted that among various categories of sampled beneficiary farmers, the per hectare input cost increased with the increase in land holding size of farmers. This held true for all the crops cultivated during kharif season. In general, per hectare input cost for kharif crops increased from Rs.13,860 for marginal category to Rs.17,848 for the large category. The general trend also showed that the owned input cost accounted for 50 per cent share in total input cost for various crops cultivated during kharif season by sampled beneficiary farmers.

The estimates presented in Table 5.19 further revealed wide variations in output value of various crops cultivated during kharif season by sampled beneficiary farmers. The per hectare output value in kharif season for the average category of sampled beneficiary farmer was estimated at Rs.25,345 for cereals, Rs.45,657 for pulses, Rs.27,668 for oilseeds and Rs.76,129 for other crops with an average of Rs.33,509 for all the kharif crops put together.

Table 5.10: Category- Wise Details of Inputs and Outputs of Kharif Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	Cereal						Pulses						Oilseeds						Other						Total																						
		Input Cost			Output (Rs.)			Input Cost			Output (Rs.)			Input Cost			Output (Rs.)			Input Cost			Output (Rs.)			Input Cost			Output (Rs.)																			
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total																	
		Inputs & Output in Rs./Ha																																														
Proper Agri. Services (I)																																																
Marginal Farmers	10	5495	5055	10549	20604	6436	5941	12376	32178	4321	4691	9012	21852	14789	22535	37324	61972	7028	8065	15092	30346																											
Small Farmers	24	6794	5277	12071	23780	7317	6504	13821	41463	4688	4948	9635	23958	18631	25475	44106	70266	8350	8775	17125	33271																											
Medium Farmers	23	7015	6102	13117	25180	7363	6923	14286	44505	4840	5336	10176	25330	19662	26427	46089	77696	8414	9224	17638	36527																											
Large Farmers	13	9077	7877	16954	29925	9711	8884	18595	55579	6520	8170	14690	33009	22840	33333	56173	101543	8787	9452	18239	37146																											
Total Proper Agri Services	70	7691	6556	14247	26479	7872	7275	15147	45657	5612	6625	12237	28728	19576	27066	46643	78595	8467	9161	17628	35798																											
Allied Agri. Services (II)																																																
Marginal Farmers	10	4219	4479	8698	18698	-	-	-	-	3960	2178	6139	18020	15493	15775	31268	54366	6346	6044	12390	25467																											
Small Farmers	13	6019	5146	11165	22495	-	-	-	-	4599	4906	9505	23726	23967	19835	43802	69917	7011	6206	13217	29453																											
Medium Farmers	6	6214	5825	12039	24272	-	-	-	-	4670	4945	9615	23846	22222	23457	45679	74074	7519	7455	14974	29357																											
Large Farmers	1	9256	9917	19174	32975	-	-	-	-	5785	6612	12397	30000	-	-	-	-	-	6923	7692	14615	30907																										
Total Allied Agri Services	30	6095	5573	11668	23265	-	-	-	-	4847	5058	9905	24742	21245	19853	41099	67106	7053	6680	13733	27605																											
Both Agri. + Allied Services (I + II)																																																
Marginal Farmers	20	4840	4759	9599	19626	6436	5941	12376	32178	4121	3297	7418	19725	15248	19291	34539	58582	6717	7143	13860	28120																											
Small Farmers	37	6348	5201	11549	23040	7317	6504	13821	41463	4641	4926	9567	23837	20313	23698	44010	70156	7670	7470	15140	29808																											
Medium Farmers	29	6761	6012	12773	24882	7363	6923	14286	44505	4812	5270	10082	25082	20036	25993	46029	77166	8229	8857	17086	35041																											
Large Farmers	14	9086	8041	17127	30158	9711	8884	18595	55579	6403	7921	14323	32528	22840	33333	56173	101543	8586	9262	17848	36473																											
Total Proper Agri + Allied Services	100	7128	6209	13337	25345	7872	7275	15147	45657	5409	6210	11618	27668	19960	25500	45460	76129	8072	8468	16540	33509																											
Proper Agri. Services (I)																																																
Marginal Farmers	10	1000	920	1920	3750	650	600	1250	3250	350	380	730	1770	1050	1600	2650	4400	3050	3500	6550	13170																											
Small Farmers	24	2146	1667	3813	7510	375	333	708	2125	750	792	1542	3833	2042	2792	4833	7700	5313	5583	10896	21169																											
Medium Farmers	23	3474	3022	6496	12470	1457	1370	2826	8804	1913	2109	4022	10011	4043	5435	9478	15978	10887	11935	22822	47263																											
Large Farmers	13	9308	8077	17385	30685	1808	1654	3462	10346	6385	8000	14385	32323	2846	4154	7000	12654	20346	21885	42231	86008																											
Total Proper Agri Services	70	3749	3196	6944	12906	1036	957	1993	6007	2121	2504	4626	10859	2707	3743	6450	10869	9613	10400	20013	40641																											
Allied Agri. Services (II)																																																
Marginal Farmers	10	810	860	1670	3590	-	-	-	-	400	220	620	1820	1100	1120	2220	3860	2310	2200	4510	9270																											
Small Farmers	13	4769	4077	8846	17823	-	-	-	-	1500	1600	3100	7738	2231	1846	4077	6508	8500	7523	16023	32069																											
Medium Farmers	6	5333	5000	10333	20833	-	-	-	-	1417	1500	2917	7233	3000	3167	6167	10000	9750	9667	19417	38067																											
Large Farmers	1	11200	12000	23200	39900	-	-	-	-	14000	16000	30000	72600	-	-	-	-	-	25200	28000	53200																											
Total Allied Agri Services	30	3777	3453	7230	14417	-	-	-	-	1533	1600	3133	7827	1933	1807	3740	6107	7243	6860	14103	28350																											
Both Agri. + Allied Services (I + II)																																																
Marginal Farmers	20	905	890	1795	3670	325	300	625	1625	375	300	675	1795	1075	1360	2435	4130	2680	2850	5530	11220																											
Small Farmers	37	3068	2514	5581	11134	243	216	459	1378	1014	1076	2089	5205	2108	2459	4568	7281	6432	6265	12697	24999																											
Medium Farmers	29	3859	3431	7290	14200	1155	1086	2241	6983	1810	1983	3793	9436	3828	4966	8793	14741	10652	11466	22117	45360																											
Large Farmers	14	9443	8357	17800	31343	1679	1536	3214	9607	6929	8571	15500	35200	2643	3857	6500	11750	20693	22321	43014	87900																											
Total Proper Agri + Allied Services	100	3757	3273	7030	13360	725	670	1395	4205	1945	2233	4178	9950	2475	3162	5637	9440	8902	9338	18240	36954																											

The beneficiary farmers also showed a rise in per hectare output value for various crops cultivated during kharif season with the increase in their land holding size. In general, the per hectare output value for various crops cultivated during kharif season increased from Rs.28,120 for marginal category to Rs.36,473 for the large category.

The per household input cost and output value for various crops cultivated during kharif season by sampled beneficiary farmers also differed significantly. During kharif season, per household input cost for the average category of sampled beneficiary farmer was estimated at Rs.7,030 for cereals, Rs.1,395 for pulses, Rs.4,178 for oilseeds and Rs.5,637 for other crops with a sum of Rs.18,240 for all the kharif crops put together. The per household output value in kharif season for the average category of sampled beneficiary farmer was estimated at Rs.13,360 for cereals, Rs.4,205 for pulses, Rs.9,950 for oilseeds and Rs.9,940 for other crops with a sum of Rs.36,954 for all the kharif crops put together. In general, the per household input cost and output value for various crops grown in kharif season increased with the increase in land holding size of beneficiaries.

5.1.6.1.1 Income from Kharif Crops

The estimates relating to per hectare and per household income generation from various kharif crops cultivated by sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are presented in Table 5.11. The information relating to total income generation from various kharif crops for all the sampled beneficiary farmers put together for various land holding size categories is presented in **Appendix 10**.

The sampled beneficiary farmers were seen to generate significant income from various kharif crops. The per hectare income for the average category of sampled beneficiary farmers in kharif season was estimated at Rs.12,008 for cereals, Rs.30,510 for pulses, Rs.16,050 for oilseeds and Rs.30,669 from other crops with an average of Rs.16,969 for all the kharif crops put together (Table 5.11). Thus, in kharif season, the sampled beneficiaries generated lowest per hectare income from cereals and highest from other kharif crops. The per hectare income from kharif crops was found to increase with the increase in land holding size of beneficiary farmers with the increase being from Rs.14,260 for marginal category to Rs.18,625 for large category. The per household income in kharif season for the average category of sampled beneficiary farmers turned out to be the highest for cereals and lowest for pulses, and it was estimated at Rs.6,330 for cereals, Rs.2,810 for pulses, Rs.5,772 for oilseeds and Rs.3,803 for other crops with a sum of Rs.18,714 for all the kharif crops put together.

Table 5.11: Category-wise Details of Income from Kharif Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Cereals	Pulses	Oilseeds	Others	Total	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	10	10055	19802	12840	24648	15254	1830	2000	1040	1750	6620
Small Farmers	24	11709	27642	14323	26160	16146	3698	1417	2292	2867	10273
Medium Farmers	23	12063	30219	15154	31607	18889	5974	5978	5989	6500	24441
Large Farmers	13	12971	36984	18319	45370	18907	13300	6885	17938	5654	43777
Total Proper Agri Services	70	12232	30510	16491	31952	18170	5962	4014	6234	4419	20629
Allied Agri. Services (II)											
Marginal Farmers	10	10000	-	11881	23098	13077	1920	-	1200	1640	4760
Small Farmers	13	11330	-	14221	26115	13236	8977	-	4638	2431	16046
Medium Farmers	6	12233	-	14231	28395	14383	10500	-	4317	3833	18650
Large Farmers	1	13801	-	17603	-	16292	16700	-	42600	-	59300
Total Allied Agri Services	30	11597	-	14837	26007	13872	7187	-	4693	2367	14247
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	10027	19802	12307	24043	14260	1875	1000	1120	1695	5690
Small Farmers	37	11491	27642	14270	26146	14668	5553	919	3116	2714	12301
Medium Farmers	29	12109	30219	15000	31137	17955	6910	4741	5643	5948	23243
Large Farmers	14	13031	36984	18205	45370	18625	13543	6393	19700	5250	44886
Total Proper Agri + Allied Services	100	12008	30510	16050	30669	16969	6330	2810	5772	3803	18714

Note: Other crops include cotton, fodder (jowar) and vegetable crops

The per household income from kharif crops also increased with the increase in land holding size of beneficiaries with the increase being from Rs.5,690 for marginal category to Rs.44,886 for large category.

5.1.6.2 Input Cost and Output Value for Rabi Crops

The crops cultivated in rabi seasons generally fetch higher prices due to better quality of produce and longer shelf life. Though rabi crops usually show higher cost of production, the returns from these crops are proportionately higher as against kharif crops. The estimates relating to per hectare and per household input costs and output value for various crops cultivated in rabi season for the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.12. Details regarding total input cost and output value for various crops cultivated in rabi season for all the beneficiary farmers put together for various land holding size categories are presented in **Appendix 11**.

There were wide variations in per hectare input cost for various rabi crops cultivated by sampled beneficiary farmers. The per hectare input cost for the average category of sampled beneficiary farmer in rabi season was estimated at Rs.19,682 for cereals, Rs.22,416 for pulses, Rs.27,500 for oilseeds and Rs.75,372 for other crops with an average of Rs.31,321 for all the rabi crops put together (Table 5.12).

Table 5.12: Category- Wise Details of Inputs and Outputs of Rabi Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	Cereal			Pulses			Oilseeds			Other			Total							
		Input Cost		Output (Rs.)	Input Cost		Output (Rs.)	Input Cost		Output (Rs.)	Input Cost		Output (Rs.)	Input Cost		Output (Rs.)					
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total					
		Inputs & Output in Rs./Ha																			
Proper Agri. Services (I)																					
Marginal Farmers	10	8264	5372	13636	27769	67500	9250	7500	16750	67500	-	-	-	27500	30000	80000	10549	8516	19066	42088	
Small Farmers	24	9776	9878	19654	37780	82500	11250	8000	19250	82500	12500	15000	27500	29258	30769	98077	14900	15306	30206	55050	
Medium Farmers	23	10000	10554	20554	43844	86458	12240	8333	20573	86458	-	-	-	42105	47059	124613	15009	15433	30442	62779	
Large Farmers	13	10098	11270	21368	44430	93440	14286	11079	25364	93440	-	-	-	43286	48387	135866	18372	19885	38257	72484	
Total Proper Agri Services	70	9931	10506	20436	42156	88181	12896	9431	22327	88181	12500	15000	27500	38727	42812	121328	16163	16935	33098	64217	
Allied Agri. Services (II)																					
Marginal Farmers	10	8204	5108	13313	26037	50000	8000	6500	14500	50000	-	-	-	18033	14754	49180	9721	6637	16358	30228	
Small Farmers	13	9010	9708	18718	40901	91000	15000	15000	30000	91000	-	-	-	22840	38272	61111	87037	10405	12430	22835	46232
Medium Farmers	6	9143	9905	19048	41448	-	-	-	-	-	-	-	-	22184	38942	61126	88396	13814	20306	34120	58264
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	8894	8863	17757	38142	77333	12667	12167	24833	77333	-	-	-	21774	35507	57281	82834	11604	14410	26014	47915
Both Agri. + Allied Services (I + II)																					
Marginal Farmers	20	8221	5180	13401	26509	62745	8824	7157	15980	62745	-	-	-	20370	18519	38889	56790	9983	7231	17214	33976
Small Farmers	37	9435	9802	19237	39169	83934	12240	10164	22459	83934	12500	15000	27500	28153	32207	60360	96284	13159	14192	27351	51634
Medium Farmers	29	9777	10383	20160	43212	86458	12240	8333	20573	86458	-	-	-	32630	43198	75828	107386	14685	16730	31415	61552
Large Farmers	14	10098	11270	21368	44430	93440	14286	11079	25364	93440	-	-	-	43286	48387	91873	135866	18372	19885	38257	72484
Total Proper Agri + Allied Services	100	9639	10043	19682	41026	87792	12888	9529	22416	87792	12500	15000	27500	34417	40955	75372	111541	15019	16302	31321	60128
Proper Agri. Services (I)																					
Marginal Farmers	10	1000	650	1650	3360	2700	370	300	670	2700	-	-	-	550	600	1150	1600	1920	1550	3470	7660
Small Farmers	24	4000	4042	8042	15458	1375	188	133	321	1375	104	125	229	4438	4667	9104	14875	8729	8967	17696	32250
Medium Farmers	23	6674	7043	13717	29261	14435	2043	1391	3435	14435	-	-	-	5913	6609	12522	17500	14630	15043	29674	61196
Large Farmers	13	11923	13308	25231	52462	24654	3769	2923	6692	24654	-	-	-	18846	21154	40000	59154	34538	37385	71923	136269
Total Proper Agri Services	70	5921	6264	12186	25137	10179	1489	1089	2577	10179	36	43	79	7043	7786	14829	22064	14489	15181	29670	57566
Allied Agri. Services (II)																					
Marginal Farmers	10	2650	1650	4300	8410	500	80	65	145	500	-	-	-	1100	900	2000	3000	3830	2615	6445	11910
Small Farmers	13	5462	5885	11346	24792	1400	231	231	462	1400	-	-	-	1423	2385	3808	5423	7115	8500	15615	31615
Medium Farmers	6	8000	8667	16667	36267	-	-	-	-	-	-	-	-	10833	19017	29850	43167	18833	27683	46517	79433
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	4850	4833	9683	20800	773	127	122	248	773	-	-	-	3150	5137	8287	11983	8127	10092	18218	33557
Both Agri. + Allied Services (I + II)																					
Marginal Farmers	20	1825	1150	2975	5885	1600	225	183	408	1600	-	-	-	825	750	1575	2300	2875	2083	4958	9785
Small Farmers	37	4514	4689	9203	18738	1384	203	168	370	1384	68	81	149	3378	3865	7243	11554	8162	8803	16965	32027
Medium Farmers	29	6948	7379	14328	30710	11448	1621	1103	2724	11448	-	-	-	6931	9176	16107	22810	15500	17659	33159	64969
Large Farmers	14	11071	12357	23429	48714	22893	3500	2714	6214	22893	-	-	-	17500	19643	37143	54929	32071	34714	66786	126536
Total Proper Agri + Allied Services	100	5600	5835	11435	23836	7357	1080	799	1879	7357	25	30	55	5875	6991	12866	19040	12580	13655	26235	50363

The estimates clearly showed very high input cost for other rabi crops, which chiefly included high value vegetable crops. Further, the per hectare input cost for various crops cultivated in rabi season increased with the increase in land holding size of beneficiary farmers. In general, per hectare input cost for rabi crops increased from Rs.17,214 for marginal category to Rs.38,257 for the large category. The general trend also showed that input cost encompassed 48 per cent share towards expenses on owned inputs and 52 per cent share on purchased inputs. Further, the estimates not only showed wide variations in per hectare input cost but also wide variations in per hectare output value for various rabi crops. The per hectare output value in rabi season for the average category of beneficiary farmer was estimated at Rs.41,026 for cereals, Rs.87,792 for pulses, Rs.65,000 for oilseeds and Rs.1,11,541 for other crops with an average of Rs.60,128 for all the kharif crops put together. The estimates also revealed that there was a rise in per hectare output value for various rabi crops with the increase in land holding size of beneficiary farmers. The per hectare output value for rabi crops, in general, increased from Rs.33,976 for marginal category to Rs.72,484 for the large category.

The input cost and output value on per household basis also differed significantly for various rabi crops cultivated by the sample beneficiary farmers. The per household input cost in rabi season for the average category of sampled beneficiary farmer was estimated at Rs.11,435 for cereals, Rs.1,879 for pulses, Rs.55 for oilseeds and Rs.12,866 for other crops with a sum of Rs.26,235 for all the kharif crops put together. On the other hand, the per household output value in rabi season for the average category of sampled beneficiary farmer was estimated at Rs.23,836 for cereals, Rs.7,357 for pulses, Rs.130 for oilseeds and Rs.19,040 for other crops with a sum of Rs.50,363 for all the rabi crops put together. These estimates showed significant margin between input cost and output value. The estimates also showed rise in per household input cost and output value with the increase in land holding size of beneficiary farmers. While the per household input cost for rabi crops increased from Rs.4,958 for marginal category to as much as Rs.66,786 for the large category, the increase in output value on per household basis was from Rs.9,785 for marginal category to as much as Rs.1,26,536 for the large category.

5.1.6.2.1 Income from Rabi Crops

The sampled beneficiary farmers derived significant income from various crops cultivated during rabi season. The estimates relating to the extent of per hectare and per household income generation from various rabi crops cultivated by sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services

and allied agricultural services are shown in Table 5.13. Further, the estimates relating to total income generation from various rabi crops for all the sampled beneficiary farmers put together for various land holding size categories are presented in **Appendix 12**.

The extent of income generation from rabi crops was much higher than kharif crops for both sampled beneficiary and non-beneficiary farmers. In rabi season, the per hectare income derived by the average category of sampled beneficiary farmers was of the order of Rs.21,344 from cereals, Rs.65,376 from pulses, Rs.37,500 from oilseeds and Rs.36,169 from other rabi crops with an average of Rs.28,807 from all the rabi crops put together (Table 5.13). These estimates clearly showed that the sampled beneficiary farmers in rabi season derived lowest per hectare income from cereals and highest from pulses. The estimates further showed an increase in per hectare income from rabi crops with the increase in land holding size of beneficiary farmers, which increased from Rs.16,762 for marginal category to Rs.34,227 for the large category. Further, as against per hectare income, the income on per household basis in rabi season was the highest from cereals and lowest from oilseeds.

Table 5.13: Category-wise Details of Income from Rabi Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Cereals	Pulses	Oilseeds	Others	Total	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	10	14132	50750	37500	22500	23022	1710	2030	-	450	4190
Small Farmers	24	18126	63250	-	38049	24844	7416	1054	313	5771	14554
Medium Farmers	23	23290	65885	-	35449	32337	15544	11000	-	4978	31522
Large Farmers	13	23062	68076	37500	43993	34227	27231	17962	-	19154	64346
Total Proper Agri Services	70	21720	65854	-	39788	31119	12951	7602	107	7235	27896
Allied Agri. Services (II)											
Marginal Farmers	10	12724	35500	-	16393	13871	4110	355	-	1000	5465
Small Farmers	13	22183	61000	-	25926	23397	13446	938	-	1615	16000
Medium Farmers	6	22400	-	-	27270	24144	19600	-	-	13317	32916
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	20385	52500	-	25553	21901	11117	525	-	3696	15339
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	13108	46765	37500	17901	16762	2910	1192	-	725	4827
Small Farmers	37	19932	61475	-	35923	24283	9535	1014	202	4311	15062
Medium Farmers	29	23052	65885	-	31558	30137	16382	8724	-	6703	31810
Large Farmers	14	23062	68076	37500	43993	34227	25285	16679	-	17786	59750
Total Proper Agri + Allied Services	100	21344	65376	37500	36169	28807	12401	5478	75	6174	24128

Note: Other crops include fodder (jowar), Lucerne and vegetable crops

The per household income in rabi season for the average category of beneficiary farmers was estimated at Rs.12,401 for cereals, Rs.5,478 for pulses, Rs.75 for oilseeds and Rs.6,174 for other crops with a sum of Rs.124,128 for all the rabi crops put together. The income generated from rabi crops on per household basis increased with the increase

in land holding size of beneficiary farmers. Among various land holding size categories, the income from rabi crops on per household basis was estimated at Rs.4,827 for marginal category, Rs.15,062 for small, Rs.31,810 for medium and Rs.59,750 for the large category, showing a steady rise in per household income from rabi crops with the increase in land holding size of beneficiaries.

5.1.6.3 Input Cost and Output Value for Zaid Crops

The sampled beneficiary farmers cultivated very few crops during zaid season, which mainly encompassed some oilseeds and ginger crop. The information relating to per hectare and per household input costs and output value for various crops cultivated in zaid season for the beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.14. The estimates regarding total input cost and output value for various crops cultivated in zaid season for all the beneficiary farmers put together for various land holding size categories are presented in **Appendix 13**.

The per hectare input cost for the average category of sampled beneficiary farmer in zaid season was estimated at Rs.27,500 for oilseeds and Rs.23,861 for other crops with an average of Rs.24,463 for all the zaid crops put together (Table 5.14). The total input cost encompassed 52 per cent share towards expenses on owned inputs and 48 per cent share on purchased inputs. The per hectare output value in zaid season for the average category of sampled beneficiary farmer was estimated at Rs.1,25,000 for oilseeds and Rs.53,465 for other crops with an average of Rs.65,289 for all the zaid crops put together. The estimates further showed that per hectare input cost and output value in zaid season increased with the increase in land holding size of farmers. While per hectare input cost in zaid season increased from Rs.23,626 for small category to Rs.27,000 for the medium category, the increase in per hectare output value in zaid season was from Rs.46,978 for the small category to Rs.1,20,833 for the large category.

The per household input cost in zaid season for the average category of sampled beneficiary farmer was estimated at Rs.110 for oilseeds and Rs.1482 for other crops with a sum of Rs.592 for all the zaid crops put together. As against input cost, the per household output value in zaid season for the average category of sampled beneficiary farmer was estimated at 500 for oilseeds and Rs.1,080 for other crops with a sum of Rs.1,580 for all the zaid crops put together. Thus, zaid crops showed very low amount of per household input cost and output value for various categories of sampled beneficiary farmers since these crops were cultivated by very few farmers.

Table 5.14: Category- Wise Details of Inputs and Outputs of Zaid Crops on the Farms of Sample Beneficiary Farmers under AC/ABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	Cereal			Pulses			Oilseeds			Other			Total		
		Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total
		Inputs & Output in Rs./Ha														
Proper Agri. Services (I)																
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Proper Agri Services	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Allied Agri. Services (II)																
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Allied Agri Services	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Both Agri. + Allied Services (I + II)																
Marginal Farmers	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Proper Agri + Allied Services	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Proper Agri. Services (I)																
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Proper Agri Services	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Allied Agri. Services (II)																
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Allied Agri Services	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Both Agri. + Allied Services (I + II)																
Marginal Farmers	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Proper Agri + Allied Services	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Among various categories of sampled beneficiaries, medium category of farmers showed the highest per hectare input cost as well as output value for zaid crops. On the other hand, small category of sampled beneficiaries showed higher input cost and lower output value on per household basis.

5.1.6.3.1 Income from Zaid Crops

The estimates relating to the extent of per hectare and per household income derived by the sampled beneficiary farmers of the ACABC Scheme from various zaid crops under the broad category of proper agricultural services and allied agricultural services are presented in Table 5.15. As for total income generation from zaid crops on per hectare and per household basis for various land holding size categories, the estimates for beneficiary farmers are presented in **Appendix 14**.

The per hectare income derived by the average category of sampled beneficiary farmers was seen to be Rs.97,500 from oilseeds and Rs.29,604 from other zaid crops with an average of Rs.40,826 from all the zaid crops put together (Table 5.15).

Table 5.15: Category-wise Details of Income from Zaid Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Cereals	Pulses	Oilseeds	Others	Total	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
Small Farmers	24	-	-	-	33951	33951	-	-	-	1146	1146
Medium Farmers	23	-	-	97500	-	97500	-	-	1696	-	1696
Large Farmers	13	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	70	-	-	97500	33951	54959	-	-	557	393	950
Allied Agri. Services (II)											
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
Small Farmers	13	-	-	-	14851	14851	-	-	-	1154	1154
Medium Farmers	6	-	-	-	86500	86500	-	-	-	2883	2883
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	30	-	-	-	26694	26694	-	-	-	1077	1077
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	-	-	-	-	-	-	-	-	-	-
Small Farmers	37	-	-	-	23352	23352	-	-	-	1149	1149
Medium Farmers	29	-	-	97500	86500	93833	-	-	1345	597	1941
Large Farmers	14	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	100	-	-	97500	29604	40826	-	-	390	598	988

Note: Other crops include fodder (jowar) and ginger

The medium category of beneficiary farmers derived almost four times higher per hectare income from zaid crops as against small category. The per household income in zaid season for the average category of non-beneficiary farmers was estimated at Rs.390 for oilseeds and Rs.598 for other crops with a sum of Rs.988 for all the zaid crops put together, showing higher marginally higher income from other crops than oilseeds.

5.1.6.4 Input Cost and Output Value for Perennial Crops

The area allocation under perennial crops was found to be significant, which stood at 33.50 per cent of the GCA for beneficiary farmers. The major perennial crops cultivated by beneficiary farmers were sugarcane, pomegranate and banana. The information relating to per hectare and per household input costs and output value for various perennial crops cultivated by the sampled beneficiary of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.16. The estimates regarding total input cost and output value for various perennial crops cultivated by the sampled beneficiary farmers put together for various land holding size categories are presented in **Appendix 15**.

The beneficiary farmers showed wide variations in per hectare input cost for various perennial cultivated by them. The per hectare input cost for the average category of beneficiary farmer for perennial crops was estimated at Rs.82,313 for sugarcane, Rs.1,27,482 for pomegranate, Rs.74,074 for banana and Rs.60,991 for other perennial crops with an average of Rs.98,424 for all the perennial crops put together (Table 5.16).

Thus, per hectare input cost was the highest for pomegranate and lowest for other perennial crops. The perennial crops showed a tendency of rise in per hectare input cost with the rise in land holding size of farmers, which increased from Rs.69,691 for marginal category to Rs.1,17,212 for the large category. The estimates also revealed that total input cost of beneficiaries encompassed 38 per cent expenses towards owned inputs and 62 per cent on purchased inputs. The output value of beneficiary farmers for perennial crops also varies widely. The per hectare output value for perennial crops for the average category of beneficiary farmer was estimated at Rs.1,65,419 for sugarcane, Rs.4,07,419 for pomegranate, Rs.2,72,222 for banana and Rs.1,17,403 for other perennial with an average of Rs.2,58,000 for all the perennial crops put together. The estimates also showed an increase in per hectare output value of perennial crops, which, in general, increased from Rs.1,91,753 for marginal category to Rs.3,13,596 for the large category.

The per household input cost and output value also varied significantly for various perennial crops. The per household input cost for perennial crops for the average category of sampled beneficiary farmer was estimated at Rs.43,980 for sugarcane, Rs.48,800 for pomegranate, Rs.1,200 for banana and Rs.3,450 for other perennial with a sum of Rs.97,430 for all the perennial crops put together.

Table 5.16: Category- Wise Details of Inputs and Outputs of Perennial Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	Sugarcanne			Pomegranate			Banana			Others			Total				
		Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)		
		Own	Others		Own	Others		Own	Others		Own	Others		Own	Others			
		Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total			
Inputs & Output in Rs./Ha																		
Proper Agri. Services (I)																		
Marginal Farmers	10	29644	25692	55336	154941	78431	68627	147059	480588	-	-	-	-	37954	33003	70957	210264	
Small Farmers	24	20873	27112	48585	138650	40578	70151	110729	423315	37500	75000	112500	29700	29761	44940	74701	246270	
Medium Farmers	23	30995	61749	92744	169303	50218	88064	138282	445693	43210	37037	80247	37037	35552	66488	102040	235923	
Large Farmers	13	30290	66553	96843	171365	51530	77633	129163	396332	-	-	-	30938	18563	49500	116403	313580	
Total Proper Agri Services	70	28755	54318	83073	163054	49498	77977	127475	412015	41322	37190	78512	27675	33525	61200	107820	268587	
Allied Agri. Services (II)																		
Marginal Farmers	10	32787	49180	81967	177049	-	-	-	-	-	-	-	23100	37125	60225	152543	160934	
Small Farmers	13	33058	43388	76446	173554	-	-	-	-	37500	25000	62500	-	-	-	-	182332	
Medium Farmers	6	37263	42213	79476	176274	59406	44554	103960	276238	-	-	-	-	40102	42513	82614	189086	
Large Farmers	1	-	-	-	-	100000	87500	187500	315000	-	-	-	-	100000	87500	187500	315000	
Total Allied Agri Services	30	35960	42929	78889	175657	70922	56738	127660	287234	37500	25000	62500	23100	37125	60225	152543	187541	
Both Agri. + Allied Services (I + II)																		
Marginal Farmers	20	30351	30351	60703	159744	78431	68627	147059	480588	-	-	-	23100	37125	60225	152543	69691	191753
Small Farmers	37	23556	31164	54720	146265	40578	70151	110729	423315	37037	30864	67901	27000	29700	56700	102690	237739	
Medium Farmers	29	32551	56900	89451	171033	51396	82487	133883	423973	43210	37037	80247	26871	48086	74957	119507	226154	
Large Farmers	14	30290	66553	96843	171365	52364	77773	130137	394719	-	-	-	30938	18563	49500	101475	313596	
Total Proper Agri + Allied Services	100	30095	52218	82313	165419	50287	77194	127482	407419	40123	33951	74074	272222	26695	34296	60991	117403	258000
Proper Agri. Services (I)																		
Marginal Farmers	10	7500	6500	14000	39200	4000	3500	7500	24510	-	-	-	-	11500	10000	21500	63710	
Small Farmers	24	7375	9792	17167	48990	12292	21250	33542	128229	625	625	1250	2500	22792	34417	57208	188602	
Medium Farmers	23	28043	55870	83913	153183	15000	26304	41304	133126	1522	1304	2826	1652	46217	86435	132652	306700	
Large Farmers	13	27308	60000	87308	154492	88077	132692	220769	677423	-	-	-	1923	1154	3077	6308	838223	
Total Proper Agri Services	70	17886	33786	51671	101419	26071	41071	67143	217014	714	643	1357	4929	1757	3886	6846	124057	330208
Allied Agri. Services (II)																		
Marginal Farmers	10	2000	3000	5000	10800	-	-	-	-	-	-	-	2800	4500	7300	18490	29290	
Small Farmers	13	6154	8077	14231	32308	-	-	-	7385	-	769	1923	-	7308	8846	16154	39692	
Medium Farmers	6	42667	48333	91000	201833	10000	7500	17500	46500	-	-	-	-	52667	55833	108500	248333	
Large Farmers	1	-	-	-	-	40000	35000	75000	126000	-	-	-	-	40000	35000	75000	126000	
Total Allied Agri Services	30	11867	14167	26033	57967	3333	2667	6000	13500	500	333	833	933	1500	2433	6163	35300	80830
Both Agri. + Allied Services (I + II)																		
Marginal Farmers	20	4750	4750	9500	25000	2000	1750	3750	12255	-	-	-	1400	2250	3650	9245	16900	46500
Small Farmers	37	6946	9189	16135	43128	7973	13784	21757	83176	811	676	1486	1622	1784	3405	6168	25432	42784
Medium Farmers	29	31069	54310	83379	163248	13966	22414	36379	115204	1207	1034	2241	1310	2345	3655	5828	80103	127655
Large Farmers	14	25357	55714	81071	143457	84643	125714	210357	638036	-	-	-	1786	1071	2857	5857	111786	294286
Total Proper Agri + Allied Services	100	16080	27900	43980	88384	19250	29550	48800	155960	650	550	1200	4410	1510	1940	3450	59940	97430

The per household output value for perennial crops for the average category of sampled beneficiary farmer was estimated at Rs.88,384 for sugarcane, Rs.1,55,960 for pomegranate, Rs.4,410 for banana and Rs.6,641 for other perennial crops with a sum of Rs.2,55,395 for all the perennial crops put together. These estimates showed significant margin between per household input cost and output value. Further, there was very wide variation in per household input cost and output value for perennial crops across land holding size categories. While per household input cost for perennial crops varied from Rs.16,900 for marginal category to as much as Rs.2,94,286 for the large category, the variation in output value in this respect was from Rs.46,500 for marginal category to as much as Rs.7,87,350 for the large category.

5.1.6.4.1 Income from Perennial Crops

As against various field crops, the income generation from perennial crops was quite high for beneficiary farmers. The estimates relating to the extent of per hectare and per household income generation from various perennial crops cultivated by sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.17. On the other hand, the estimates relating to total income generation from various perennial crops for all the sampled beneficiary farmers put together for various land holding size categories are presented in **Appendix 16**.

Table 5.17: Category-wise Details of Income from Perennial Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Sugarcane	Pomegranate	Banana	Others	Total	Sugarcane	Pomegranate	Banana	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	10	99605	333529	-	-	139307	25200	17010	-	-	42210
Small Farmers	24	90065	312586	37500	45990	171570	31823	94688	625	4258	131394
Medium Farmers	23	76559	307410	290123	44550	133883	69270	91822	10217	2739	174048
Large Farmers	13	74522	267169	-	51975	197177	67185	456654	-	3231	527069
Total Proper Agri Services	70	79980	284541	206612	46620	167680	49748	149872	3571	2960	206151
Allied Agri. Services (II)											
Marginal Farmers	10	95082	-	-	92318	93352	5800	-	-	11190	16990
Small Farmers	13	97107	-	177500	-	108127	18077	-	5462	-	23538
Medium Farmers	6	96798	172277	-	-	106472	110833	29000	-	-	139833
Large Farmers	1	-	127500	-	-	127500	-	51000	-	-	51000
Total Allied Agri Services	30	96768	159574	177500	92318	105638	31933	7500	2367	3730	45530
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	99042	333529	-	92318	122062	15500	8505	-	5595	29600
Small Farmers	37	91544	312586	106173	45990	163105	26993	61419	2324	2762	93499
Medium Farmers	29	81582	290090	290123	44550	128166	77869	78824	8103	2172	166969
Large Farmers	14	74522	264582	-	51975	196384	62386	427679	-	3000	493064
Total Proper Agri + Allied Services	100	83106	279938	198148	56412	159576	44404	107160	3210	3191	157965

Note: Other perennial crops include papaya, grape, mango, lemon, chiku, and guava

In case of perennial crops, the average category of sampled beneficiary farmers derived a per hectare income of the order of Rs.83,106 from sugarcane, Rs.2,79,938 from pomegranate, Rs.1,98,148 from banana and Rs.56,412 from other perennial crops with an average of Rs.1,59,576 from all the perennial crops put together (Table 5.17). Thus, among perennial crops, sampled beneficiaries derived lowest per hectare income from other perennial crops and highest from pomegranate. The per hectare income from perennial crops increased with the increase in land holding size of beneficiaries; the increase being from Rs.1,22,062 for marginal category to Rs.1,96,384 for the large category. The per household income from perennial crops was also the highest from pomegranate and lowest from other perennial crops. The per household income from perennial crops for the average category of beneficiary farmers was estimated at Rs.44,404 from sugarcane, Rs.1,07,160 from pomegranate, Rs.3,210 from banana and Rs.3,191 from other crops with a sum of Rs.1,57,965 from all the perennial crops put together. There was a steep rise in per household income from perennial crops with the increase in land holding size of beneficiaries, which increased from Rs.29,600 for marginal category to Rs.4,93,064 for the large category.

5.1.6.5. Input Cost, Output Value and Income from All Crops

The sampled beneficiary farmers were seen to cultivate large number of crops, which not only included kharif, rabi and zaid crops but also several perennial crops. The input and output cost as well as income generated from these crops differed significantly across land holding size of farmers. The estimates relating to per hectare and per household input costs, output value and income generation from all the crops put together for the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.18. The information regarding total input cost, output value, and income generation from all the crops cultivated by the beneficiary farmers put together for various land holding size categories is presented in **Appendix 17**.

The estimates presented in Table 5.18 showed that a rise in land holding size of beneficiary farmers was associated with a steady rise in per hectare as well as per household input cost, output value and net income generation from all the crops put together. The per hectare input cost for beneficiary farmers with all the crops put together was estimated at Rs.29,465 for marginal category, Rs.35,366 for small, Rs.49,946 for medium and Rs.60,615 for the large category with an average of Rs.48,230 for the average category of farmers.

Table 5.18: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops on the Farms of the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	Inputs, Output & Income in Rs./Ha					Inputs, Output & Income in Rs./Household				
		Input Cost			Output (Rs)	Income (Rs.)	Input Cost			Output (Rs)	Income (Rs.)
		Own	Others	Total			Own	Others	Total		
Proper Agri. Services (I)											
Marginal Farmers	10	17922	16376	34298	91991	57693	16470	15050	31520	84540	53020
Small Farmers	24	18405	24448	42852	120692	77840	37208	49425	86633	244000	157367
Medium Farmers	23	20058	31705	51763	116376	64613	71930	113696	185626	417333	231707
Large Farmers	13	25070	36852	61922	154401	92480	172192	253115	425308	1060500	635192
Total Proper Agri Services	70	21572	31558	53130	131102	77972	70723	103460	174183	429808	255625
Allied Agri. Services (II)											
Marginal Farmers	10	11638	13101	24739	53691	28952	10940	12315	23255	50470	27215
Small Farmers	13	10990	11633	22623	48522	25899	24077	25485	49562	106300	56738
Medium Farmers	6	20370	23382	43752	92242	48490	81617	93683	175300	369583	194283
Large Farmers	1	16099	15556	31654	58889	27235	65200	63000	128200	238500	110300
Total Allied Agri Services	30	14817	16367	31184	65838	34654	32577	35985	68562	144753	76192
Both Agri. + Allied Services (I + II)											
Marginal Farmers	20	14744	14720	29465	72625	43160	13705	13683	27388	67505	40118
Small Farmers	37	15660	19705	35366	93986	58621	32595	41014	73608	195619	122011
Medium Farmers	29	20125	29821	49946	110908	60963	73934	109555	183490	407454	223964
Large Farmers	14	24683	35932	60615	150273	89658	164550	239536	404086	1001786	597700
Total Proper Agri + Allied Services	100	20064	28166	48230	116531	68301	59279	83218	142497	344292	201795

As against input cost, the per hectare output value for beneficiary farmers with all the crops put together was estimated at Rs.72,625 for marginal category, Rs.93,986 for small, Rs.1,10,908 for medium and Rs.1,50,273 for the large category with an average of Rs.1,16,531 for the average category of farmers. As a result, the per hectare income generation for beneficiary farmers with all the crops put together was worked out at Rs.43,160 for marginal category, Rs.58,621 for small, Rs.60,963 for medium and Rs.89,658 for the large category with an average of Rs.68,301 for the average category of farmers. Further, there was a wide variation in per household input cost and output value across various land holding size of beneficiary farmers, which resulted in significant variation in per household income generation from various crops put together. The per household income generation for beneficiary farmers with all the crops put together was estimated at Rs.40,118 for marginal category, Rs.1,22,011 for small, Rs.2,23,964 for medium and Rs.5,97,700 for the large category with an average of Rs.2,01,795 for the average category of farmers (Table 5.18). These estimates showed a steep rise in per household income generation from all the crops put together with the increase in land holding size of beneficiary farmers.

5.1.7 Input Cost, Output Value and Income from Animals

The sampled beneficiary farmers of the ACABC Scheme were not only found to cultivate various kharif, rabi, zaid and perennial crops but also reared various animals to

supplement their income from crop production. The animals reared by them included various cows, buffaloes, bullocks, calves and heifers, goats, etc. Among these animals reared by sampled beneficiary farmers, cows and buffaloes in milk and goats generated reasonable amount of annual income for them. Therefore, an attempt in this section is made to evaluate the extent of input cost, output value and net income generation from various animals reared by sampled beneficiary farmers. The estimates relating to input cost, output value and net income generation for beneficiary farmers of ACABC Scheme are assessed separated for milch animals, draught animals, calves/heifers and goats.

5.1.7.1 Input Cost, Output Value and Income from Milch Animals

The milch animals reared by sampled beneficiary farmers encompassed cross-bred and local cows, local buffaloes and *murrah* buffaloes. These animals turned out to be significant source of annual income for beneficiary farmers. The estimates relating to per milch animal and per household annual input cost, output value and net income generation for the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.19. The information relating to total annual input cost, output value and net income generation from various milch animals for all the sampled beneficiary farmers put together for various land holding size categories is presented in **Appendix 18**.

All the sampled beneficiary farmers put together reared 326 milch animals, which encompassed 77 milch animals being reared by marginal farmers, 103 by small, 98 by medium and 48 by large farmers. The per milch animal annual input cost was estimated at Rs.17,031 for marginal category of beneficiary farmers, Rs.19,991 for small, Rs.22,569 for medium and Rs.22,880 for large category with an average of Rs.20,492 for the average category of beneficiary farmer (Table 5.19). In general, owned inputs accounted for about 68 per cent share in total input cost of beneficiary farmers. As against input cost, the per milch animal annual output value was estimated at Rs.56,608 for marginal category of beneficiary farmers, Rs.64,644 for small, Rs.68,356 for medium and Rs.69,228 for the large category with an average of Rs.64,537 for the average category of beneficiary farmer. The beneficiary farmers were seen to generate significant net income from milch animals since output value for milch animals was much higher than input cost. The estimated net per milch animal annual income was found to be of the order of Rs.39,577 for marginal category, Rs.44,653 for small, Rs.45,786 for medium and Rs.46,349 for the large category with an average of Rs.44,044 for the average category of

beneficiary farmer. Incidentally, the per milch animal annual input cost, output value, and net income increased with the increase in land holding size of beneficiary farmers.

Table 5.19: Category-wise Details of Total Inputs, Outputs and Net Income from Milch Animals Reared By Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Milch Animal Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Milch Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	17	10967	4811	15778	52539	36760
Small Farmers	49	14182	6492	20674	67652	46977
Medium Farmers	63	14219	6872	21091	66152	45060
Large Farmers	48	15231	7649	22880	69228	46349
Total Proper Agri Services	177	14171	6780	20951	66094	45143
Allied Agri. Services (II)						
Marginal Farmers	60	12074	5312	17386	57761	40375
Small Farmers	54	13169	6202	19371	61915	42544
Medium Farmers	35	17474	7755	25229	72322	47093
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	149	13739	6209	19948	62687	42739
Both Agri. + Allied Services (I + II)						
Marginal Farmers	77	11829	5202	17031	56608	39577
Small Farmers	103	13651	6340	19991	64644	44653
Medium Farmers	98	15382	7188	22569	68356	45786
Large Farmers	48	15231	7649	22880	69228	46349
Total Proper Agri + Allied Services	326	13974	6519	20492	64537	44044

Note: Output value for milch animals included value of milk output and dung

Table 5.19 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Milch Animals Reared By Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Milch Animals in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	18643	8179	26823	89316	62493
Small Farmers	24	28955	13255	42210	138122	95912
Medium Farmers	23	38949	18824	57772	181199	123426
Large Farmers	13	56238	28241	84479	255612	171133
Total Proper Agri Services	70	35832	17143	52975	167123	114148
Allied Agri. Services (II)						
Marginal Farmers	10	72442	31874	104317	346568	242251
Small Farmers	13	54702	25761	80463	257185	176721
Medium Farmers	6	101932	45239	147171	421879	274708
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	30	68238	30836	99074	311345	212271
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	45543	20027	65570	217942	152372
Small Farmers	37	38001	17649	55650	179955	124304
Medium Farmers	29	51980	24289	76269	230995	154726
Large Farmers	14	52221	26224	78445	237354	158910
Total Proper Agri + Allied Services	100	45554	21251	66805	210390	143585

In general, the sampled beneficiary farmers were seen to possess more than three milch animals. Therefore, per household annual income generation from milch animals stood at Rs.1,52,372 for marginal category, Rs.1,24,304 for small, Rs.1,54,726 for

medium and Rs.1,58,910 for the large category with an average of Rs.1,43,585 for the average category of beneficiary farmers (Table 5.19 (a)). The estimates also showed the lowest per household input cost, output value and income generation from milch animals for the small category and highest for the large category of beneficiary farmers.

5.1.7.2 Input Cost, Output Value and Income from Draught Animals

Draught animals play an important role in various farm operations in the absence of mechanized sources of power. Generally, draught animal power is more suitable to small size of farm as against mechanized sources of power. Draught animals are used in various farming operations like ploughing, planting, weeding, transportation, water lifting, etc. The draught animal power is not only affordable but easily accessible to the small holding farmers. The draught animals are useful not in carrying farm inputs like seeds, fertilizers, and crop protection requisites but also outputs such as harvested crops and animal products. It was, therefore, thought prudent to evaluate the extent of input cost, output value and net income generation from draught animal possessed by the sampled beneficiary farmers. The estimates relating to per draught animal and per household annual input cost, output value and net income generation for the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.20. The information relating to total annual input cost, output value and net income generation from draught animals for all the sampled beneficiary farmers put together for various land holding size categories is presented in **Appendix 19**.

The sampled beneficiary farmers were seen to possess altogether 51 draught animals, which encompassed 6 draught animals with marginal category, 15 with small, 23 with medium and 7 with large category of farmers. The draught animals were found to work for 60-90 days in a year. Therefore, the output value of draught animals included imputed value of work rendered by draught animals, apart from sale value of dung. It is to be noted that since input cost outweighed output value for draught animals, there was negative return from these animals. In case of beneficiary farmers, the per draught animal annual input cost was estimated at Rs.9,490 for marginal category, Rs.9,782 for small, Rs.9,046 for medium and Rs.10,585 for large category with an average of Rs.9,411 for the average category of beneficiary farmer (Table 5.20). The annual per draught animal output value was much lower than input cost and it was estimated at Rs.4,104 for marginal category, Rs.4,153 for small, Rs.3,482 for medium and Rs.3,825 for large category with an average of Rs.3,797 for the average category of beneficiary farmer.

There was, therefore, negative annual income from draught animals possessed by beneficiary farmers. The estimated annual negative income per draught animal was of the order of Rs.5,386 for marginal category, Rs.5,629 for small, Rs.5,564 for medium and Rs.6,760 for large category with an average of Rs.5,614 for the average category of beneficiary farmer. Therefore, negative annual income per draught animal remained by and large same for various categories of beneficiary farmers.

Table 5.20: Category-wise Details of Total Inputs, Outputs and Net Income from Draught Animals Reared By Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Draught Animal Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Draught Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	2	5475	3650	9125	3325	-5800
Small Farmers	12	5171	4228	9399	3695	-5703
Medium Farmers	14	4745	4641	9386	3513	-5873
Large Farmers	2	5475	5110	10585	3825	-6760
Total Proper Agri Services	30	5013	4441	9454	3594	-5860
Allied Agri. Services (II)						
Marginal Farmers	4	5293	4380	9673	4494	-5179
Small Farmers	3	5840	5475	11315	5983	-5332
Medium Farmers	9	4380	4137	8517	3434	-5083
Large Farmers	5	-	-	-	-	-
Total Allied Agri Services	21	4882	4448	9330	4177	-5153
Both Agri. + Allied Services (I + II)						
Marginal Farmers	6	5353	4137	9490	4104	-5386
Small Farmers	15	5305	4477	9782	4153	-5629
Medium Farmers	23	4602	4443	9046	3482	-5564
Large Farmers	7	5475	5110	10585	3825	-6760
Total Proper Agri + Allied Services	51	4967	4443	9411	3797	-5614

Table 5.20 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Draught Animals Reared By Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Draught Animals in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	1095	730	1825	665	-1160
Small Farmers	24	2585	2114	4699	1848	-2852
Medium Farmers	23	2888	2825	5713	2138	-3575
Large Farmers	13	842	786	1628	588	-1040
Total Proper Agri Services	70	2148	1903	4052	1540	-2511
Allied Agri. Services (II)						
Marginal Farmers	10	2117	1752	3869	1798	-2072
Small Farmers	13	1348	1263	2611	1381	-1230
Medium Farmers	6	6570	6205	12775	5151	-7624
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	30	2604	2373	4976	2228	-2749
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	1606	1241	2847	1231	-1616
Small Farmers	37	2151	1815	3966	1684	-2282
Medium Farmers	29	3650	3524	7174	2761	-4413
Large Farmers	14	782	730	1512	546	-966
Total Proper Agri + Allied Services	100	2285	2044	4329	1747	-2582

In general, the sampled beneficiary farmers possessed 0.51 draught animals per household. Therefore, the extent of per household negative annual income generation from draught animals was Rs.1,616 for marginal category, Rs.2,282 for small, Rs.4,413 for medium and Rs.966 for the large category with an average of Rs.2,582 for the average category of beneficiary farmers (Table 5.20 (a)). Therefore, the extent of per household negative annual income generation from draught animals was the lowest for large and large category and highest for medium category.

5.1.7.3 Input Cost, Output Value and Income from Other Animals

The beneficiary farmers not only possessed milch and draught animals but also calves and heifers. The input cost for these animals mainly encompassed feeds and fodder cost, labour cost, etc. On the other hand, the output value for these animals was in the form of sale value of dung. Since output value was much lower than input cost, the net income generation from these animals was negative. The details regarding per calf/heifer as well as per household annual input cost, output value and net income generation these animals for the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.21. The estimates relating to total annual input cost, output value and net income generation from these calves/heifers for all the sampled beneficiary farmers put together for various land holding size categories is presented in **Appendix 20**.

Table 5.21: Category-wise Details of Total Inputs, Outputs and Net Income from Other Animals (Calves and Heifers) Reared By Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra (Per Calf and Heifer Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Calves & Heifers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	14	5084	130	5214	704	-4510
Small Farmers	15	4137	1217	5353	1217	-4137
Medium Farmers	20	2920	821	3741	1241	-2500
Large Farmers	12	2890	913	3802	1004	-2798
Total Proper Agri Services	61	3710	778	4488	1065	-3423
Allied Agri. Services (II)						
Marginal Farmers	19	1921	768	2689	1172	-1518
Small Farmers	14	3650	391	4041	1278	-2764
Medium Farmers	16	2852	913	3764	798	-2966
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	49	2719	708	3427	1080	-2346
Both Agri. + Allied Services (I + II)						
Marginal Farmers	33	3263	498	3761	973	-2787
Small Farmers	29	3902	818	4720	1246	-3474
Medium Farmers	36	2890	862	3751	1044	-2707
Large Farmers	12	2890	913	3802	1004	-2798
Total Proper Agri + Allied Services	110	3268	747	4015	1072	-2943

Note: Output value for calves and heifers included value of dung

The beneficiary farmers altogether possessed 110 calves and heifers, which encompassed 33 with marginal category, 29 with small, 36 with medium and 12 with large category. Per calf/heifer annual input cost was estimated at Rs.3,761 for marginal category, Rs.4,720 for small, Rs.3,751 for medium and Rs.3,802 for large category with an average of Rs.4,015 for the average category of beneficiary farmer (Table 5.21). Owned inputs accounted for about 81 per cent share in total input cost for these animals.

The annual per calf/heifer output value was very low and it was estimated at Rs.973 for marginal category, Rs.1,246 for small, Rs.1,044 for medium and Rs.1,004 for large category with an average of Rs.1,072 for the average category of beneficiary farmer. The dung value constituted the output value for these animals. The higher input cost as against output value resulted in negative returns for these calves and heifers. The estimated annual negative income per calf/heifer was to the tune of Rs.2,787 for marginal category, Rs.3,474 for small, Rs.2,707 for medium and Rs.2,798 for the large category with an average of Rs.2,943 for the average category of beneficiary farmers. Therefore, various land holding size of beneficiary farmers showed almost same negative annual income from these calves and heifers.

Table 5.21 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Other Animals Calves and Heifers) Reared By Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra (Per Household Annual Input Costs, Output Value and Net Income from Calves & Heifers in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	7118	183	7300	986	-6315
Small Farmers	24	2585	760	3346	760	-2585
Medium Farmers	23	2539	714	3253	1079	-2174
Large Farmers	13	2667	842	3510	927	-2583
Total Proper Agri Services	70	3233	678	3911	928	-2983
Allied Agri. Services (II)						
Marginal Farmers	10	3650	1460	5110	2227	-2884
Small Farmers	13	3931	421	4352	1376	-2976
Medium Farmers	6	7604	2433	10038	2129	-7908
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	30	4441	1156	5597	1764	-3833
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	5384	821	6205	1606	-4599
Small Farmers	37	3058	641	3699	977	-2723
Medium Farmers	29	3587	1070	4657	1296	-3361
Large Farmers	14	2477	782	3259	860	-2399
Total Proper Agri + Allied Services	100	3595	821	4417	1179	-3238

Note: Output value for calves and heifers included value of dung

The per household negative annual income generation from calves and heifers was marginally higher as compared to income generation on per calf/heifer basis since beneficiary farmers, in general, possessed 1.10 calves and heifers per household. The extent of per household negative annual income generation from calves and heifers was

Rs.4,599 for marginal category, Rs.2,723 for small, Rs.3,361 for medium and Rs.2,399 for the large category with an average of Rs.3,238 for the average category of beneficiary farmers (Table 5.21 (a)). It is to be noted that marginal category of beneficiary farmers showed the highest per household annual input cost, output value and negative income generation from calves and heifers, followed by medium, small and large category.

5.1.7.4 Input Cost, Output Value and Income from Goats

In addition to milch and draught animals, calves and heifers, many of the beneficiary farmers also reared goats, which included adult goats and their male and female calves. Input cost in case of goat rearing included feed expenditure on adult goats and their male and female calves. On the other hand, the output value in goat rearing was in the form of sale value of male and female calves of adult goats. The beneficiary farmers generated a reasonable amount of income from goat rearing. The details regarding annual input cost, output value and net income generation from goat rearing on per goat and per household basis for various categories of sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.22. The information relating to total annual input cost, output value and net income generation from goat rearing for various land holding size categories of sampled beneficiary farmers is presented in **Appendix 21**.

Table 5.22: Category-wise Details of Total Inputs, Outputs and Net Income from Goats (Adult/ Male & Female Calves) Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra (Per Goat Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Goats (Adult & Calves)	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	-	-	-	-	-	-
Small Farmers	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Proper Agri Services	-	-	-	-	-	-
Allied Agri. Services (II)						
Marginal Farmers	31	1130	895	2025	3484	1459
Small Farmers	52	1025	442	1467	3779	2312
Medium Farmers	77	830	502	1332	3429	2097
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	160	951	559	1510	3553	2043
Both Agri. + Allied Services (I + II)						
Marginal Farmers	31	1130	895	2025	3484	1459
Small Farmers	52	1025	442	1467	3779	2312
Medium Farmers	77	830	502	1332	3429	2097
Large Farmers	-	-	-	-	-	-
Total Proper Agri + Allied Services	160	951	559	1510	3553	2043

Note: 1) Input cost includes feed expenditure on adult goats and their male and female calves
2) Output value is the sale value of male and female calves of adult goats

The sampled beneficiary farmers altogether reared 160 goats, which encompassed 31 goats being reared by marginal category, 52 by small and 77 by medium category. The annual input cost per goat was estimated at Rs.2,025 for marginal category of beneficiary farmers, Rs.1,467 for small and Rs.1,332 for medium category with an average of Rs.1,510 for the average category of beneficiary farmers (Table 5.22). Contrary to input cost, the annual output value per goat was estimated at Rs.3,484 for marginal category of beneficiary farmers, Rs.3,779 for small and Rs.3,429 for medium category with an average of Rs.3,553 for the average category of beneficiary farmers. The beneficiary farmers, therefore, generated some income from goat rearing. The extent of annual income generation on per goat basis was to the tune of Rs.1,459 for marginal category of beneficiary farmers, Rs.2,312 for small and Rs.2,097 for medium category with an average of Rs.2,043 for the average category of beneficiary farmers.

Table 5.22 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Goats (Adult/ Male & Female Calves) Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Goats in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	-	-	-	-	-
Small Farmers	24	-	-	-	-	-
Medium Farmers	23	-	-	-	-	-
Large Farmers	13	-	-	-	-	-
Total Proper Agri Services	70	-	-	-	-	-
Allied Agri. Services (II)						
Marginal Farmers	10	3504	2774	6278	10800	4522
Small Farmers	13	4099	1769	5868	15115	9247
Medium Farmers	6	10646	6448	17094	44000	26906
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	30	5074	2981	8054	18950	10896
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	1752	1387	3139	5400	2261
Small Farmers	37	1440	621	2062	5311	3249
Medium Farmers	29	2203	1334	3537	9103	5567
Large Farmers	14	-	-	-	-	-
Total Proper Agri + Allied Services	100	1522	894	2416	5685	3269

Note: 1) Input cost includes feed expenditure on adult goats and their male and female calves

2) Output value is the sale value of male and female calves of adult goats

Since the beneficiary farmers, on and average, possessed 1.60 goats, the annual income from goat rearing increased on per household basis as against per goat basis. Per household annual income generation from goat rearing was of the order of Rs.2,261 for marginal category, Rs.3,249 for small, and 5,567 for medium category with an average of Rs.3,269 for the average category of beneficiary farmers (Table 5.22 (a)). The estimates clearly showed an increase in per household annual income generation from goat rearing with an increase in land holding size of beneficiary farmers. In goat rearing, the medium

category of beneficiary farmers not only showed higher per household income generation but also higher annual input cost and output value.

5.1.7.5 Input Cost, Output Value and Income from All Animals

The herd size of beneficiary farmers included several species and breeds of animals. The input cost, output value and net income generation from these animals differed significantly due to the nature and type of animals. In general, the herd size of beneficiary farmers encompassed various milch animals, draught animals, calves and heifers and goats. This section presents an overall scenario in terms of input cost, output value and income generation from all the animals put together possessed by the beneficiary farmers. The estimates relating to annual input cost, output value and net income generation on per animal and per household basis with all the animals put together for various categories of sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.23. The details regarding total annual input cost, output value and net income generation from all the animals put together for various land holding size categories of sampled beneficiary farmers is presented in **Appendix 22**.

Table 5.23: Category-wise Details of Total Inputs, Outputs and Net Income from Total Animals Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Animal Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	33	8138	2755	10893	27565	16672
Small Farmers	76	10777	5093	15870	44441	28571
Medium Farmers	97	10522	5302	15825	43727	27903
Large Farmers	62	12528	6263	18791	53914	35123
Total Proper Agri Services	268	10765	5152	15916	44296	28380
Allied Agri. Services (II)						
Marginal Farmers	114	7168	3321	10489	31701	21212
Small Farmers	123	6773	3088	9860	29071	19211
Medium Farmers	137	5551	2642	8193	20722	12529
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	374	6446	2996	9441	26814	17373
Both Agri. + Allied Services (I + II)						
Marginal Farmers	147	7386	3194	10580	30773	20193
Small Farmers	199	8302	3854	12156	34941	22785
Medium Farmers	234	7612	3745	11357	30259	18902
Large Farmers	62	12528	6263	18791	53914	35123
Total Proper Agri + Allied Services	642	8249	3896	12144	34112	21968

Note: Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

All the sampled beneficiary farmers put together reared as many as 642 animals, which encompassed 142 animals being reared by marginal category, 199 by small, 214 by medium and 62 by large category. The per animal annual input cost with all the animals put together was estimated at Rs.10,580 for marginal category of beneficiary farmers,

Rs.12,156 for small, Rs.11,357 for medium and Rs.18,791 for large category with an average of Rs.12,144 for the average category of beneficiary farmer (Table 5.23).

In general, owned inputs accounted for about 68 per cent share in total input cost of beneficiary farmers. Contrary to input cost, the per animal annual output value was estimated at Rs.30,773 for marginal category, Rs.34,941 for small, Rs.30,259 for medium and Rs.53,914 for the large category with an average of Rs.34,112 for the average category of beneficiary farmer. These estimates clearly showed significant margin money between input cost and output value for various animals reared by beneficiary farmers. The estimated per animal net annual income was to the tune of Rs.20,193 for marginal category, Rs.22,785 for small, Rs.18,902 for medium and Rs.35,123 for the large category with an average of Rs.21,968 for the average category of beneficiary farmer. Incidentally, per animal annual input cost, output value and net income generation was the highest for large category and lowest for marginal category of beneficiary farmers.

It is to be noted that since sampled beneficiary farmers possessed 6.42 animals of various types on per household basis, there was significant amount of income generation from these animals. The annual income generation from various animals on per household basis was estimated at Rs.1,48,418 for marginal category, Rs.1,22,549 for small, Rs.1,52,519 for medium and Rs.1,55,545 for the large category with an average of Rs.1,41,034 for the average category of beneficiary farmers (Table 5.23 (a)).

Table 5.23 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Total Animals Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Animal in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	26856	9092	35948	90966	55018
Small Farmers	24	34126	16129	50255	140730	90475
Medium Farmers	23	44376	22363	66739	184416	117677
Large Farmers	13	59747	29870	89617	257127	167510
Total Proper Agri Services	70	41213	19724	60937	169592	108654
Allied Agri. Services (II)						
Marginal Farmers	10	81713	37860	119574	361392	241818
Small Farmers	13	64080	29215	93295	275057	181762
Medium Farmers	6	126752	60326	187078	473159	286081
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	30	80356	37345	117701	334287	216586
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	54285	23476	77761	226179	148418
Small Farmers	37	44650	20727	65377	187926	122549
Medium Farmers	29	61419	30217	91636	244156	152519
Large Farmers	14	55480	27736	83216	238761	155545
Total Proper Agri + Allied Services	100	52956	25010	77966	219000	141034

Note: Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

The estimates also showed the lowest per household input cost, output value and income generation from various animals for the small category and the highest for the large category of beneficiary farmers.

5.1.8 Input Cost, Output Value and Income from All Crops Grown and Animals Reared

The beneficiary farmers not only cultivated wide range of kharif, rabi, zaid and perennial crops by also reared various types of animals, which became their major source of farm income. The annual input cost, output value and income generation from these crops grown during different seasons differed significantly for beneficiary farmers. Similarly, the beneficiary farmers also showed considerable differences in annual maintenance cost, output value and income generation from various animals reared by them. Therefore, this section provides an insight into total per household annual input cost, output value and income generation from all the crops and animals put together with a view to find out the extent of total annual income generation for beneficiary farmers with all the crops and animals put together.

The estimates relating to annual input cost, output value and net income generation on per household basis with all the crops and animals put together for various categories of beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.24. The information relating to total annual input cost, output value and net income generation from all the crops and animals put together for various land holding size categories of sampled beneficiary is shown in **Appendix 23**.

Table 5.24: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops Grown and Animals Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Crops and Animal in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	43326	24142	67468	175506	108038
Small Farmers	24	71334	65554	136889	384730	247842
Medium Farmers	23	116306	136058	252365	601749	349384
Large Farmers	13	231940	282985	514925	1317627	802703
Total Proper Agri Services	70	111936	123184	235120	599399	364279
Allied Agri. Services (II)						
Marginal Farmers	10	92653	50175	142829	411862	269033
Small Farmers	13	88157	54699	142856	381357	238500
Medium Farmers	6	208368	154009	362378	842743	480365
Large Farmers	1	65200	63000	128200	238500	110300
Total Allied Agri Services	30	112933	73330	186263	479040	292777
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	67990	37159	105148	293684	188536
Small Farmers	37	77245	61740	138985	383545	244560
Medium Farmers	29	135354	139772	275126	651610	376484
Large Farmers	14	220030	267272	487302	1240547	753245
Total Proper Agri + Allied Services	100	112235	108228	220463	563292	342829

Note: 1) All crops include kharif, rabi zaid and perennial crops

2) Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

In case of beneficiary farmers, the total per household annual input cost with all the crops and animals put together was estimated at Rs.1,05,148 for marginal category, Rs.1,38,985 for small, Rs.2,75,126 for medium and Rs.4,87,302 for the large category with an average of Rs.2,20,463 for the average category of farmers (Table 5.24). In this respect, expenses towards owned inputs accounted for 51 per cent share in total input cost for beneficiary farmers. As against input cost, the total per household annual output value with all the crops and animals put together was estimated at Rs.2,93,684 for marginal category, Rs.3,83,545 for small, Rs.6,51,610 for medium and Rs.12,40,547 for the large category with an average of Rs.5,63,292 for the average category of farmers. These estimates clearly showed significant annual income generation from crops and animals for beneficiary farmers since output value was much higher than input cost.

The extent of annual income generation on per household basis with all the crops and animals put together was of the order of Rs.1,88,536 for marginal category, Rs.2,44,560 for small, Rs.3,76,484 for medium and Rs.7,53,245 for the large category with an average of Rs.3,42,829 for the average category of beneficiary farmers. Incidentally, the annual input cost, output value and net income generation from crops and animals increased with the increase in land holding size of beneficiary farmers.

5.1.9 Distribution of Income Generation from Crops and Animals

An attempt is made in this section to provide an overall scenario regarding the extent of income generation from crops and animals put together for beneficiary farmers. The estimates with respect to per household annual income generation from all the crops grown during different seasons along with per household annual income generation from various types of animals reared by the households for beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.25. An evaluation of these estimates provides an in-depth assessment of the extent and proportion of income generation from various crops grown during different seasons and various types of animals reared by the sampled beneficiary farmers.

The estimates reported in Table 5.25 showed that the extent of annual income generation on per household basis for beneficiary farmers with all the crops and animals put together was Rs.3,42,830, which encompassed 58.86 per cent income generation from crop enterprise and 41.14 per cent from animals.

Table 5.25: Category-Wise Details of Per Household Annual Income Generation from Crops and Animals for Beneficiary Farmers under ACABC Scheme in Maharashtra
(Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Income from Crop Enterprise						Income from Animals Reared						Grand Total
		Kharif	Rabi	Zaid	Perennial	Total	Milch Animal	Draught Animal	Calves & Heifers	Goats	Total			
												Per Household Annual Income from Crops and Animals in Rupees		
Proper Agri. Services (I)														
Marginal Farmers	10	6620	4190	-	42210	53020	62493	-1160	-6315	-	55018	108038		
Small Farmers	24	10273	14554	1146	131394	157367	95912	-2852	-2585	-	90475	247842		
Medium Farmers	23	24441	31522	1696	174048	231707	123426	-3575	-2174	-	117677	349384		
Large Farmers	13	43777	64346	-	527069	635192	171133	-1040	-2583	-	167510	802702		
Total Proper Agri. Services	70	20629	27896	950	206151	255626	114148	-2511	-2983	-	108654	364280		
Allied Agri. Services (II)														
Marginal Farmers	10	4760	5465	-	16990	27215	242251	-2072	-2884	4522	241818	269033		
Small Farmers	13	16046	16000	1154	23538	56738	176721	-1230	-2976	9247	181762	238500		
Medium Farmers	6	18650	32917	2883	139833	194283	274708	-7624	-7908	26906	286081	480364		
Large Farmers	1	59300	-	-	51000	110300	-	-	-	-	110300	-		
Total Allied Agri. Services	30	14247	15338	1077	45530	76192	212271	-2749	-3833	10896	216586	292778		
Both Agri. + Allied Services (I + II)														
Marginal Farmers	20	5690	4828	-	29600	40118	152372	-1616	-4599	2261	148418	188536		
Small Farmers	37	12301	15062	1149	93499	122011	124304	-2282	-2723	3249	122549	244560		
Medium Farmers	29	23243	31810	1941	166969	223963	154726	-4413	-3361	5567	152519	376482		
Large Farmers	14	44886	59750	-	493064	597700	158910	-966	-2399	-	155545	753245		
Total Both Agri.+ Allied Services	100	18714	24129	988	157965	201796	143585	-2582	-3238	3269	141034	342830		
% Distribution of Per Household Annual Income from Crops and Animals														
Proper Agri. Services (I)														
Marginal Farmers	10	6.13	3.88	-	39.07	49.08	57.84	-1.07	-5.85	-	50.92	100.00		
Small Farmers	24	4.14	5.87	0.46	53.02	63.49	38.70	-1.15	-1.04	-	36.51	100.00		
Medium Farmers	23	7.00	9.02	0.49	49.82	66.32	35.33	-1.02	-0.62	-	33.68	100.00		
Large Farmers	13	5.45	8.02	-	65.66	79.13	21.32	-0.13	-0.32	-	20.87	100.00		
Total Proper Agri. Services	70	5.66	7.66	0.26	56.59	70.17	31.34	-0.69	-0.82	-	29.83	100.00		
Allied Agri. Services (II)														
Marginal Farmers	10	1.77	2.03	-	6.32	10.12	90.05	-0.77	-1.07	1.68	89.88	100.00		
Small Farmers	13	6.73	6.71	0.48	9.87	23.79	74.10	-0.52	-1.25	3.88	76.21	100.00		
Medium Farmers	6	3.88	6.85	0.60	29.11	40.44	57.19	-1.59	-1.65	5.60	59.56	100.00		
Large Farmers	1	53.76	-	-	46.24	100.00	-	-	-	-	-	100.00		
Total Allied Agri. Services	30	4.87	5.24	0.37	15.55	26.02	72.50	-0.94	-1.31	3.72	73.98	100.00		
Both Agri. + Allied Services (I + II)														
Marginal Farmers	20	3.02	2.56	-	15.70	21.28	80.82	-0.86	-2.44	1.20	78.72	100.00		
Small Farmers	37	5.03	6.16	0.47	38.23	49.89	50.83	-0.93	-1.11	1.33	50.11	100.00		
Medium Farmers	29	6.17	8.45	0.52	44.35	59.49	41.10	-1.17	-0.89	1.48	40.51	100.00		
Large Farmers	14	5.96	7.93	-	65.46	79.35	21.10	-0.13	-0.32	-	20.65	100.00		
Total Both Agri.+ Allied Services	100	5.46	7.04	0.29	46.08	58.86	41.88	-0.75	-0.94	0.95	41.14	100.00		

A further break-up revealed that the beneficiary farmers generated 5.46 per cent of the total annual income from kharif crops, 7.04 per cent from rabi crops, 0.29 per cent from zaid crops and 46.08 per cent from perennial crops, 41.88 per cent from milch animals, -0.75 per cent from draught animals, -0.94 per cent from calves and heifers and 0.95 per cent from goats. Thus, the beneficiary farmers derived 87.22 per cent of the total annual income from perennial crops among crop enterprises and milch animals among various types of animals. These estimates clearly showed that the major source of annual income for beneficiary farmers was perennial crops and milch animals.

5.2 Economic Status, Cropping Pattern, Input Cost, Output Value and Income Generation for Non-Beneficiary Farmers

The focus of this section is on analysing economic and social status, caste composition, education status, cropping pattern, irrigated area, value of input and output for various crops cultivated during different seasons, value of input and output for various animals, etc. of sampled non-beneficiary farmers.

5.2.1 Economic Status of Non-Beneficiary Farmers

The details regarding economic status of various categories of sampled non-beneficiary farmers with focus on their land holding size, membership of agencies/ventures, subsidiary and main occupation under the category of proper agricultural services, allied agricultural services and proper and allied agricultural services put together are provided in Table 5.26.

Table 5.26: Category-wise Details of the Economic Status of Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	Area (Hectare)	Membership of Agencies if Any	Subsidiary Occupation (Number)			Main Occupation Agri (Number)
				Dairy	Goat	Total	
Proper Agri. Services (I)							
Marginal Farmers	9	0.73	-	-	-	-	10
Small Farmers	8	1.56	-	-	-	-	24
Medium Farmers	12	2.61	-	-	-	-	23
Large Farmers	6	6.47	-	-	-	-	13
Total Proper Agri Services	35	2.55	-	-	-	-	70
Allied Agri. Services (II)		-					
Marginal Farmers	6	0.49	-	Yes (3); No (3)	Yes (3); No (3)	Yes (6); No (0)	10
Small Farmers	5	1.48	-	Yes (3); No (2)	Yes (2); No (3)	Yes (5); No (0)	13
Medium Farmers	3	3.08	-	Yes (3); No (0)	-	Yes (3); No (0)	6
Large Farmers	1	6.06	-	Yes (1); No (0)	-	Yes (1); No (0)	1
Total Allied Agri Services	15	1.71	-	Yes (10); No (5)	Yes (5); No (10)	Yes (15); No (0)	30
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	15	0.63	-	Yes (3); No (12)	Yes (3); No (12)	Yes (6); No (9)	20
Small Farmers	13	1.53	-	Yes (3); No (10)	Yes (2); No (11)	Yes (5); No (8)	37
Medium Farmers	15	2.70	-	Yes (3); No (12)	-	Yes (3); No (12)	29
Large Farmers	7	6.41	-	Yes (1); No (6)	-	Yes (1); No (6)	14
Total Proper Agri + Allied Services	50	2.29	-	Yes (10); No (40)	Yes (5); No (45)	Yes (15); No (35)	100

The non-beneficiary farmers showed 70 per cent of them belonging to the category of proper agricultural services and 30 per cent of them belonging to the category of allied agricultural services. Not only this, the non-beneficiary farmers showed 20 per cent among them practicing dairy farming as subsidiary occupation and 10 per cent of them showed goat farming as their subsidiary occupation. In general, all the 50 sampled non-beneficiary farmers showed agriculture as their main occupation (Table 5.26). Goat farming was mainly practiced by marginal and small category of non-beneficiary farmers.

The land holding size of sample non-beneficiary farmers turned out to be by and large similar to that of beneficiary farmers. The average land holding size of sampled non-beneficiary farmers with proper agricultural services and allied services put together was worked out at 0.63 hectare for marginal category, 1.53 hectares for small, 2.70 hectares for medium and 6.41 hectares for large category with an average of 2.29 hectares for the average category of farmers. Further, none of the sampled non-beneficiary farmers was noticed to be a member of any agency/venture.

5.2.2 Social Group Status of Non-Beneficiary Farmers

The sampled non-beneficiary farmers belonged to different social groups. Information relating to social group status of various categories of sampled non-beneficiary farmers under the broad category of proper agricultural services and allied agricultural services is provided in Table 5.27.

Table 5.27: Category-wise Details of Social Group Status of the Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Non-Beneficiary Farmers	No of Samples	General	OBC	SC	ST	N.T.	Total
Proper Agri. Services (I)							
Marginal Farmers	9	5	-	3	-	1	9
Small Farmers	8	8	-	-	-	-	8
Medium Farmers	12	11	-	-	-	1	12
Large Farmers	6	4	1	-	1	-	6
Total Proper Agri Services	35	28	1	3	1	2	35
Allied Agri. Services (II)							
Marginal Farmers	6	1	2	3	-	-	6
Small Farmers	5	5	-	-	-	-	5
Medium Farmers	3	1	1	-	-	1	3
Large Farmers	1	1	-	-	-	-	1
Total Allied Agri Services	15	8	3	3	-	1	15
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	15	6	2	6	-	1	15
Small Farmers	13	13	-	-	-	-	13
Medium Farmers	15	12	1	-	-	2	15
Large Farmers	7	5	1	-	1	-	7
Total Proper Agri + Allied Services	50	36	4	6	1	3	50

Table 5.27 (a): % Distribution of Category-wise Details of Social Group Status of the Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Non-Beneficiary Farmers	No of Samples	General	OBC	SC	ST	N.T.	Total
Proper Agri. Services (I)							
Marginal Farmers	9	55.56	-	33.33	-	11.11	100.00
Small Farmers	8	100.00	-	-	-	-	100.00
Medium Farmers	12	91.67	-	-	-	8.33	100.00
Large Farmers	6	66.67	16.67	-	16.67	-	100.00
Total Proper Agri Services	35	80.00	2.86	8.57	2.86	5.71	100.00
Allied Agri. Services (II)							
Marginal Farmers	6	16.67	33.33	50.00	-	-	100.00
Small Farmers	5	100.00	-	-	-	-	100.00
Medium Farmers	3	33.33	33.33	-	-	33.33	100.00
Large Farmers	1	100.00	-	-	-	0.00	100.00
Total Allied Agri Services	15	53.33	20.00	20.00	-	6.67	100.00
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	15	40.00	13.33	40.00	-	6.67	100.00
Small Farmers	13	100.00	-	-	-	0.00	100.00
Medium Farmers	15	80.00	6.67	-	-	13.33	100.00
Large Farmers	7	71.43	14.29	-	14.29	-	100.00
Total Proper Agri + Allied Services	50	72.00	8.00	12.00	2.00	6.00	100.00

The non-beneficiary farmers showed majority among them belonging to the social group of General category since 28 out of 35 sampled farmers under proper agricultural services and 8 out of 15 farmers under allied agricultural services belonged to this category of social group (Table 5.27). In general, 36 out of 50 sampled non-beneficiary farmers belonged to the social group of general category.

As for per cent distribution, 72 per cent of the total sampled non-beneficiary farmers belonged to the social group of General category, 8 per cent to OBC, 12 per cent to SC, 2 per cent to ST and 6 per cent to NT category (Table 5.27 (a)). Among various categories of sampled non-beneficiary farmers under proper agricultural services and allied agricultural services put together, the proportion of farmers belonging to General category was 100 per cent for small category, 80 per cent for medium, 71 per cent for large and 40 per cent for marginal category.

5.2.3 Caste Status of Non-Beneficiary Farmers

The details regarding caste composition of various categories of sampled non-beneficiary farmers under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.28.

The sampled non-beneficiary farmers belonged to more social caste categories as against sampled beneficiary farmers. However, the general trend showed that 35 out of 50 sampled non-beneficiary farmers belonged to the caste category of Maratha and the

remaining 15 of sampled non-beneficiary farmers belonged to the caste category of Mahar, Chamar, Dhangar, Mali, Mang, Dhobi and Wani. The category of proper agricultural services showed significantly higher number of sampled farmers belonging to Maratha caste category.

Table 5.28: Category-wise Details of Social Group Status (Cast Category) of the Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Mahar	Chamar	Dhangar	Mali	Mang	Maratha	Dhobi	Wani	Total
Proper Agri. Services (I)										
Marginal Farmers	9	2	-	1	-	1	4	-	1	9
Small Farmers	8	-	-	-	-	-	8	-	-	8
Medium Farmers	12	-	-	1	-	-	11	-	-	12
Large Farmers	6	-	-	-	-	-	4	1	1	6
Total Proper Agri Services	35	2	-	2	-	1	27	1	2	35
Allied Agri. Services (II)										
Marginal Farmers	6	2	1	-	2	-	1	-	-	6
Small Farmers	5	-	-	-	-	-	5	-	-	5
Medium Farmers	3	-	-	1	1	-	1	-	-	3
Large Farmers	1	-	-	-	-	-	1	-	-	1
Total Allied Agri Services	15	2	1	1	3	-	8	-	-	15
Both Proper Agri. + Allied Services (I + II)										
Marginal Farmers	15	4	1	1	2	1	5	-	1	15
Small Farmers	13	-	-	-	-	-	13	-	-	13
Medium Farmers	15	-	-	2	1	-	12	-	-	15
Large Farmers	7	-	-	-	-	-	5	1	1	7
Total Proper Agri + Allied Services	50	4	1	3	3	1	35	1	2	50

Table 5.28 (a): % Distribution of Category-wise Details of Social Group Status (Cast Category) of the Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Mahar	Chamar	Dhangar	Mali	Mang	Maratha	Dhobi	Wani	Total
Proper Agri. Services (I)										
Marginal Farmers	9	22.22	-	11.11	-	11.11	44.44	-	11.11	100.00
Small Farmers	8	-	-	-	-	-	100.00	-	-	100.00
Medium Farmers	12	-	-	8.33	-	-	91.67	-	-	100.00
Large Farmers	6	-	-	-	-	-	66.67	16.67	16.67	100.00
Total Proper Agri Services	35	5.71	-	5.71	-	2.86	77.14	2.86	5.71	100.00
Allied Agri. Services (II)										
Marginal Farmers	6	33.33	16.67	-	33.33	-	16.67	-	-	100.00
Small Farmers	5	-	-	-	-	-	100.00	-	-	100.00
Medium Farmers	3	-	-	33.33	33.33	-	33.33	-	-	100.00
Large Farmers	1	-	-	-	-	-	100.00	-	-	100.00
Total Allied Agri Services	15	13.33	6.67	6.67	20.00	-	53.33	-	-	100.00
Both Proper Agri. + Allied Services (I + II)										
Marginal Farmers	15	26.67	6.67	6.67	13.33	6.67	33.33	-	6.67	100.00
Small Farmers	13	-	-	-	-	-	100.00	-	-	100.00
Medium Farmers	15	-	-	13.33	6.67	-	80.00	-	-	100.00
Large Farmers	7	-	-	-	-	-	71.43	14.29	14.29	100.00
Total Proper Agri + Allied Services	50	8.00	2.00	6.00	6.00	2.00	70.00	2.00	4.00	100.00

The sampled non-beneficiary farmers belonged to more social caste categories as against sampled beneficiary farmers. However, the general trend showed that 35 out of 50 sampled non-beneficiary farmers belonged to the caste category of Maratha and the remaining 15 of sampled non-beneficiary farmers belonged to the caste category of Mahar, Chamar, Dhangar, Mali, Mang, Dhobi and Wani. The category of proper agricultural services showed significantly higher number of sampled farmers belonging to Maratha caste category.

As for per cent distribution, no discernible trend was noticed in terms of proportion of sampled beneficiary farmers belonging to the caste category of Maratha and their land holding size (Table 5.28 (a)).

The general trend showed that 70 per cent of sampled non-beneficiary farmers belonged to the caste category of Maratha, 8 per cent to Mahar, 6 per cent to Dhangar, another 6 per cent to Mali, 4 per cent to Wani, and 2 per cent each to Chamar, Mang and Dhobi. Small category of sampled non-beneficiary farmers showed the highest proportion of them belonging to the social caste category of Maratha, followed by Medium, large and marginal category.

5.2.4 Educational Status of Non-Beneficiary Farmers

Information relating to the educational status of head of the household for various categories of sampled non-beneficiary farmers under the broad category of proper agricultural services and allied agricultural services is provided in Table 5.29.

Table 529: Category-wise Details of Social Group Status (Education) of the Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Non-Beneficiary Farmers	No of Samples	Illiterate	Primary	Secondary	Higher Secondary	Graduate & Above	Total
Proper Agri. Services (I)							
Marginal Farmers	9	1	1	3	2	2	9
Small Farmers	8	-	-	6	1	1	8
Medium Farmers	12	-	2	4	2	4	12
Large Farmers	6	-	-	5	-	1	6
Total Proper Agri Services	35	1	3	18	5	8	35
Allied Agri. Services (II)							
Marginal Farmers	6	2	-	2	-	2	6
Small Farmers	5	1	1	-	2	1	5
Medium Farmers	3	1	1	1	-	-	3
Large Farmers	1	-	-	1	-	-	1
Total Allied Agri Services	15	4	2	4	2	3	15
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	15	3	1	5	2	4	15
Small Farmers	13	1	1	6	3	2	13
Medium Farmers	15	1	3	5	2	4	15
Large Farmers	7	-	-	6	-	1	7
Total Proper Agri + Allied Services	50	5	5	22	7	11	50

In the case of educational status of non-beneficiary farmers, there were 40 out of 50 heads of households who attained education up to secondary and higher level, indicating relatively higher education status of heads of the households of non-beneficiary farmers as against beneficiary farmers (Table 5.29). However, the graduates or above were relatively higher among beneficiary as against non-beneficiary farmers. The educational status of heads of the households increased with size of land holding of beneficiary farmers since 11 out of 15 heads of marginal category, 11 out of 13 heads of small category, 11 out of 15 heads of medium category and 7 out of 7 heads of large category had attained education up to secondary and higher level. There were 5 heads of households who were illiterate among non-beneficiary farmers, whereas 5 heads of households attained education up to primary level.

Table 5.29 (a): % Distribution of Category-wise Details of Social Group Status (Education) of the Sample Non-Beneficiary Farmers of the ACABC Scheme Area of Maharashtra (Numbers)

Category of Sample Non-Beneficiary Farmers	No of Samples	Illiterate	Primary	Secondary	Higher Secondary	Graduate & Above	Total
Proper Agri. Services (I)							
Marginal Farmers	9	11.11	11.11	33.33	22.22	22.22	100.00
Small Farmers	8	-	-	75.00	12.50	12.50	100.00
Medium Farmers	12	-	16.67	33.33	16.67	33.33	100.00
Large Farmers	6	-	-	83.33	-	16.67	100.00
Total Proper Agri Services	35	2.86	8.57	51.43	14.29	22.86	100.00
Allied Agri. Services (II)							
Marginal Farmers	6	33.33	-	33.33	-	33.33	100.00
Small Farmers	5	20.00	20.00	-	40.00	20.00	100.00
Medium Farmers	3	33.33	33.33	33.33	-	-	100.00
Large Farmers	1	-	-	100.00	-	-	100.00
Total Allied Agri Services	15	26.67	13.33	26.67	13.33	20.00	100.00
Both Proper Agri. + Allied Services (I + II)							
Marginal Farmers	15	20.00	6.67	33.33	13.33	26.67	100.00
Small Farmers	13	7.69	7.69	46.15	23.08	15.38	100.00
Medium Farmers	15	6.67	20.00	33.33	13.33	26.67	100.00
Large Farmers	7	-	-	85.71	-	14.29	100.00
Total Proper Agri + Allied Services	50	10.00	10.00	44.00	14.00	22.00	100.00

Among various categories of sampled non-beneficiary farmers, the heads of households receiving education up to secondary and higher level was 73 per cent in marginal category, 85 per cent in small, 73 per cent in medium and 100 per cent in large category with an average of 80 per cent for the average category of farmers, indicating rise in proportion of heads of households receiving education up to secondary and higher level with the rise in their land holding size (Table 5.8 (a)). The proportion of heads of households among non-beneficiary farmers who attained education up to primary level was 10 per cent, whereas 10 per cent of heads of households among non-beneficiary

farmers did not attain any education and turned out to be illiterate. Further, the education status of non-beneficiary farmers was higher in the category of proper agricultural services as against the category of allied agricultural services.

5.2.5 Cropping Pattern of Non-Beneficiary Farmers

The area allocation of non-beneficiary farmers during kharif, rabi, summer seasons and under perennial crops is presented separately.

5.2.5.1 Cropping Pattern in Kharif Season

The information on area allocation under different crops grown during kharif season by the non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services is provided in Table 5.30.

The sampled non-beneficiary farmers showed their cropping pattern in favour of cultivating cereal and oilseed crops in kharif season. The other crops cultivated by sampled non-beneficiary farmers in kharif season were pulses, fodder, vegetable and flower crops. The sampled non-beneficiary farmers with all the categories put together showed a net sown area of 69.82 hectares in kharif season, which encompassed 29.82 hectares of area under cereal crops, 4.85 hectares under pulses, 27.88 hectares under oilseeds and 7.27 hectares under other kharif crops (Table 5.30).

Table 5.30: Category-wise Details of Crops Grown in Kharif Season by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Area in Hectare)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	0.20	1.01	-	-	0.40	1.62	0.81	0.81	1.41	3.43
Small Farmers	8	0.61	2.42	-	-	2.63	2.63	1.41	1.41	4.65	6.46
Medium Farmers	12	2.42	7.27	2.42	2.42	4.44	4.85	1.01	1.01	10.30	15.56
Large Farmers	6	1.21	10.30	-	0.81	0.81	8.89	1.62	2.83	3.64	22.83
Total Proper Agri Services	35	4.44	21.01	2.42	3.23	8.28	17.98	4.85	6.06	20.00	48.28
Allied Agri. Services (II)											
Marginal Farmers	6	2.22	2.22	-	-	-	-	-	-	2.22	2.22
Small Farmers	5	1.01	2.95	-	-	0.61	1.82	0.61	1.21	2.22	5.98
Medium Farmers	3	-	2.02	-	-	3.23	5.66	-	-	3.23	7.68
Large Farmers	1	-	1.62	-	1.62	-	2.42	-	-	-	5.66
Total Allied Agri Services	15	3.23	8.81	-	1.62	3.84	9.90	0.61	1.21	7.68	21.54
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	2.42	3.23	-	-	0.40	1.62	0.81	0.81	3.64	5.66
Small Farmers	13	1.62	5.37	-	-	3.23	4.44	2.02	2.63	6.87	12.44
Medium Farmers	15	2.42	9.29	2.42	2.42	7.68	10.51	1.01	1.01	13.54	23.23
Large Farmers	7	1.21	11.92	-	2.42	0.81	11.31	1.62	2.83	3.64	28.48
Total Proper Agri + Allied Services	50	7.68	29.82	2.42	4.85	12.12	27.88	5.45	7.27	27.68	69.82

Note: Other crops include fodder (jowar), vegetable and flower crops

Table 5.30 (a): % Distribution of Category-wise Details of Crops Grown in Kharif Season by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	14.29	29.41	-	-	28.57	47.06	57.14	23.53	100.00	100.00
Small Farmers	8	13.04	37.50	-	-	56.52	40.63	30.43	21.88	100.00	100.00
Medium Farmers	12	23.53	46.75	23.53	15.58	43.14	31.17	9.80	6.49	100.00	100.00
Large Farmers	6	33.33	45.13	-	3.54	22.22	38.94	44.44	12.39	100.00	100.00
Total Proper Agri Services	35	22.22	43.51	12.12	6.69	41.41	37.24	24.24	12.55	100.00	100.00
Allied Agri. Services (II)											
Marginal Farmers	6	100.00	100.00	-	-	-	-	-	-	100.00	100.00
Small Farmers	5	45.45	49.32	-	-	27.27	30.41	27.27	20.27	100.00	100.00
Medium Farmers	3	0.00	26.32	-	-	100.00	73.68	-	-	100.00	100.00
Large Farmers	1	-	28.57	-	28.57	-	42.86	-	-	-	100.00
Total Allied Agri Services	15	42.11	40.90	-	7.50	50.00	45.97	7.89	5.63	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	66.67	57.14	-	-	11.11	28.57	22.22	14.29	100.00	100.00
Small Farmers	13	23.53	43.18	-	-	47.06	35.71	29.41	21.10	100.00	100.00
Medium Farmers	15	17.91	40.00	17.91	10.43	56.72	45.22	7.46	4.35	100.00	100.00
Large Farmers	7	33.33	41.84	-	8.51	22.22	39.72	44.44	9.93	100.00	100.00
Total Proper Agri + Allied Services	50	27.74	42.71	8.76	6.94	43.80	39.93	19.71	10.42	100.00	100.00

Note: Other crops include fodder (jowar), vegetable and flower crops

The sampled non-beneficiary farmers in kharif season showed 39.64 per cent of the net sown area under irrigation. The net irrigated area in kharif season with all categories of non-beneficiary farmers put together was estimated at 27.68 hectares, which encompassed 7.68 hectares of area under cereals, 2.42 hectares under pulses, 12.12 hectares under oilseeds and 5.45 hectares under other kharif crops.

5.2.5.2 Cropping Pattern in Rabi Season

The estimates relating to area allocation under different crops grown in rabi season by the non-beneficiary farmers of ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.31.

Most of the sampled non-beneficiary farmers also allocated significantly high area under various cereal crops in rabi season. The net sown area in rabi season with all the sampled non-beneficiary farmers put together was estimated at 47.78 hectares, which encompassed as much as 39.80 hectares of area under cereal crops, 3.84 hectares under pulses, 0.40 hectare under oilseeds and 3.74 hectares under other rabi crops like jowar fodder, Lucerne and vegetable crops (Table 5.31).

The irrigated area in rabi season with all the sampled non-beneficiary farmers put together was estimated at 22.12 hectares, which encompassed 17.78 hectares of area under cereal crops, 1.41 hectares under pulses, 0.40 hectare under oilseeds and 2.53 hectares under other crops (Table 5.31). Therefore, the sampled non-beneficiary farmers

showed only 46.30 per cent of the net sown area under irrigation in rabi season. The proportion of net sown area under irrigation in rabi season was the highest for small category and lowest for large category of non-beneficiary farmers.

Table 5.31: Category-wise Details of Crops Grown in Rabi Season by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Area in Hectare)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	0.20	1.82	0.20	0.61	-	-	-	-	0.40	2.42
Small Farmers	8	1.62	1.62	0.81	0.81	-	-	0.20	0.61	2.63	3.03
Medium Farmers	12	7.47	10.51	-	-	0.40	0.40	1.41	1.41	9.29	12.32
Large Farmers	6	2.83	11.72	-	1.62	-	-	-	0.81	2.83	14.14
Total Proper Agri Services	35	12.12	25.66	1.01	3.03	0.40	0.40	1.62	2.83	15.15	31.92
Allied Agri. Services (II)											
Marginal Farmers	6	0.20	0.40	-	-	-	-	0.51	0.51	0.71	0.91
Small Farmers	5	1.62	2.22	0.40	0.40	-	-	0.40	0.40	2.42	3.03
Medium Farmers	3	3.84	5.86	-	0.40	-	-	-	-	3.84	6.26
Large Farmers	1	-	5.66	-	-	-	-	-	-	-	5.66
Total Allied Agri Services	15	5.66	14.14	0.40	0.81	-	-	0.91	0.91	6.97	15.86
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	0.40	2.22	0.20	0.61	-	-	0.51	0.51	1.11	3.33
Small Farmers	13	3.23	3.84	1.21	1.21	-	-	0.61	1.01	5.05	6.06
Medium Farmers	15	11.31	16.36	-	0.40	0.40	0.40	1.41	1.41	13.13	18.59
Large Farmers	7	2.83	17.37	-	1.62	-	-	-	0.81	2.83	19.80
Total Proper Agri + Allied Services	50	17.78	39.80	1.41	3.84	0.40	0.40	2.53	3.74	22.12	47.78

Note: Other crops include fodder (jowar), Lucerne, vegetable crops

Table 5.31 (a): % Distribution of Category-wise Details of Crops Grown in Rabi Season by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	50.00	75.00	50.00	25.00	-	-	-	-	100.00	100.00
Small Farmers	8	61.54	53.33	30.77	26.67	-	-	7.69	20.00	100.00	100.00
Medium Farmers	12	80.43	85.25	-	-	4.35	3.28	15.22	11.48	100.00	100.00
Large Farmers	6	100.00	82.86	-	11.43	-	-	-	5.71	100.00	100.00
Total Proper Agri Services	35	80.00	80.38	6.67	9.49	2.67	1.27	10.67	8.86	100.00	100.00
Allied Agri. Services (II)											
Marginal Farmers	6	28.57	44.44	-	-	-	-	71.43	55.56	100.00	100.00
Small Farmers	5	66.67	73.33	16.67	13.33	-	-	16.67	13.33	100.00	100.00
Medium Farmers	3	100.00	93.55	-	6.45	-	-	-	-	100.00	100.00
Large Farmers	1	-	100.00	-	-	-	-	-	-	-	100.00
Total Allied Agri Services	15	81.16	89.17	5.80	5.10	-	-	13.04	5.73	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	36.36	66.67	18.18	18.18	-	-	45.45	15.15	100.00	100.00
Small Farmers	13	64.00	63.33	24.00	20.00	-	-	12.00	16.67	100.00	100.00
Medium Farmers	15	86.15	88.04	-	2.17	3.08	2.17	10.77	7.61	100.00	100.00
Large Farmers	7	100.00	87.76	-	8.16	-	-	-	4.08	100.00	100.00
Total Proper Agri + Allied Services	50	80.37	83.30	6.39	8.03	1.83	0.85	11.42	7.82	100.00	100.00

Note: Other crops include fodder (jowar), Lucerne and vegetable crops

The non-beneficiary farmers in rabi season showed as much as 83 per cent of the net sown area under cereal crops, 8 per cent under pulses, 1 per cent under oilseeds and 8

per cent under other rabi crops (Table 5.31 (a)). The estimates also showed that about 80 per cent of the net irrigated area of non-beneficiary farmers in rabi season was under cereal crops, 6 per cent under pulses, 2 per cent under oilseeds and 11 per cent under other rabi crops. Among various non-beneficiary farmers, medium and large category showed significantly high proportion of rabi cropped area under cereal crops.

5.2.5.3 Cropping Pattern in Zaid Season

The estimates relating to area allocation under different crops grown during zaid season (summer) by the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.32.

Table 5.32: Category-wise Details of Crops Grown in Zaid Season by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Area in Hectare)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	-	-	-	-	-	-	-	-	-	-
Small Farmers	8	-	-	-	-	-	-	-	-	-	-
Medium Farmers	12	-	-	-	-	-	-	-	-	-	-
Large Farmers	6	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	35	-	-	-	-	-	-	-	-	-	-
Allied Agri. Services (II)											
Marginal Farmers	6	-	-	-	-	-	-	1.21	1.21	1.21	1.21
Small Farmers	5	-	-	-	-	-	-	-	-	-	-
Medium Farmers	3	-	-	-	-	-	-	-	-	-	-
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15	-	-	-	-	-	-	1.21	1.21	1.21	1.21
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	-	-	-	-	-	-	1.21	1.21	1.21	1.21
Small Farmers	13	-	-	-	-	-	-	-	-	-	-
Medium Farmers	15	-	-	-	-	-	-	-	-	-	-
Large Farmers	7	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	50	-	-	-	-	-	-	1.21	1.21	1.21	1.21

Note: Other crops include fodder (jowar) and ginger

The sampled non-beneficiary farmers allocated minuscule area under zaid season. The net sown area in zaid season with all the non-beneficiary farmers put together was estimated at 1.21 hectares, which turned out to be some other crops like fodder and ginger (Table 5.32). Among various sampled non-beneficiaries, only marginal category allocated some area under zaid season and that too under fodder and ginger crops. The small, medium and large category of sampled non-beneficiary farmers did not allocate any area under zaid crops.

Table 5.32 (a): % Distribution of Category-wise Details of Crops Grown in Zaid Season by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Cereals		Pulses		Oilseeds		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	-	-	-	-	-	-	-	-	-	-
Small Farmers	8	-	-	-	-	-	-	-	-	-	-
Medium Farmers	12	-	-	-	-	-	-	-	-	-	-
Large Farmers	6	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	35	-	-	-	-	-	-	-	-	-	-
Allied Agri. Services (II)											
Marginal Farmers	6	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Small Farmers	5	-	-	-	-	-	-	-	-	-	-
Medium Farmers	3	-	-	-	-	-	-	-	-	-	-
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	-	-	-	-	-	-	100.00	100.00	100.00	100.00
Small Farmers	13	-	-	-	-	-	-	-	-	-	-
Medium Farmers	15	-	-	-	-	-	-	-	-	-	-
Large Farmers	7	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	50	-	-	-	-	-	-	100.00	100.00	100.00	100.00

Note: Other crops include fodder (jowar) and ginger

The estimates furnished in Table 5.32 (a) further revealed that the sampled non-beneficiary farmers in general allocated 100 per cent of net sown area in zaid season under other zaid crops like fodder and ginger, and that entire area was under irrigation.

5.2.5.4 Area under Perennial Crops

The estimates relating to area allocation under various perennial crops for the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.33.

The sampled non-beneficiary farmers also cultivated various perennial crops on their farm, and important among these were sugarcane, pomegranate, banana, papaya, grape, mango, lemon and coconut. The area allocation under perennial crops with all the sample non-beneficiary farmers put together was estimated at 29.19 hectares, which encompassed 15.76 hectares of area under sugarcane, 9.39 hectares under pomegranate, 1.21 hectares under banana, and 2.83 hectares under other perennial crops (Table 5.33).

In general, the sampled non-beneficiary farmers showed about 83 per cent of the perennial cropped area under irrigation. Medium category of farmers showed entire perennial cropped area under irrigation and also highest area under perennial crops.

As for proportion of area allocation under perennial crops, about 54 per cent of the perennial cropped area of sampled non-beneficiary farmers was under sugarcane, 32 per cent under pomegranate, 4 per cent under banana, and 10 per cent under other perennial crops such as papaya, grape, lemon, and coconut (Table 5.33 (a)).

Table 5.33: Category-wise Details of Area under Perennial Crops for the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Area in Hectare)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Sugarcane		Pomegranate		Banana		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	1.21	1.21	0.61	0.61	-	-	0.71	0.71	2.53	2.53
Small Farmers	8	0.81	1.82	2.93	2.93	-	-	-	-	3.74	4.75
Medium Farmers	12	4.85	4.85	3.03	3.03	-	-	0.51	0.51	8.38	8.38
Large Farmers	6	2.42	5.66	0.81	0.81	-	0.81	1.62	1.62	4.85	8.89
Total Proper Agri Services	35	9.29	13.54	7.37	7.37	-	0.81	2.83	2.83	19.49	24.55
Allied Agri. Services (II)											
Marginal Farmers	6	0.20	0.20	-	-	-	-	-	-	0.20	0.20
Small Farmers	5	1.21	1.21	1.21	1.21	0.40	0.40	-	-	2.83	2.83
Medium Farmers	3	0.81	0.81	0.81	0.81	-	-	-	-	1.62	1.62
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15	2.22	2.22	2.02	2.02	0.40	0.40	-	-	4.65	4.65
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	1.41	1.41	0.61	0.61	-	-	0.71	0.71	2.73	2.73
Small Farmers	13	2.02	3.03	4.14	4.14	0.40	0.40	0.00	0.00	6.57	7.58
Medium Farmers	15	5.66	5.66	3.84	3.84	-	-	0.51	0.51	10.00	10.00
Large Farmers	7	2.42	5.66	0.81	0.81	-	0.81	1.62	1.62	4.85	8.89
Total Proper Agri + Allied Services	50	11.52	15.76	9.39	9.39	0.40	1.21	2.83	2.83	24.14	29.19

Note: Other perennial crops include papaya, grape, mango, lemon and coconut

Table 5.33 (a): % Distribution of Category-wise Details of Area under Perennial Crops for the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(in per cent)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Sugarcane		Pomegranate		Banana		Others		Total	
		Irri	Total	Irri	Total	Irri	Total	Irri	Total	Irri	Total
Proper Agri. Services (I)											
Marginal Farmers	9	48.00	48.00	24.00	24.00	-	-	28.00	28.00	100.00	100.00
Small Farmers	8	21.62	38.30	78.38	61.70	-	-	-	-	100.00	100.00
Medium Farmers	12	57.83	57.83	36.14	36.14	-	-	6.02	6.02	100.00	100.00
Large Farmers	6	50.00	63.64	16.67	9.09	-	9.09	33.33	18.18	100.00	100.00
Total Proper Agri Services	35	47.67	55.14	37.82	30.04	-	3.29	14.51	11.52	100.00	100.00
Allied Agri. Services (II)											
Marginal Farmers	6	100.00	100.00	-	-	-	-	-	-	100.00	100.00
Small Farmers	5	42.86	42.86	42.86	42.86	14.29	14.29	-	-	100.00	100.00
Medium Farmers	3	50.00	50.00	50.00	50.00	-	-	-	-	100.00	100.00
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15	47.83	47.83	43.48	43.48	8.70	8.70	-	-	100.00	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	51.85	51.85	22.22	22.22	-	-	25.93	25.93	100.00	100.00
Small Farmers	13	30.77	40.00	63.08	54.67	6.15	5.33	-	-	100.00	100.00
Medium Farmers	15	56.57	56.57	38.38	38.38	-	-	5.05	5.05	100.00	100.00
Large Farmers	7	50.00	63.64	16.67	9.09	-	9.09	33.33	18.18	100.00	100.00
Total Proper Agri + Allied Services	50	47.70	53.98	38.91	32.18	1.67	4.15	11.72	9.69	100.00	100.00

Note: Other perennial crops include papaya, grape, mango, lemon and coconut

Among various non-beneficiaries, large category of farmers showed the highest proportion of perennial cropped area under sugarcane, followed by medium, marginal and small category. The proportion of perennial cropped area under pomegranate was the highest for the small category of non-beneficiary farmers, followed by medium, marginal and large category of farmers.

5.2.5.5 Irrigated and Gross Cropped Area

The estimates relating to area allocation under different seasons as well as gross cropped area and total irrigated area for the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.34.

Table 5.34: Category-Wise Details of Seasonal Total Irrigated and Cropped Area on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

(Area in Hectare)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Total Irrigated Area				Gross Irrigated Area	Total Cropped Area				Gross Cropped Area
		Kharif	Rabi	Zaid	Perennial		Kharif	Rabi	Zaid	Perennial	
Proper Agri. Services (I)											
Marginal Farmers	9	1.41	0.40	-	2.53	4.34	3.43	2.42	-	2.53	8.38
Small Farmers	8	4.65	2.63	-	3.74	11.02	6.46	3.03	-	4.75	14.24
Medium Farmers	12	10.30	9.29	-	8.38	27.97	15.56	12.32	-	8.38	36.26
Large Farmers	6	3.64	2.83	-	4.85	11.32	22.83	14.14	-	8.89	45.86
Total Proper Agri Services	35	20.00	15.15	-	19.49	54.64	48.28	31.92	-	24.55	104.75
Allied Agri. Services (II)											
Marginal Farmers	6	2.22	0.71	1.21	0.20	4.34	2.22	0.91	1.21	0.20	4.54
Small Farmers	5	2.22	2.42	-	2.83	7.47	5.98	3.03	-	2.83	11.84
Medium Farmers	3	3.23	3.84	-	1.62	8.69	7.68	6.26	-	1.62	15.56
Large Farmers	1	-	-	-	-	-	5.66	5.66	-	-	11.32
Total Allied Agri Services	15	7.68	6.97	1.21	4.65	20.51	21.54	15.86	1.21	4.65	43.26
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	3.64	1.11	1.21	2.73	8.69	5.66	3.33	1.21	2.73	12.93
Small Farmers	13	6.87	5.05	-	6.57	18.49	12.44	6.06	-	7.58	26.08
Medium Farmers	15	13.54	13.13	-	10.00	36.67	23.23	18.59	-	10.00	51.82
Large Farmers	7	3.64	2.83	-	4.85	11.32	28.48	19.80	-	8.89	57.17
Total Proper Agri + Allied Services	50	27.68	22.12	1.21	24.14	75.15	69.82	47.78	1.21	29.19	148.00

Table 5.34 (a): % Distribution of Category-Wise Details of Seasonal Total Irrigated and Cropped Area on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra
(in per cent)

Category of Sample Non-Beneficiary Farmers	No. of Sample	Total Irrigated Area				Gross Irrigated Area	Total Cropped Area				Gross Cropped Area
		Kharif	Rabi	Zaid	Perennial		Kharif	Rabi	Zaid	Perennial	
Proper Agri. Services (I)											
Marginal Farmers	9	32.49	9.22	-	58.29	100.00	40.93	28.88	-	30.19	100.00
Small Farmers	8	42.20	23.87	-	33.94	100.00	45.37	21.28	-	33.36	100.00
Medium Farmers	12	36.83	33.21	-	29.96	100.00	42.91	33.98	-	23.11	100.00
Large Farmers	6	32.16	25.00	-	42.84	100.00	49.78	30.83	-	19.39	100.00
Total Proper Agri Services	35	36.60	27.73	-	35.67	100.00	46.09	30.47	-	23.44	100.00
Allied Agri. Services (II)											
Marginal Farmers	6	51.15	16.36	27.88	4.61	100.00	48.90	20.04	26.65	4.41	100.00
Small Farmers	5	29.72	32.40	-	37.88	100.00	50.51	25.59	-	23.90	100.00
Medium Farmers	3	37.17	44.19	-	18.64	100.00	49.36	40.23	-	10.41	100.00
Large Farmers	1	-	-	-	-	-	50.00	50.00	-	-	100.00
Total Allied Agri Services	15	37.45	33.98	5.90	22.67	100.00	49.79	36.66	2.80	10.75	100.00
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	41.89	12.77	13.92	31.42	100.00	43.77	25.75	9.36	21.11	100.00
Small Farmers	13	37.16	27.31	-	35.53	100.00	47.70	23.24	-	29.06	100.00
Medium Farmers	15	36.92	35.81	-	27.27	100.00	44.83	35.87	-	19.30	100.00
Large Farmers	7	32.16	25.00	-	42.84	100.00	49.82	34.63	-	15.55	100.00
Total Proper Agri + Allied Services	50	36.83	29.43	1.61	32.12	100.00	47.18	32.28	0.82	19.72	100.00

The GCA for all the sampled non-beneficiary farmers put together was estimated at 148.00 hectares, which encompassed 69.82 of area under kharif crops, 47.78 hectares under rabi crops, 1.21 hectares under summer crops and 29.19 hectares under perennial crops, showing significantly high allocation of GCA under kharif crops, followed by rabi and perennial crops (Table 5.34). The GIA with all sampled non-beneficiary farmers put together was worked out at 75.15 hectares, which encompassed 27.68 hectares of area under kharif crops, 22.12 hectares under rabi crops, 1.21 hectares under summer crops and 24.14 hectares under perennial crops. Thus, in case of non-beneficiary farmers GIA turned out to be 50.78 per cent of GCA.

The estimates further showed that 47.18 per cent of the GCA for the average category of sampled non-beneficiary farmer was under kharif crops, 32.28 per cent under rabi crops, 0.82 per cent under summer crops and 19.72 per cent under perennial crops (Table 5.34 (a)). The estimates also revealed that 36.83 per cent of GIA for the average category of sampled non-beneficiary farmers was under kharif crops, 29.53 per cent under rabi crops, 1.61 per cent under summer crops and 32.12 per cent under perennial crops. In general, area allocation under kharif crops as proportion GCA increased with the increase in land holding size of sampled non-beneficiary farmers, whereas no such discernible trend was noticed in case of perennial and rabi crops.

5.2.6 Input Cost, Output Value and Income from Crops

The input costs and output value for various crops cultivated during kharif, rabi, and summer seasons as well as for perennial crops are brought out separately for sampled non-beneficiary farmers of ACABC scheme. The estimates relating to input costs and output value have helped in computing income generation from various crops cultivated during various seasons by sampled non-beneficiary farmers.

5.2.6.1 Input Cost and Output Value for Kharif Crops

The estimates relating to per hectare and per household input costs and output value for various crops cultivated in kharif season for the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.35. The information relating to total input cost and output value for various crops cultivated in kharif season for all the sampled non-beneficiary farmers put together for various land holding size categories is presented in **Appendix 24**.

Table 5.35: Category-Wise Details of Inputs and Outputs of Kharif Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	Cereal				Pulses				Oilseeds				Other				Total				
		Input Cost		Output (Rs)	Total	Input Cost		Output (Rs)	Total	Input Cost		Output (Rs)	Total	Input Cost		Output (Rs)	Total	Input Cost		Output (Rs)	Total	
		Own	Others			Own	Others			Own	Others			Own	Others			Own	Others			Own
		Inputs & Output in Rs./Ha																				
Proper Agri. Services (I)																						
Marginal Farmers	9	4950	5941	10891	19109	-	-	-	-	8025	6790	14815	25309	41481	20988	11111	9877	7580	41481	7580	15160	27376
Small Farmers	8	5826	5992	11818	21653	-	-	-	-	8365	6844	15209	26920	45390	21277	12057	9220	7601	45390	7601	15263	28978
Medium Farmers	12	6602	7290	13893	25873	-	-	-	-	8866	7216	16082	29320	55050	24257	12376	11881	7845	55050	7845	15499	29391
Large Farmers	6	6796	7573	14369	26592	4938	6790	11728	35802	9111	7537	16648	30427	60848	13781	12789	12367	8322	60848	8322	16623	32659
Total Proper Agri Services	35	6525	7211	13736	25402	4938	6790	11728	35802	8843	7286	16129	29171	12789	24010	53696	7624	7570	12789	7570	15195	29258
Allied Agri. Services (II)																						
Marginal Farmers	6	4730	5405	10135	18063	-	-	-	-	-	-	-	-	-	-	-	-	4730	5405	-	10135	18063
Small Farmers	5	5186	5932	11119	19695	-	-	-	-	7418	7143	14560	24533	40496	11157	21074	9917	6823	40496	6823	14181	25376
Medium Farmers	3	6188	6188	12376	23267	-	-	-	-	7597	7067	14664	26926	-	-	-	-	7227	6836	-	14063	25964
Large Farmers	1	7407	8333	15741	27099	7407	5556	12963	33951	8678	7438	16116	28884	-	-	-	-	7951	7155	-	15106	29823
Total Allied Agri Services	15	5709	6300	12009	21464	7407	5556	12963	33951	7828	7172	15000	26965	40496	11157	21074	9917	6917	40496	6917	13965	26000
Both Agri. + Allied Services (I + II)																						
Marginal Farmers	15	4799	5573	10372	18390	-	-	-	-	8025	6790	14815	25309	41481	20988	11111	9877	7580	41481	7580	15160	27376
Small Farmers	13	5475	5959	11434	20577	-	-	-	-	7995	6982	14977	26002	42966	11597	21103	9506	7227	42966	7227	14743	27247
Medium Farmers	15	6512	7051	13563	25307	-	-	-	-	8183	7136	15319	28030	55050	11881	12376	11881	7352	55050	7352	14969	28126
Large Farmers	7	6879	7676	14555	26661	6612	5992	12603	34711	9019	7515	16534	30097	60848	12367	13781	12367	8251	60848	8251	16327	32107
Total Proper Agri + Allied Services	50	6284	6942	13226	24239	6612	5992	12603	34711	8483	7245	15728	28388	51499	23521	12517	11004	7446	51499	7446	14815	28253
Proper Agri. Services (I)																						
Marginal Farmers	9	556	667	1222	2144	-	-	-	-	1444	1222	2667	4556	3733	1889	1000	889	2889	3733	2889	5778	10433
Small Farmers	8	1763	1813	3575	6550	-	-	-	-	2750	2250	5000	8850	8000	3750	2125	1625	6138	8000	6138	12325	23400
Medium Farmers	12	4000	4417	8417	15675	-	-	-	-	3583	2917	6500	11850	4633	2042	1042	1000	8375	4633	8375	16958	32158
Large Farmers	6	11667	13000	24667	45650	667	917	1583	4833	13500	11167	24667	45083	28700	12333	6500	5833	31667	28700	31583	63250	124267
Total Proper Agri Services	35	3917	4329	8246	15249	114	157	271	829	4543	3743	8286	14986	9297	4157	2214	1943	10517	9297	10443	20960	40360
Allied Agri. Services (II)																						
Marginal Farmers	6	1750	2000	3750	6683	-	-	-	-	-	-	-	-	-	-	-	-	1750	2000	-	3750	6683
Small Farmers	5	3060	3500	6560	11620	-	-	-	-	2700	2600	5300	8930	9800	5100	2700	2400	8160	9800	8160	16960	30350
Medium Farmers	3	4167	4167	8333	15667	-	-	-	-	14333	13333	27667	50800	-	-	-	-	18500	17500	-	36000	66467
Large Farmers	1	12000	13500	25500	43900	12000	9000	21000	55000	21000	18000	39000	69900	-	-	-	-	45000	40500	-	85500	168800
Total Allied Agri Services	15	3353	3700	7053	12607	800	600	1400	3667	5167	4733	9900	17797	3267	1700	900	800	9933	3267	9933	20053	37337
Both Agri. + Allied Services (I + II)																						
Marginal Farmers	15	1033	1200	2233	3960	-	-	-	-	867	733	1600	2733	2240	1133	600	533	2433	2240	2433	4967	8933
Small Farmers	13	2262	2462	4723	8500	-	-	-	-	2731	2385	5115	8881	8692	4269	2346	1923	6915	8692	6915	14108	26073
Medium Farmers	15	4033	4367	8400	15673	-	-	-	-	5733	5000	10733	19640	3707	1633	833	800	10567	3707	10567	20767	39020
Large Farmers	7	11714	13071	24786	45400	2286	2071	4357	12000	14571	12143	26714	48629	24600	10571	5571	5000	35571	24600	35571	66429	130629
Total Proper Agri + Allied Services	50	3748	4140	7888	14456	320	290	610	1680	4730	4040	8770	15829	7488	3420	1820	1600	10398	7488	10398	20688	39453

The non-beneficiary farmers also showed considerable difference in per hectare input cost as well as value of output for various crops cultivated in kharif season. The per hectare input cost for the average category of non-beneficiary farmers in kharif season was worked out at Rs.13,226 for cereals, Rs.12,603 for pulses, Rs.15,728 for oilseeds and Rs.23,521 for other crops with an average of Rs.14,815 for all the kharif crops put together (Table 5.20). The other crops grown by sampled non-beneficiary farmers in kharif season showed comparatively higher input cost as against cereal, pulses and oilseed crops since they were mainly high value vegetable and flower crops.

All the kharif crops cultivated by sampled non-beneficiary farmers showed the tendency of rise in per hectare input cost with the rise in land holding size of farmers. The per hectare input cost for non-beneficiary farmers in kharif season varied from Rs.13,163 for marginal category to Rs.16,327 for the large category. In general, owned inputs accounted for 50 per cent share in total input cost for various crops cultivated during kharif season by sampled non-beneficiary farmers.

The per hectare output value for various crops cultivated by sampled non-beneficiary farmers in kharif season also differed considerably, and, it was estimated at Rs.24,239 for cereals, Rs.34,711 for pulses, Rs.28,388 for oilseeds and Rs.51,499 for other kharif crops with an average of Rs.28,253 for all the kharif crops put together. The sampled non-beneficiary farmers also showed tendency of rise in per hectare output value for various kharif crops with the increase in their land holding size, which increased from Rs.23,675 for marginal category to Rs.32,107 for the large category with all the crops cultivated during kharif season put together.

The estimates presented in Table 5.20 also showed wide variations in per household input cost as well as output value for various crops cultivated in kharif season by sampled non-beneficiary farmers. The per household input cost in kharif season for the average category of sampled non-beneficiary farmer was estimated at Rs.7,888 for cereals, Rs.610 for pulses, Rs.8,770 for oilseeds and Rs.3,420 for other crops with a sum of Rs.20,688 for all the kharif crops put together. On the other hand, the per household output value in kharif season for the average category of sampled non-beneficiary farmer was estimated at Rs.14,456 for cereals, Rs.1,680 for pulses, Rs.15,829 for oilseeds and Rs.7,488 for other kharif crops with a sum of Rs.39,453 for all the kharif crops put together. The general trend also showed a rise in per household input cost as well as output value for various crops cultivated in kharif season with the increase in land holding size of non-beneficiary farmers.

5.2.6.1.1 Income from Kharif Crops

The estimates relating to per hectare and per household income generation from various kharif crops cultivated by sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are presented in Table 5.36. The information relating to total income generation from various kharif crops for all the sampled non-beneficiary farmers put together for various land holding size categories is presented in **Appendix 25**.

The sampled non-beneficiary farmers generated considerable income from various kharif crops. The amount of per hectare income generation by sampled non-beneficiary farmers in kharif season was of the order of Rs.11,013 from cereals, Rs.22,108 from pulses, Rs.12,660 from oilseeds and Rs.27,978 from other crops with an average of Rs.13,438 for all the kharif crops put together (Table 5.36). Thus, per hectare income generation for sampled non-beneficiary farmers in kharif season was the highest from other crops, followed by pulses. The sampled non-beneficiary farmers also showed a steady rise in per hectare income from various kharif crops with the increase in their land holding size, which increased from Rs.10,512 for marginal category to Rs.15,780 for large category. Further, in kharif season, the sampled non-beneficiary farmers showed the highest per household income from oilseeds and lowest from pulses.

Table 5.36: Category-wise Details of Income from Kharif Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Cereals	Pulses	Oilseeds	Others	Total	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	9	8218	-	10494	20493	12216	922	-	1889	1844	4656
Small Farmers	8	9835	-	11711	24113	13715	2975	-	3850	4250	11075
Medium Farmers	12	11980	-	13238	30793	13892	7258	-	5350	2592	15200
Large Farmers	6	12223	24074	13779	34700	16036	20983	3250	20417	16367	61017
Total Proper Agri Services	35	11666	24074	13042	29686	14063	7003	557	6700	5140	19400
Allied Agri. Services (II)											
Marginal Farmers	6	7928	-	-	-	7928	2933	-	-	-	2933
Small Farmers	5	8576	-	9973	19422	11195	5060	-	3630	4700	13390
Medium Farmers	3	10891	-	12262	-	11901	7333	-	23133	-	30467
Large Farmers	1	11358	20988	12768	-	14717	18400	34000	30900	-	83300
Total Allied Agri Services	15	9455	20988	11965	19422	12035	5553	2267	7897	1567	17283
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	8018	-	10494	20493	10512	1727	-	1133	1107	3967
Small Farmers	13	9143	-	11025	21863	12504	3777	-	3765	4423	11965
Medium Farmers	15	11744	-	12711	30793	13157	7273	-	8907	2073	18253
Large Farmers	7	12106	22108	13563	34700	15780	20614	7643	21914	14029	64200
Total Proper Agri + Allied Services	50	11013	22108	12660	27978	13438	6568	1070	7059	4068	18765

Note: Other crops include fodder (jowar), vegetable and flower crops

The per household income for the sampled non-beneficiary farmers in kharif season was estimated at Rs.6,568 from cereals, Rs.1,070 from pulses, Rs.7,059 from oilseeds and Rs.4,068 from other crops with a sum of Rs.18,765 for all the kharif crops put together. The per household income from kharif crops also increased rapidly with the increase in land holding size of non-beneficiary farmers with the increase being from Rs.3,967 for marginal category to as much as Rs.64,200 for large category.

5.2.6.2 Input Cost and Output Value for Rabi Crops

The estimates relating to per hectare and per household input costs and output value for various crops cultivated in rabi season for the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.37. Details regarding total input cost and output value for various crops cultivated in rabi season for all the non-beneficiary farmers put together for various land holding size categories are presented in **Appendix 26**.

The input cost and output value for rabi crops cultivated by sampled non-beneficiary farmers also varied significantly. The per hectare input cost in rabi season for the average category of non-beneficiary farmers was estimated at Rs.16,314 for cereals, Rs.19,271 for pulses, Rs.20,000 for oilseeds and Rs.27,086 for other crops with an average of Rs.17,426 for all the rabi crops put together (Table 5.37). In general, the rabi crops cultivated by sampled non-beneficiary farmers also showed a rise in per hectare input cost with the rise in land holding size of farmers, which increased from Rs.13,003 for marginal category to Rs.18,283 for the large category. In general, owned inputs showed a share of 52 per cent in total input cost for various rabi crops cultivated by sampled non-beneficiary farmers (Table 5.37).

The estimates also showed a significant difference in per hectare output value for various rabi crops cultivated by sampled non-beneficiary farmers. The per hectare output value in rabi season for the average category of non-beneficiary farmers was estimated at Rs.34,491 for cereals, Rs.63,021 for pulses, Rs.72,500 for oilseeds and Rs.49,652 for other rabi crops with an average of Rs.38,289 for all the rabi crops put together.

The sampled non-beneficiary farmers also showed an increase in per hectare output value for various rabi crops with the increase in their land holding size, which increased from Rs.29,775 for marginal category to Rs.41,429 for the large category with all the crops cultivated during rabi season put together. Further, the sampled non-beneficiary farmers showed considerable differences in per household input cost and output value for various rabi crops.

Table 5.37: Category-Wise Details of Inputs and Outputs of Rabi Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	Cereal				Pulses				Oilseeds				Other				Total			
		Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)		
		Own	Others		Total	Own		Others	Total		Own	Others		Total	Own		Others	Total			
		Inputs & Output in Rs./Ha																			
Proper Agri. Services (I)																					
Marginal Farmers	9	6044	4560	10604	23571	9836	6557	16393	46721	-	-	-	-	-	-	7025	5083	12107	29504		
Small Farmers	8	7099	5864	12963	26420	9877	7407	17284	48765	-	-	-	9016	18033	33607	8251	6931	15182	33927		
Medium Farmers	12	8040	7422	15461	32712	-	-	-	-	7500	12500	20000	72500	30142	53191	9091	8198	17289	36347		
Large Farmers	6	8276	7850	16126	34625	12346	10494	22840	79012	-	-	-	20988	13580	64815	9477	8487	17963	41464		
Total Proper Agri Services	35	7950	7319	15269	32553	11221	8911	20132	64686	7500	12500	20000	72500	28799	52297	9023	7967	16989	37854		
Allied Agri. Services (II)																					
Marginal Farmers	6	7500	5000	12500	24375	-	-	-	-	-	-	-	9804	7843	17647	8791	6593	15385	30495		
Small Farmers	5	8559	8333	16892	33784	5000	6250	11250	45000	-	-	-	12500	14500	27000	8581	8845	17426	37195		
Medium Farmers	3	8703	9586	18259	37321	11250	10000	21250	70000	-	-	-	-	-	-	8866	9585	18450	39409		
Large Farmers	1	9717	9364	19081	41343	-	-	-	-	-	-	-	-	-	-	9717	9364	19081	41343		
Total Allied Agri Services	15	9052	9158	18211	38009	8025	8025	16049	56790	-	-	-	10989	10769	21758	9111	9193	18304	39165		
Both Agri. + Allied Services (I + II)																					
Marginal Farmers	15	6306	4640	10946	23716	9836	6557	16393	46721	-	-	-	9804	7843	17647	35294	7508	5495	13003	29775	
Small Farmers	13	7943	7292	15234	30677	8264	7025	15289	47521	-	-	-	10396	11188	21584	39802	8416	7888	16304	35561	
Medium Farmers	15	8282	8191	16473	34383	11250	10000	21250	70000	7500	12500	20000	72500	30142	53191	9010	8661	17671	37359		
Large Farmers	7	8751	8348	17098	36834	12346	10494	22840	79012	-	-	-	20988	13580	64815	9545	8737	18283	41429		
Total Proper Agri + Allied Services	50	8342	7972	16314	34491	10547	8724	19271	63021	7500	12500	20000	72500	27086	49652	9052	8374	17426	38289		
Proper Agri. Services (I)																					
Marginal Farmers	9	1222	922	2144	4767	667	444	1111	3167	-	-	-	-	-	-	1889	1367	3256	7933		
Small Farmers	8	1438	1188	2625	5350	1000	750	1750	4938	-	-	-	688	688	1375	3125	2625	5750	12850		
Medium Farmers	12	7042	6500	13542	28650	-	-	-	-	250	417	667	2417	3542	6250	9333	8417	17750	37317		
Large Farmers	6	16167	15333	31500	67633	3333	2833	6167	21333	-	-	-	2833	1833	4667	22333	20000	42333	97717		
Total Proper Agri Services	35	5829	5366	11194	23866	971	771	1743	5600	86	143	229	829	986	2329	8229	7266	15494	34523		
Allied Agri. Services (II)																					
Marginal Farmers	6	500	333	833	1625	-	-	-	-	-	-	-	833	667	1500	1333	1000	2333	4625		
Small Farmers	5	3800	3700	7500	15000	400	500	900	3600	-	-	-	1000	1160	2160	5200	5360	10560	22540		
Medium Farmers	3	17000	18667	35667	72900	1500	1333	2833	9333	-	-	-	-	-	-	18500	20000	38500	82233		
Large Farmers	1	55000	53000	108000	234000	-	-	-	-	-	-	-	-	-	-	55000	53000	108000	234000		
Total Allied Agri Services	15	8533	8633	17167	35830	433	433	867	3067	-	-	-	667	653	1320	2513	9633	19353	41410		
Both Agri. + Allied Services (I + II)																					
Marginal Farmers	15	933	687	1620	3510	400	267	667	1900	0	0	0	333	267	600	1200	1667	2887	6610		
Small Farmers	13	2346	2154	4500	9062	769	654	1423	4423	0	0	0	808	869	1677	3923	3677	7600	16577		
Medium Farmers	15	9033	8933	17967	37500	300	267	567	1867	200	333	533	1633	1200	2833	5000	11167	10733	21900		
Large Farmers	7	21714	20714	42429	91400	2857	2429	5286	18286	0	0	0	2429	1571	4000	7500	27000	24714	51714		
Total Proper Agri + Allied Services	50	6640	6346	12986	27455	810	670	1480	4840	60	100	160	580	886	2026	3714	8650	8002	16652		

The sampled non-beneficiary farmers showed the highest per household input cost and output value for cereals and lowest for oilseeds. In general, the per household input cost in rabi season for the average category of sampled non-beneficiary farmer was estimated at Rs.12,986 for cereals, Rs.1,480 for pulses, Rs.160 for oilseeds and Rs.2,026 for other crops with a sum of Rs.16,652 for all the rabi crops put together. As against input cost, the per household output value in rabi season for the average category of sampled non-beneficiary farmer was estimated at Rs.27,455 for cereals, Rs.4,840 for pulses, Rs.580 for oilseeds and Rs.3,714 for other rabi crops with a sum of Rs.36,589 for all the rabi crops put together. Thus, the non-beneficiary farmers derived the major output value from cereals in rabi season. The sampled non-beneficiary farmers also showed a rise in per household input cost as well as output value for various rabi crops with the increase in their land holding size.

5.2.6.2.1 Income from Rabi Crops

The estimates relating to the extent of per hectare and per household income generation from various rabi crops cultivated by sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.38. Further, the estimates relating to total income generation from various rabi crops for all the sampled non-beneficiary farmers put together for various land holding size categories are presented in **Appendix 27**.

Although non-beneficiary farmers also generated significant income from various rabi crops, the extent of income generation was lower as against beneficiary farmers. The extent of per hectare income derived from various rabi crops by the sampled non-beneficiary farmers was to the tune of Rs.18,177 from cereals, Rs.43,750 from pulses, Rs.52,500 from oilseeds and Rs.22,567 from other crops with an average of Rs.20,863 for all the rabi crops put together (Table 5.38). Thus, sampled non-beneficiary farmers in rabi season derived highest per hectare income from oilseeds and lowest from cereals. However, it could be readily discerned from Table 5.38 that it was only in the case of medium category of non-beneficiary farmers who cultivated oilseeds in rabi season. Further, the non-beneficiary farmers showed a steady increase in per hectare income from various rabi crops with the increase in their land holding size, which increased from Rs.16,772 for marginal category to Rs.23,146 for the large category. As against income derived on per hectare basis, the sampled beneficiary showed the highest per household income from cereals and lowest from oilseeds.

Table 5.38: Category-wise Details of Income from Rabi Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Cereals	Pulses	Oilseeds	Others	Total	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	9	12967	30328	-	-	17397	2622	2056	-	-	4678
Small Farmers	8	13457	31481	-	15574	18746	2725	3188	-	1188	7100
Medium Farmers	12	17251	-	52500	23050	19058	15108	-	1750	2708	19567
Large Farmers	6	18499	56172	-	30247	23501	36133	15167	-	4083	55383
Total Proper Agri Services	35	17284	44554	52500	23498	20865	12671	3857	600	1900	19029
Allied Agri. Services (II)					-						
Marginal Farmers	6	11875	-	-	17647	15110	792	-	-	1500	2292
Small Farmers	5	16892	33750	-	22250	19769	7500	2700	-	1780	11980
Medium Farmers	3	19062	48750	-	-	20958	37233	6500	-	-	43733
Large Farmers	1	22262	-	-	-	22261	126000	-	-	-	126000
Total Allied Agri Services	15	19798	40741	-	19670	20861	18663	2200	-	1193	22057
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	12770	30328	-	17647	16772	1890	1233	-	600	3723
Small Farmers	13	15443	32232	-	18218	19257	4562	3000	-	1415	8977
Medium Farmers	15	17910	48750	52500	23050	19688	19533	1300	1400	2167	24400
Large Farmers	7	19736	56172	-	30247	23146	48971	13000	-	3500	65471
Total Proper Agri + Allied Services	50	18177	43750	52500	22567	20863	14469	3360	420	1688	19937

Note: Other crops include fodder (jowar), Lucerne, vegetable crops

The per household income in rabi season for the non-beneficiary farmers was estimated at Rs.14,469 from cereals, Rs.3,360 from pulses, Rs.420 from oilseeds and Rs.1,688 from other rabi crops with a sum of Rs.19,937 for all the rabi crops put together. The non-beneficiary farmers in rabi season also showed a tendency of rise in per household income with the increase in land holding size, which increased from Rs.3,723 for marginal category to Rs.65,471 for the large category.

5.2.6.3 Input Cost and Output Value for Zaid Crops

The sampled non-beneficiary farmers cultivated very few crops during zaid season, which mainly encompassed some oilseeds and ginger crop. The information relating to per hectare and per household input costs and output value for various crops cultivated in zaid season for the non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.39. The estimates regarding total input cost and output value for various crops cultivated in zaid season for all the non-beneficiary farmers put together for various land holding size categories are presented in **Appendix 28**.

In case of non-beneficiary farmers, only marginal category was found to cultivate zaid crops, which encompassed fodder and ginger crop. While the per hectare input cost in zaid season for the average category of non-beneficiary farmers was estimated at Rs.39,669, the output value in this respect stood at Rs.71,901 (Table 5.39).

Table 5.39: Category-Wise Details of Inputs and Outputs of Zaid Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	Cereal			Pulses			Oilseeds			Other			Total		
		Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total
Inputs & Output in Rs./Ha																
Proper Agri. Services (I)																
Marginal Farmers	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Farmers	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium Farmers	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allied Agri. Services (II)																
Marginal Farmers	6															
Small Farmers	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium Farmers	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15															
Both Agri. + Allied Services (I + II)																
Marginal Farmers	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium Farmers	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Farmers	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inputs & Output in Rs./Household																
Proper Agri. Services (I)																
Marginal Farmers	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Farmers	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium Farmers	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allied Agri. Services (II)																
Marginal Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Farmers	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium Farmers	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Both Agri. + Allied Services (I + II)																
Marginal Farmers	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium Farmers	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Farmers	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The owned inputs showed a share of 47 per cent in total input cost for various zaid crops cultivated by sampled non-beneficiary farmers. The estimates further showed that while per household input cost in zaid season for the average category of non-beneficiary farmers stood at Rs.950, the output value in this respect was Rs.1,740.

5.2.6.3.1 Income from Zaid Crops

The estimates relating to the extent of per hectare and per household income derived by the sampled non-beneficiary farmers of the ACABC Scheme from various zaid crops under the broad category of proper agricultural services and allied agricultural services are presented in Table 5.40. As for total income generation from zaid crops on per hectare and per household basis for various land holding size categories, the estimates for non-beneficiary farmers are presented in **Appendix 29**.

Table 5.40: Category-wise Details of Income from Zaid Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Cereals	Pulses	Oilseeds	Others	Total	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	9	-	-	-	-	-	-	-	-	-	-
Small Farmers	8	-	-	-	-	-	-	-	-	-	-
Medium Farmers	12	-	-	-	-	-	-	-	-	-	-
Large Farmers	6	-	-	-	-	-	-	-	-	-	-
Total Proper Agri Services	35	-	-	-	-	-	-	-	-	-	-
Allied Agri. Services (II)											
Marginal Farmers	6				32231	32231	6500	6500	6500	6500	6500
Small Farmers	5	-	-	-	-	-	-	-	-	-	-
Medium Farmers	3	-	-	-	-	-	-	-	-	-	-
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15				32231	32231	2600	2600	2600	2600	2600
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	-	-	-	32231	32231	2600	2600	2600	2600	2600
Small Farmers	13	-	-	-	-	-	-	-	-	-	-
Medium Farmers	15	-	-	-	-	-	-	-	-	-	-
Large Farmers	7	-	-	-	-	-	-	-	-	-	-
Total Proper Agri + Allied Services	50	-	-	-	32231	32231	780	780	780	780	780

Note: Other crops include fodder (jowar) and ginger

The non-beneficiary farmer derived income only from other zaid crops that included fodder and ginger crop. The extent of income generation from zaid crops for non-beneficiary farmers was Rs.32,231 on per hectare basis and Rs.780 on per household basis. In fact, it was only in the case of marginal category of non-beneficiary farmer who cultivated zaid crops like fodder and ginger.

5.2.6.4 Input Cost and Output Value for Perennial Crops

The area allocation under perennial crops was found to be significant, which stood at 19.72 per cent of the GCA for non-beneficiary farmers. The major perennial crops

cultivated by non-beneficiary farmers were sugarcane, pomegranate and banana. The information relating to per hectare and per household input costs and output value for various perennial crops cultivated by the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.41. The estimates regarding total input cost and output value for various perennial crops cultivated by the sampled non-beneficiary farmers put together for various land holding size categories are presented in **Appendix 30**.

The non-beneficiary farmers also showed considerable variations in input cost and out value for various perennial crops cultivated by them. The estimated per hectare input cost for the average category of non-beneficiary farmers was Rs.97,589 for sugarcane, Rs.1,35,783 for pomegranate, Rs.94,215 for banana and Rs.46,290 for other perennial crops with an average of Rs.1,04,755 for all the perennial crops put together (Table 5.41). The non-beneficiary farmers showed a rise in per hectare input cost with the rise in their land holding size, which increased from Rs.61,967 for the marginal category to Rs.1,17,000 for the large category.

In case of non-beneficiary farmers, owned inputs accounted for 44 per cent share in total input cost (Table 5.41). The estimates further showed wide variations in per hectare output value for various perennial crops cultivated by non-beneficiary farmers. The per hectare output value for the average category of non-beneficiary farmers was estimated at Rs.1,79,537 for sugarcane, Rs.3,68,118 for pomegranate, Rs.1,92,149 for banana and Rs.1,07,420 for other perennial crops with an average of Rs.2,33,716 for all the perennial crops put together.

The per hectare output value of various perennial crops increased with the increase in land holding size of non-beneficiary farmers, which increased from Rs.2,04,417 for marginal category to Rs.2,46,750 for the medium category with all the perennial crops put together. Further, a very wide variation was noticed in per household input cost and output value for various perennial crops cultivated by non-beneficiary farmers. The highest per household input cost was noticed for sugarcane, whereas pomegranate showed the highest output value on per household basis.

In general, the per household input cost for perennial crops for the average category of sampled non-beneficiary farmer was estimated at Rs.30,760 for sugarcane, Rs.25,500 for pomegranate, Rs.2,280 for banana and Rs.2,620 for other perennial crops with a sum of Rs.61,160 for all the perennial crops put together.

Table 5.41: Category-Wise Details of Inputs and Outputs of Perennial Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	Sugarcane				Pomegranate				Banana				Others				Total	
		Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Total		
		Own	Others		Own	Others		Own	Others		Own	Others		Own	Others		Own	Others	
		Total		Total	Total		Total	Total		Total	Total		Total	Total		Total	Total		
Inputs & Output in Rs./Ha																			
Proper Agri. Services (I)																			
Marginal Farmers	9	26446	33058	59504	140496	49180	57377	405738	-	-	-	12676	29577	126761	31284	31284	62568	200970	
Small Farmers	8	27473	30220	57692	173626	63140	297995	58020	63140	297995	-	-	-	-	46340	50553	96894	250475	
Medium Farmers	12	48454	48454	96907	170722	57756	92409	376238	-	-	-	19608	39216	117647	50096	62620	112717	241894	
Large Farmers	6	53004	75088	128092	218375	74074	80247	444444	49383	74074	123457	30864	55556	95062	50625	66375	117000	217969	
Total Proper Agri Services	35	45569	55761	101329	188331	59701	75984	355580	49383	74074	123457	23442	46290	107420	47626	58422	106048	230679	
Allied Agri. Services (II)																			
Marginal Farmers	6	25000	30000	55000	250000	-	-	-	-	-	-	-	-	-	24750	29700	54450	247500	
Small Farmers	5	24793	49587	74380	104132	57851	61983	413223	15000	20000	35000	-	-	-	37479	50561	88039	237246	
Medium Farmers	3	37037	43210	80247	127778	61728	98765	160494	-	-	-	-	-	-	49500	71156	120656	271941	
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Allied Agri Services	15	29279	45495	74775	125901	59406	76733	361139	15000	20000	35000	-	-	-	41107	56817	97924	249760	
Both Agri. + Allied Services (I+ II)																			
Marginal Farmers	15	26241	32624	58865	156028	57377	49180	106557	-	-	-	12676	29577	126761	30880	31167	61967	204417	
Small Farmers	13	26403	37954	64356	145875	57971	62802	120773	15000	20000	35000	-	-	-	43032	50556	93588	245537	
Medium Farmers	15	46820	47703	94523	164576	58594	93750	384375	-	-	-	19608	39216	117647	50000	64000	114000	246750	
Large Farmers	7	53004	75088	128092	218375	74074	80247	444444	49383	74074	123457	30864	55556	95062	50625	66375	117000	217969	
Total Proper Agri + Allied Services	50	43274	54315	97589	179537	59638	76145	357883	38017	56198	94215	192149	46290	107420	46588	58167	104755	233716	
Inputs & Output in Rs./Household																			
Proper Agri. Services (I)																			
Marginal Farmers	9	3556	4444	8000	18889	3889	3333	7222	27500	-	-	1333	1000	2333	8778	8778	17556	56389	
Small Farmers	8	6250	6875	13125	39500	21250	23125	44375	109141	-	-	-	-	-	27500	30000	57500	148641	
Medium Farmers	12	19583	19583	39167	69000	14583	23333	37917	95000	-	-	833	833	1667	35000	43750	78750	169000	
Large Farmers	6	50000	70833	120833	206000	10000	10833	20833	60000	6667	10000	3333	6667	15000	75000	98333	173333	322917	
Total Proper Agri Services	35	17629	21571	39200	72857	12571	16000	28571	74875	1143	1714	2857	1686	3743	33400	40971	74371	161775	
Allied Agri. Services (II)																			
Marginal Farmers	6	833	1000	1833	8333	-	-	-	-	-	-	-	-	-	833	1000	1833	8333	
Small Farmers	5	6000	12000	18000	25200	14000	15000	29000	100000	1200	1600	2800	9000	-	21200	28600	49800	134200	
Medium Farmers	3	10000	11667	21667	34500	16667	26667	43333	112000	-	-	-	-	-	26667	38333	65000	146500	
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Allied Agri Services	15	4333	6733	11067	18633	8000	10333	18333	55733	400	533	933	3000	-	12733	17600	30333	77367	
Both Agri. + Allied Services (I + II)																			
Marginal Farmers	15	2467	3067	5533	14667	2333	2000	4333	16500	-	-	800	600	1400	5600	5667	11267	37167	
Small Farmers	13	6154	8846	15000	34000	18462	20000	38462	105625	462	615	1077	3462	-	25077	29462	54538	143087	
Medium Farmers	15	17667	18000	35667	62100	15000	24000	39000	98400	-	-	667	667	1333	33333	42667	76000	164500	
Large Farmers	7	42857	60714	103571	176571	8571	9286	17857	51429	5714	8571	14286	26786	22000	64286	84286	148571	276786	
Total Proper Agri + Allied Services	50	13640	17120	30760	56590	11200	14300	25500	69133	920	1360	2280	4650	2620	33960	39960	61160	136453	

The per household output value for the average category of non-beneficiary farmer was estimated at Rs.56,590 for sugarcane, Rs.69,133 for pomegranate, Rs.4,650 for banana and Rs.6,080 for other perennial crops with a sum of Rs.1,36453 for all the perennial crops put together. The non-beneficiary farmers derived the major per household output value from pomegranate among perennial crops. The input cost and output value of various perennial crops on per household basis increased rapidly and steadily with the increase in land holding size of non-beneficiary farmers.

5.2.6.4.1 Income from Perennial Crops

The income generation from perennial crops was quite high for non-beneficiary farmers. The estimates relating to the extent of per hectare and per household income generation from various perennial crops cultivated by sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.42. On the other hand, the estimates relating to total income generation from various perennial crops for all the non-beneficiary farmers put together for various land holding size categories are presented in **Appendix 31**.

Table 5.42: Category-wise Details of Income from Perennial Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Sample	Income in Rs. Per Hectare					Income in Rs. Per Household				
		Sugarcane	Pomegranate	Banana	Others	Total	Sugarcane	Pomegranate	Banana	Others	Total
Proper Agri. Services (I)											
Marginal Farmers	9	80992	299180	-	97183	138402	10889	20278	-	7667	38833
Small Farmers	8	115934	176834	-	-	153582	26375	64766	-	-	91141
Medium Farmers	12	73814	226073	-	78431	129177	29833	57083	-	3333	90250
Large Farmers	6	90283	290123	108025	39506	100969	85167	39167	14583	10667	149583
Total Proper Agri Services	35	87001	219895	108025	61131	124631	33657	46304	2500	4943	87404
Allied Agri. Services (II)											
Marginal Farmers	6	195000	-	-	-	193050	6500	-	-	-	6500
Small Farmers	5	29752	293388	77500	-	149207	7200	71000	6200	-	84400
Medium Farmers	3	47531	254321	-	-	151284	12833	68667	0	-	81500
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Total Allied Agri Services	15	51126	277723	77500	-	151836	7567	37400	2067	-	47033
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	97163	299180	-	97183	142450	9133	12167	-	4600	25900
Small Farmers	13	81518	210900	77500	-	151949	19000	67163	2385	-	88548
Medium Farmers	15	70053	232031	-	78431	132750	26433	59400	-	2667	88500
Large Farmers	7	90283	290123	108025	39506	100969	73000	33571	12500	9143	128214
Total Proper Agri + Allied Services	50	81948	232335	97934	61131	128961	25830	43633	2370	3460	75293

Note: Other perennial crops include papaya, grape, mango, lemon and coconut

The extent of income generation from perennial crops was much lower for non-beneficiary farmers. In case of perennial crops, the average category of non-beneficiary farmers generated per hectare net income to the tune of Rs.81,948 from sugarcane, Rs.2,32,335 from pomegranate, Rs.97,934 from banana and Rs.61,131 from other

perennial crops with an average of Rs.1,28,961 from all the perennial crops put together (Table 5.42). Thus, non-beneficiary farmers also derived highest per hectare income from pomegranate and lowest from other perennial crops. Incidentally, the small category of non-beneficiary farmers derived the highest per hectare income from various perennial crops followed by marginal category; the estimated per hectare income being Rs.1,51,949 for small category and Rs.1,42,450 for the marginal category. As against per hectare income, the per household income from perennial crop for the non-beneficiary farmers was estimated at Rs.25,830 from sugarcane, Rs.43,633 from pomegranate, Rs.2,370 from banana and Rs.3,460 from other perennial crops with a sum of Rs.75,293 from all the perennial crops put together.

5.2.6.5 Input Cost, Output Value and Income from All Crops

The estimates relating to per hectare and per household input costs, output value and income generation from all the crops put together for the non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are shown in Table 5.43. The information regarding total input cost, output value, and income generation from all the crops cultivated by the non-beneficiary farmers put together for various land holding size categories is presented in **Appendix 32**.

Table 5.43: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops on the Farms of the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	Inputs, Output & Income in Rs./Ha					Inputs, Output & Income in Rs./Household				
		Input Cost			Output (Rs)	Income (Rs.)	Input Cost			Output (Rs)	Income (Rs.)
		Own	Others	Total			Own	Others	Total		
Proper Agri. Services (I)											
Marginal Farmers	9	14558	13998	28556	80286	51730	13556	13033	26589	74756	48167
Small Farmers	8	20653	21805	42458	103871	61413	36763	38813	75575	184891	109316
Medium Farmers	12	17512	20036	37548	78922	41373	52917	60542	113458	238475	125017
Large Farmers	6	16877	19614	36491	71291	34799	129000	149917	278917	544900	265983
Total Proper Agri Services	35	17423	19607	37030	79074	42044	52146	58680	110826	236658	125832
Allied Agri. Services (II)											
Marginal Farmers	6	10132	10903	21035	45121	24086	7667	8250	15917	34142	18225
Small Farmers	5	14595	18057	32652	79008	46356	34560	42760	77320	187090	109770
Medium Farmers	3	12275	14621	26896	56915	30019	63667	75833	139500	295200	155700
Large Farmers	1	8834	8260	17094	35583	18489	100000	93500	193500	402800	209300
Total Allied Agri Services	15	11785	13507	25291	56142	30851	33987	38953	72940	161913	88973
Both Agri. + Allied Services (I + II)											
Marginal Farmers	15	12993	12900	25893	67877	41984	11200	11120	22320	58510	36190
Small Farmers	13	17903	20104	38006	92583	54577	35915	40331	76246	185737	109490
Medium Farmers	15	15940	18410	34350	72314	37964	55067	63600	118667	249820	131153
Large Farmers	7	15288	17369	32657	64233	31576	124857	141857	266714	524600	257886
Total Proper Agri + Allied Services	50	15776	17825	33601	72377	38775	46698	52762	99460	214235	114775

The non-beneficiary farmers did not show any discernible trend with respect to per hectare input cost, output value and net income generation from all the crops put together with the increase in their land holding size. For instance, the per hectare input

cost for non-beneficiary farmers with all the crops put together was estimated at 25,893 for marginal category, Rs.38,006 for small, Rs.34,350 for medium and Rs.32,657 for the large category with an average of Rs.33,601 for the average category of farmers. On the other hand, the per hectare output value for non-beneficiary farmers with all the crops put together was worked out at Rs.67,877 for marginal category, Rs.92,583 for small, Rs.72,314 for medium and Rs.64,233 for the large category with an average of Rs.72,377 for the average category of farmers. These input cost and output value estimates showed reasonable income generation from various crops for non-beneficiary farmers. The per hectare income generation for beneficiary farmers with all the crops put together was estimated at Rs.41,984 for marginal category, Rs.54,577 for small, Rs.37,964 for medium and Rs.31,576 for the large category with an average of Rs.38,775 for the average category of farmers. The non-beneficiary farmers showed a steep rise in per household income generation from all crops put together with the increase in their land holding size. The per household income generation for non-beneficiary farmers with all the crops put together was estimated at Rs.36,190 for marginal category, Rs.1,09,490 for small, Rs.1,31,153 for medium and Rs.2,57,886 for the large category with an average of Rs.1,14,775 for the average category of farmers (Table 5.43). Therefore, per household income generation for non-beneficiary farmers from various crops cultivated by them was quite reasonable, though much lower than beneficiary farmers.

5.2.7 Input Cost, Output Value and Income from Animals

The non-beneficiary farmers of the ACABC Scheme reared various animals to supplement their income from crop production. The animals reared by them included cows, buffaloes, bullocks, calves and heifers, goats, etc. Among these animals reared by sampled non-beneficiary farmers, cows and buffaloes in milk and goats generated reasonable amount of annual income for them. The estimates relating to input cost, output value and net income generation for non-beneficiary farmers of ACABC Scheme are assessed separated for milch animals, draught animals, calves/heifers and goats.

5.2.7.1 Input Cost, Output Value and Income from Milch Animals

The milch animals reared by non-beneficiary farmers encompassed cross-bred and local cows, local buffaloes and *murrah* buffaloes, which turned out to be reasonable source of annual income generation for non-beneficiary farmers. The estimates relating to per milch animal and per household annual input cost, output value and net income generation for the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided

in Table 5.44. The information relating to total annual input cost, output value and net income generation from various milch animals for all the non-beneficiary farmers put together for various land holding size categories is presented in **Appendix 33**.

Table 5.44 Category-wise Details of Total Inputs, Outputs and Net Income from Milch Animals Reared By Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Milch Animal Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Milch Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	8	8669	6159	14828	51967	37139
Small Farmers	21	15382	4171	19554	57062	37508
Medium Farmers	23	15473	5396	20868	64891	44022
Large Farmers	19	17289	6724	24013	46912	22899
Total Proper Agri Services	71	15165	5475	20640	56308	35667
Allied Agri. Services (II)						
Marginal Farmers	30	11376	5779	17155	56015	38860
Small Farmers	11	13439	6968	20407	58632	38225
Medium Farmers	12	14600	10342	24942	65335	40393
Large Farmers	12	15208	3042	18250	56575	38325
Total Allied Agri Services	65	13028	6317	19345	58282	38937
Both Agri. + Allied Services (I + II)						
Marginal Farmers	38	10806	5859	16665	55163	38498
Small Farmers	32	14714	5133	19847	57602	37755
Medium Farmers	35	15174	7091	22265	65043	42778
Large Farmers	31	16484	5298	21782	50653	28870
Total Proper Agri + Allied Services	136	14144	5878	20021	57251	37230

Table 5.44 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Milch Animals Reared By Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Milch Animals in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	7706	5475	13181	46193	33012
Small Farmers	8	40378	10950	51328	149787	98459
Medium Farmers	12	29656	10342	39998	124374	84376
Large Farmers	6	54750	21292	76042	148555	72513
Total Proper Agri Services	35	30764	11106	41871	114224	72353
Allied Agri. Services (II)						
Marginal Farmers	6	56879	28896	85775	280077	194302
Small Farmers	5	29565	15330	44895	128991	84096
Medium Farmers	3	58400	41367	99767	261340	161573
Large Farmers	1	182500	36500	219000	678900	459900
Total Allied Agri Services	15	56453	27375	83828	252556	168727
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	27375	14843	42218	139746	97528
Small Farmers	13	36219	12635	48854	141788	92935
Medium Farmers	15	35405	16547	51952	151767	99815
Large Farmers	7	73000	23464	96464	224319	127854
Total Proper Agri + Allied Services	50	38471	15987	54458	155724	101266

Note: Output value for milch animals included value of milk output and dung

The sampled non-beneficiary farmers possessed 136 milch animals, which encompassed 38 with marginal category, 32 with small, 35 with medium and 31 with large category. In case of non-beneficiary farmers, the per milch animal annual input cost was worked out at Rs.16,665 for marginal category, Rs.19,847 for small, Rs.22,265 for medium and Rs.21,782 for the large category with an average of Rs.20,021 for the average category of farmers (Table 5.44). Further, the non-beneficiary farmers showed 71 per cent share of owned inputs in total input cost for rearing milch animals. The per milch animal annual output value for non-beneficiary farmers was estimated at Rs.55,163 for marginal category, Rs.57,602 for small, Rs.65,043 for medium and Rs.50,653 for the large category with an average of Rs.57,251 for the average category of farmers. The higher magnitude of output in relation to input cost resulted in significant income generation from milch animals for the non-beneficiary farmers.

The net per milch animal annual income generation for non beneficiary farmers was estimated at Rs.38,498 for marginal category, Rs.37,755 for small, Rs.42,778 for medium and Rs.28,870 for the large category with an average of Rs.37,230 for the average category of farmers. Thus, while medium category of non-beneficiary farmers showed the highest per milch animal income generation, the income generation in this respect was the lowest for the large category.

The per household annual income generation from milch animals for non-beneficiary farmers was estimated a Rs.97,528 for marginal category, Rs.92,935 for small, Rs.99,815 for medium and Rs.1,27,854 for the large category with an average of Rs.1,01,266 for the average category of farmers (Table 5.44 (a)). Although per household annual input cost and output value for milch animals increased with the increase in land holding size of non-beneficiary farmers, the annual income generation from milch animals was the lowest for small category and highest for large category.

5.2.7.2 Input Cost, Output Value and Income from Draught Animals

The estimates relating to per draught animal and per household annual input cost, output value and net income generation for the sampled beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.45. The information relating to total annual input cost, output value and net income generation from draught animals for all the sampled beneficiary farmers put together for various land holding size categories is presented in **Appendix 34**.

Table 5.45: Category-wise Details of Total Inputs, Outputs and Net Income from Draught Animals Reared By Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Draught Animal Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Draught Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	3	6692	4258	10950	4555	-6395
Small Farmers	-	-	-	-	-	-
Medium Farmers	12	6692	3802	10494	4079	-6415
Large Farmers	4	5931	5475	11406	4146	-7260
Total Proper Agri Services	19	6532	4226	10758	4168	-6590
Allied Agri. Services (II)						
Marginal Farmers	2	6388	3650	10038	3325	-6713
Small Farmers	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	2	6388	3650	10038	3325	-6713
Both Agri. + Allied Services (I + II)						
Marginal Farmers	5	6570	4015	10585	4063	-6522
Small Farmers	-	-	-	-	-	-
Medium Farmers	12	6692	3802	10494	4079	-6415
Large Farmers	4	5931	5475	11406	4146	-7260
Total Proper Agri + Allied Services	21	6518	4171	10689	4088	-6601

Table 5.45 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Draught Animals Reared By Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Draught Animals in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	2231	1419	3650	1518	-2132
Small Farmers	8	-	-	-	-	-
Medium Farmers	12	6692	3802	10494	4079	-6415
Large Farmers	6	3954	3650	7604	2764	-4840
Total Proper Agri Services	35	3546	2294	5840	2263	-3577
Allied Agri. Services (II)						
Marginal Farmers	6	2129	1217	3346	1108	-2238
Small Farmers	5	-	-	-	-	-
Medium Farmers	3	-	-	-	-	-
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	15	852	487	1338	443	-895
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	2190	1338	3528	1354	-2174
Small Farmers	13	-	-	-	-	-
Medium Farmers	15	5353	3042	8395	3263	-5132
Large Farmers	7	3389	3129	6518	2369	-4149
Total Proper Agri + Allied Services	50	2738	1752	4490	1717	-2773

The sampled non-beneficiary farmers were seen to rear altogether 21 draught animals, which encompassed 5 draught animals being reared by marginal farmers, 12 by medium and 4 by large farmers. The non-beneficiary farmers also showed much higher input cost as against output value, resulting in negative returns from draught animals. The per draught animal annual input cost was worked out at Rs.10,585 for marginal category,

Rs.10,494 for medium and Rs.11,406 for the large category with an average of Rs.10,689 for the average category of non-beneficiary farmers (Table 5.45). As against input cost, the per draught animal annual output value was estimated at Rs.4,063 for marginal category, Rs.4,079 for medium and Rs.4,146 for the large category with an average of Rs.4,088 for the average category of non-beneficiary farmers. As a consequence, there was negative per draught animal annual income, which was estimated at Rs.6,522 for the marginal category, Rs.6,415 for medium and Rs.7,260 for the large category with an average of Rs.6,601 for the average category of non-beneficiary farmers.

The draught animals possessed by sampled non-beneficiary farmers was also very less and, on an average, these farmers possessed 0.42 draught animals per household. Therefore, the estimated negative per household annual income from draught animals turned out to be Rs.2,174 for marginal category, Rs.5,132 for medium and Rs.4,149 for the large category with an average of Rs.2,773 for the average category of non-beneficiary farmers (Table 5.45 (a)). Therefore, the estimates showed lowest per household negative annual income from draught animals for marginal category and highest for medium category of non-beneficiary farmers.

5.2.7.3 Input Cost, Output Value and Income from Other Animals

The non-beneficiary farmers not only possessed milch and draught animals but also calves and heifers. The input cost for these animals mainly encompassed feeds and fodder cost, labour cost, etc. The output value for these animals was in the form of sale value of dung. Since output value was much lower than input cost, the net income generation from these animals was negative. The details regarding per calf/heifer as well as per household annual input cost, output value and net income generation these animals for the sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.46. The estimates relating to total annual input cost, output value and net income generation from these calves/heifers for all the sampled non-beneficiary farmers put together for various land holding size categories is presented in **Appendix 35**

The non-beneficiary farmers possessed less calves and heifers as against beneficiary farmers since per household calves and heifers stood at 1.10 for beneficiary and 0.60 for non-beneficiary farmers. The number of calves and heifers possessed by non-beneficiary farmers stood at 30, which encompassed 5 with marginal category, 18 with small, 5 with small and 2 with large category.

Table 5.46: Category-wise Details of Total Inputs, Outputs and Net Income from Other Animals (Calves and Heifers) Reared By Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Calf and Heifer Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Calves & Heifers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	1	5475	-	5475	730	-4745
Small Farmers	17	6656	-	6656	725	-5931
Medium Farmers	3	6083	-	6083	852	-5232
Large Farmers	2	5475	-	5475	913	-4563
Total Proper Agri Services	23	6427	-	6427	758	-5669
Allied Agri. Services (II)						
Marginal Farmers	4	3650	-	3650	548	-3103
Small Farmers	1	5475	-	5475	821	-4654
Medium Farmers	2	5475	-	5475	730	-4745
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	7	4432	-	4432	639	-3793
Both Agri. + Allied Services (I + II)						
Marginal Farmers	5	4015	-	4015	584	-3431
Small Farmers	18	6590	-	6590	730	-5860
Medium Farmers	5	5840	-	5840	803	-5037
Large Farmers	2	5475	-	5475	913	-4563
Total Proper Agri + Allied Services	30	5962	-	5962	730	-5232

Note: Output value for calves and heifers included value of dung

Table 5.46 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Other Animals Calves and Heifers) Reared By Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Calves & Heifers in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own Source	Other Source	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	608	-	608	81	-527
Small Farmers	8	14144	-	14144	1540	-12604
Medium Farmers	12	1521	-	1521	213	-1308
Large Farmers	6	1825	-	1825	304	-1521
Total Proper Agri Services	35	4224	-	4224	498	-3726
Allied Agri. Services (II)						
Marginal Farmers	6	2433	-	2433	365	-2068
Small Farmers	5	1095	-	1095	164	-931
Medium Farmers	3	3650	-	3650	487	-3163
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	15	2068	-	2068	298	-1770
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	1338	-	1338	195	-1144
Small Farmers	13	9125	-	9125	1011	-8114
Medium Farmers	15	1947	-	1947	268	-1679
Large Farmers	7	1564	-	1564	261	-1304
Total Proper Agri + Allied Services	50	3577	-	3577	438	-3139

Note: Output value for calves and heifers included value of dung

The input cost for non-beneficiary farmers was also much higher than output value, which resulted in negative returns from calves and heifers. The per calf/heifer annual input cost was estimated at Rs.4,015 for marginal category, Rs.6,590 for small, Rs.5,840 for medium and Rs.5,475 for the large category with an average of Rs.5,962 for the average category of non-beneficiary farmers (Table 5.46). On the other hand, per calf/heifer annual output value in this respect was estimated at Rs.584 for marginal

category, Rs.730 for small, Rs.803 for medium and Rs.913 for the large category with an average of Rs.730 for the average category of non-beneficiary farmers. Low output value as against high input cost resulted in negative returns from calves and heifers. The estimated per calf/heifer annual negative income was of the order of Rs.3,431 for marginal category, Rs.5,860 for small Rs.5,037 for medium and Rs.4,563 for the large category with an average of Rs.5,232 for the average category of non-beneficiary farmers. These estimates showed highest per calf/heifer annual negative returns for small category and lowest for marginal category. The small category of non-beneficiary farmers also showed highest per calf/heifer annual input cost.

It is to be noted that since non-beneficiary farmers possessed 0.60 calves and heifers on per household basis, the negative annual income from calves and heifers reduced as against on per calf/heifer basis. The estimated negative per household annual income from calves and heifers was of the order of Rs.1,144 for marginal category, Rs.8,114 for small, Rs.1,679 for medium and Rs.1,304 for the large category with an average of Rs.3,139 for the average category of non-beneficiary farmers (Table 5.46 (a)).

5.2.7.4 Input Cost, Output Value and Income from Goats

The non-beneficiary farmers generated a reasonable amount of income from goat rearing. The details regarding annual input cost, output value and net income generation from goat rearing on per goat and per household basis for various categories of sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.47. The information relating to total annual input cost, output value and net income generation from goat rearing for various land holding size categories of sampled non-beneficiary farmers is presented in **Appendix 36**.

The sampled non-beneficiary farmers altogether reared 98 goats, which included 77 goats being reared by marginal category and 21 by small category. In case of non-beneficiary farmers, the annual input cost per goat was estimated at Rs.1,375 for marginal category and Rs.1,495 for small category with an average of Rs.1,400 for the average category of non-beneficiary farmers (Table 5.47). On the other hand, the annual output value per goat was estimated at Rs.3,182 for marginal category and Rs.2,571 for small category with an average of Rs.3,051 for the average category of non-beneficiary farmers. Therefore, the annual income generation from goat rearing on per goat basis was to the tune of Rs.1,807 for marginal category and Rs.1,077 for small category with an average

of Rs.1,651 for the average category of non-beneficiary farmers. The medium and large category of non-beneficiary farmers did not rear goats.

Table 5.47: Category-wise Details of Total Inputs, Outputs and Net Income from Goats (Adult/ Male & Female Calves) Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Goat Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Goats (Adult & Calves)	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	-	-	-	-	-	-
Small Farmers	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Proper Agri Services	-	-	-	-	-	-
Allied Agri. Services (II)						
Marginal Farmers	77	924	450	1375	3182	1807
Small Farmers	21	1043	452	1495	2571	1077
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	98	950	451	1400	3051	1651
Both Agri. + Allied Services (I + II)						
Marginal Farmers	77	924	450	1375	3182	1807
Small Farmers	21	1043	452	1495	2571	1077
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Proper Agri + Allied Services	98	950	451	1400	3051	1651

Note: 1) Input cost includes feed expenditure on adult goats and their male and female calves
2) Output value is the sale value of male and female calves of adult goats

Table 5.47 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Goats (Adult/ Male & Female Calves) Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Goats in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	-	-	-	-	-
Small Farmers	8	-	-	-	-	-
Medium Farmers	12	-	-	-	-	-
Large Farmers	6	-	-	-	-	-
Total Proper Agri Services	35	-	-	-	-	-
Allied Agri. Services (II)						
Marginal Farmers	6	11863	5779	17642	40833	23192
Small Farmers	5	4380	1898	6278	10800	4522
Medium Farmers	3	-	-	-	-	-
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	15	6205	2944	9149	19933	10784
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	4745	2312	7057	16333	9277
Small Farmers	13	1685	730	2415	4154	1739
Medium Farmers	15	-	-	-	-	-
Large Farmers	7	-	-	-	-	-
Total Proper Agri + Allied Services	50	1862	883	2745	5980	3235

Note: 1) Input cost includes feed expenditure on adult goats and their male and female calves
2) Output value is the sale value of male and female calves of adult goats

The estimates further revealed that the non-beneficiary farmers, in general, possessed 1.96 goats per household. Therefore, the non-beneficiary farmers showed higher annual income from goat rearing on per household basis as against per goat basis. The extent of annual income generation from goat rearing on per household basis was Rs.9,277 for marginal category and Rs.1,739 for the small category with an average of Rs.3,235 for the average category of non-beneficiary farmers (Table 5.47 (a)). Therefore, the marginal category of non-beneficiary farmers generated almost six folds higher annual income from goat farming as against small category of non-beneficiary farmers.

5.2.7.5 Input Cost, Output Value and Income from All Animals

This section presents an overall scenario in terms of input cost, output value and income generation from all the animals put together possessed by the non-beneficiary farmers. The estimates relating to annual input cost, output value and net income generation on per animal and per household basis with all the animals put together for various categories of sampled non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are provided in Table 5.48. The details regarding total annual input cost, output value and net income generation from all the animals put together for various land holding size categories of sampled non-beneficiary farmers is presented in **Appendix 37**.

The non-beneficiary farmers were found to rear altogether 285 different types of animals, which encompassed 125 animals being reared by marginal category, 71 by small, 52 by medium and 37 by large category. In case of non-beneficiary farmers, the per animal annual input cost with all the animals put together was estimated at Rs.6,497 for marginal category, Rs.11,058 for small, Rs.17,969 for medium and Rs.19,779 for the large category with an average of Rs.11,451 for the average category of farmers (Table 5.48). These estimates showed an increase in input cost for various animals with the increase in land holding size of non-beneficiary farmers. Further, owned inputs accounted for 71 per cent share in total input cost for various animals reared by non-beneficiary farmers. The per animal annual output value for non-beneficiary farmers was estimated at Rs.18,915 for marginal category, Rs.26,907 for small, Rs.44,797 for medium and Rs.42,936 for the large category with an average of Rs.28,747 for the average category of farmers. The input and output estimates clearly showed significant margin money for non-beneficiary farmers in rearing various animals.

The annual income generation on per animal basis for non beneficiary farmers was estimated at Rs.12,418 for marginal category, Rs.15,849 for small, Rs.26,828 for

medium and Rs.23,157 for the large category with an average of Rs.17,296 for the average category of farmers. These estimates showed the highest per animal annual income generation for medium category of non-beneficiary farmers and lowest for marginal category (Table 5.48).

Table 5.48: Category-wise Details of Total Inputs, Outputs and Net Income from Total Animals Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Animal Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	12	7908	5171	13079	35844	22765
Small Farmers	38	11478	2305	13784	31858	18075
Medium Farmers	38	11959	4466	16425	40631	24206
Large Farmers	25	14527	5986	20513	36390	15877
Total Proper Agri Services	113	11935	4151	16086	36234	20148
Allied Agri. Services (II)						
Marginal Farmers	113	3892	1906	5798	17118	11320
Small Farmers	33	5309	2610	7919	21205	13286
Medium Farmers	14	13296	8864	22161	56106	33945
Large Farmers	12	15208	3042	18250	56575	38325
Total Allied Agri Services	172	5719	2687	8406	23828	15423
Both Agri. + Allied Services (I + II)						
Marginal Farmers	125	4278	2219	6497	18915	12418
Small Farmers	71	8611	2447	11058	26907	15849
Medium Farmers	52	12319	5650	17969	44797	26828
Large Farmers	37	14748	5031	19779	42936	23157
Total Proper Agri + Allied Services	285	8184	3267	11451	28747	17296

Note: Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

Table 5.48 (a): Category-wise Details of Total Inputs, Outputs and Net Income from Total Animals Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Animal in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	10544	6894	17439	47792	30353
Small Farmers	8	54522	10950	65472	151327	85855
Medium Farmers	12	37869	14144	52013	128665	76653
Large Farmers	6	60529	24942	85471	151623	66153
Total Proper Agri Services	35	38534	13401	51934	116985	65051
Allied Agri. Services (II)						
Marginal Farmers	6	73304	35892	109196	322383	213188
Small Farmers	5	35040	17228	52268	139955	87687
Medium Farmers	3	62050	41367	103417	261827	158410
Large Farmers	1	182500	36500	219000	678900	459900
Total Allied Agri Services	15	65578	30806	96384	273230	176846
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	35648	18493	54142	157629	103487
Small Farmers	13	47029	13365	60393	146953	86560
Medium Farmers	15	42705	19588	62293	155298	93004
Large Farmers	7	77954	26593	104546	226949	122402
Total Proper Agri + Allied Services	50	46647	18622	65269	163859	98589

Note: Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

The herd strength of non-beneficiary farmers was lower than beneficiary farmers since non-beneficiary farmers possessed 5.7 animals per household as against 6.42

animals possessed by beneficiary farmers. In case of non-beneficiary farmers, the estimates showed that the extent of annual income generation from various animals on per household basis was Rs.1,03,487 for marginal category, Rs.86,560 for small, Rs.93,004 for medium and Rs.1,22,402 for the large category with an average of Rs.98,589 for the average category of farmers (Table 5.48 (a)).

5.2.8 Input Cost, Output Value and Income from All Crops Grown and Animals Reared

The non-beneficiary farmers not only cultivated wide range of kharif, rabi, zaid and perennial crops by also raised various types of animals, which became their major source of farm income. The annual input cost, output value and income generation from these crops grown during different seasons varied significantly for non-beneficiary farmers. The non-beneficiary farmers also showed considerable differences in annual cost of input, output value and income generation from various animals raised by them. Therefore, an attempt in this section is made to provide an insight into total per household annual input cost, output value and income generation from all the crops and animals put together with a view to find out the extent of total annual income generation for non-beneficiary farmers with all the crops and animals put together.

The estimates relating to annual input cost, output value and net income generation on per household basis with all the crops and animals put together for various categories of non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.49. The information relating to total annual input cost, output value and net income generation from all the crops and animals put together for various land holding size categories of sampled non-beneficiary is shown in **Appendix 38**.

The total per household annual input cost with all the crops and animals put together for non-beneficiaries was worked out at Rs.76,462 for marginal category, Rs.1,36,640 for small, Rs.1,80,960 for medium and Rs.3,71,261 for the large category with an average of Rs.1,64,729 for the average category of farmers (Table 5.49). The non-beneficiaries showed 57 per cent share of owned inputs in total input cost for crops and animals. The total per household annual output value with all the crops and animals put together was estimated at Rs.2,16,139 for marginal category, Rs.3,32,690 for small, Rs.4,05,118 for medium and Rs.7,51,549 for the large category with an average of Rs.3,78,093 for the average category of non-beneficiaries. Therefore, non-beneficiaries derived considerable annual income from various crops and animals since output value exceeded input cost with a comfortable margin for all the categories of farmers.

Table 5.49: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops Grown and Animals Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Per Household Annual Input Costs, Output Value and Net Income from Crops and Animal in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	24100	19928	44028	122548	78520
Small Farmers	8	91284	49763	141047	336217	195170
Medium Farmers	12	90785	74685	165471	367140	201670
Large Farmers	6	189529	174858	364388	696523	332136
Total Proper Agri Services	35	90679	72081	162760	353643	190883
Allied Agri. Services (II)						
Marginal Farmers	6	80971	44142	125113	356525	231413
Small Farmers	5	69600	59988	129588	327045	197457
Medium Farmers	3	125717	117200	242917	557027	314110
Large Farmers	1	282500	130000	412500	1081700	669200
Total Allied Agri Services	15	99565	69759	169324	435144	265819
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	46848	29613	76462	216139	139677
Small Farmers	13	82944	53695	136640	332690	196050
Medium Farmers	15	97772	83188	180960	405118	224158
Large Farmers	7	202811	168450	371261	751549	380288
Total Proper Agri + Allied Services	50	93345	71384	164729	378093	213364

Note: 1) All crops include kharif, rabi zaid and perennial crops

2) Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

With all the crops and animals put together, the non-beneficiary farmers showed per household annual income to the tune of Rs.1,39,677 for marginal category, Rs.1,96,050 for small, Rs.2,24,158 for medium and Rs.3,80,288 for the large category with an average of Rs.2,13,364 for the average category of farmers. Like beneficiary farmers, the non-beneficiary farmers also showed a steady increase in annual input cost, output value and net income generation from crops and animals with the increase in land holding size of farmers.

5.2.9 Distribution of Income Generation from Crops and Animals

An attempt is made in this section to provide an overall scenario regarding the extent of income generation from crops and animals put together for non-beneficiary farmers. The estimates with respect to per household annual income generation from all the crops grown during different seasons along with per household annual income generation from various types of animals reared by the households for non-beneficiary farmers of the ACABC Scheme under the broad category of proper agricultural services and allied agricultural services are brought out in Table 5.50. An assessment of these estimates provides an in-depth assessment of the extent and proportion of income generation from various crops grown during different seasons and various types of animals reared by the sampled non-beneficiary farmers.

Table 5.50: Category-Wise Details of Per Household Annual Income Generation from Crops and Animals for Non-Beneficiary Farmers under ACABC Scheme in Maharashtra
(Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Sample Farmers	Income from Crop Enterprise					Income from Animals Reared					Grand Total
		Kharif	Rabi	Zaid	Perennial	Total	Milch Animal	Draught Animal	Calves & Heifers	Goats	Total	
Proper Agri. Services (I)												
Marginal Farmers	9	4656	4678	-	38833	48167	33012	-2132	-527	-	30353	78520
Small Farmers	8	11075	7100	-	91141	109316	98459	-	-12604	-	85855	195171
Medium Farmers	12	15200	19567	-	90250	125017	84376	-6415	-1308	-	76653	201670
Large Farmers	6	61017	55383	-	149583	265983	72513	-4840	-1521	-	66153	332136
Total Proper Agri. Services	35	19400	19029	-	87404	125832	72353	-3577	-3726	-	65051	190883
Allied Agri. Services (II)												
Marginal Farmers	6	2933	2292	6500	6500	18225	194302	-2238	-2068	23192	213188	231413
Small Farmers	5	13390	11980	-	84400	109770	84096	-	-931	4522	87687	197457
Medium Farmers	3	30467	43733	-	81500	155700	161573	-	-3163	-	158410	314110
Large Farmers	1	83300	126000	-	-	209300	459900	-	-	-	459900	669200
Total Allied Agri. Services	15	17283	22057	2600	47033	88973	168727	-895	-1770	10784	176846	265819
Both Agri. + Allied Services (I + II)												
Marginal Farmers	15	3967	3723	2600	25900	36190	97528	-2174	-1144	9277	103487	139677
Small Farmers	13	11965	8977	-	88548	109490	92935	-	-8114	1739	86560	196050
Medium Farmers	15	18253	24400	-	88500	131153	99815	-5132	-1679	-	93004	224157
Large Farmers	7	64200	65471	-	128214	257886	127854	-4149	-1304	-	122402	380288
Total Both Agri.+ Allied Services	50	18765	19937	780	75293	114775	101266	-2773	-3139	3235	98589	213364
% Distribution of Per Household Annual Income from Crops and Animals												
Proper Agri. Services (I)												
Marginal Farmers	9	5.93	5.96	-	49.46	61.34	42.04	-2.72	-0.67	-	38.66	100.00
Small Farmers	8	5.67	3.64	-	46.70	56.01	50.45	-	-6.46	-	43.99	100.00
Medium Farmers	12	7.54	9.70	-	44.75	61.99	41.84	-3.18	-0.65	-	38.01	100.00
Large Farmers	6	18.37	16.67	-	45.04	80.08	21.83	-1.46	-0.46	-	19.92	100.00
Total Proper Agri. Services	35	10.16	9.97	-	45.79	65.92	37.90	-1.87	-1.95	-	34.08	100.00
Allied Agri. Services (II)												
Marginal Farmers	6	1.27	0.99	2.81	2.81	7.88	83.96	-0.97	-0.89	10.02	92.12	100.00
Small Farmers	5	6.78	6.07	-	42.74	55.59	42.59	-	-0.47	2.29	44.41	100.00
Medium Farmers	3	9.70	13.92	-	25.95	49.57	51.44	-	-1.01	-	50.43	100.00
Large Farmers	1	12.45	18.83	-	-	31.28	68.72	-	-	-	68.72	100.00
Total Allied Agri. Services	15	6.50	8.30	0.98	17.69	33.47	63.47	-0.34	-0.67	4.06	66.53	100.00
Both Agri. + Allied Services (I + II)												
Marginal Farmers	15	2.84	2.67	1.86	18.54	25.91	69.82	-1.56	-0.82	6.64	74.09	100.00
Small Farmers	13	6.10	4.58	-	45.17	55.85	47.40	-	-4.14	0.89	44.15	100.00
Medium Farmers	15	8.14	10.89	-	39.48	58.51	44.53	-2.29	-0.75	-	41.49	100.00
Large Farmers	7	16.88	17.22	-	33.71	67.81	33.62	-1.09	-0.34	-	32.19	100.00
Total Both Agri.+ Allied Services	50	8.79	9.34	0.37	35.29	53.79	47.46	-1.30	-1.47	1.52	46.21	100.00

In case of non-beneficiary farmers, extent of annual income generation on per household basis with all the crops and animals put together was Rs.2,13,364, which encompassed 53.79 per cent income generation from crop enterprise and 46.21 per cent from animals. The estimates further revealed that the non-beneficiary farmers generated 8.79 per cent of the total annual income from kharif crops, 9.34 per cent from rabi crops, 0.37 per cent from zaid crops and 35.29 per cent from perennial crops, 47.46 per cent from milch animals, -1.30 per cent from draught animals, -1.47 per cent from calves and heifers and 1.52 per cent from goats. Therefore, the non-beneficiary farmers also derived 83.25 per cent of the total annual income from perennial crops among crop enterprises and milch animals among various types of animals, which became the major source of their annual income. However, the non-beneficiary farmers derived higher annual income from milch animals as compared to perennial crops.

A comparison of estimates relating to annual income generation from various crops and animals revealed by and large similar trend for beneficiary and non-beneficiary farmers. While beneficiary farmers derived 87.22 per cent of their annual income from perennial crops and milch animals, the extent of annual income generation from perennial crops and milch animals was 83.25 per for non-beneficiary farmers.

5.3 Economic Status, Cropping Pattern, Input Cost, Output Value and Income Generation – Beneficiary and Non-Beneficiary Farmers Compared

5.3.1 Economic Status of Beneficiary and Non-Beneficiary Farmers

The average land holding size of sampled beneficiary farmers with proper agricultural services and allied services put together was estimated at 0.68 hectare for marginal category, 1.53 hectares for small, 2.93 hectares for medium and 6.15 hectares for large category with an average of 2.41 hectares for the average category of farmers. The average land holding size of sampled non-beneficiary farmers with proper agricultural services and allied services put together was worked out at 0.63 hectare for marginal category, 1.53 hectares for small, 2.70 hectares for medium and 6.41 hectares for large category with an average of 2.29 hectares for the average category of farmers.

5.3.2 Social Group Status of Beneficiary and Non-Beneficiary Farmers

The beneficiary and non-beneficiary farmers showed hardly any difference in terms of their social group status since 75 per cent of beneficiary and 72 per cent of non-beneficiary farmers belonged to General category of social group. However, the farmers belonging to social group of SC category was higher among non-beneficiaries, whereas beneficiaries showed higher proportion belonging to OBC category.

5.3.3 Caste Status of Beneficiary and Non-Beneficiary Farmers

Like social group status, the caste category status also did not show much difference between sampled beneficiary and non-beneficiary farmers since 75 per cent of sampled beneficiary farmers and 70 per cent of sampled non-beneficiary farmers belonged to the caste category of Maratha. However, sampled non-beneficiary farmers belonged to higher number of caste categories as against sampled beneficiary farmers.

5.3.4 Educational Status of Beneficiary and Non-Beneficiary Farmers

The education status of heads of households did not differ much among beneficiary and non-beneficiary farmers since 77 per cent heads of households among beneficiary farmers and 80 per cent heads of households among non-beneficiary farmers attained education up to secondary and above level. However, the beneficiary farmers showed higher proportion of graduates and above as against non-beneficiary farmers. The sampled beneficiary farmers also showed relatively lower proportion of illiterates as against non-beneficiary farmers. Therefore, the sampled beneficiary farmers were relatively better off as against non-beneficiary farmers in terms of their education status.

5.3.5 Cropping Pattern of Beneficiary and Non-Beneficiary Farmers

5.3.5.1 Cropping Pattern in Kharif Season

The cropping pattern of sampled beneficiary and non-beneficiary farmers did not differ much in kharif season since area allocation in both the cases was significantly high under cereal and oilseed crops. While all the categories of sampled beneficiary farmers put together showed 48 per cent of their kharif cropped area under cereal crops and 33 per cent under oilseed crops, the area allocation under cereal and oilseed crops in kharif season as proportion of net sown area with all the categories of non-beneficiary farmers put together was 43 per cent 40 per cent., respectively. The net sown area in kharif season was estimated at 110.28 hectares with all the sampled beneficiary farmers put together and 69.82 hectares with all the sampled non-beneficiary farmers put together. The sampled beneficiary farmers in general showed 49.43 per cent of the net sown area under irrigation, whereas this proportion for the sampled non-beneficiary farmer was 39.64 per cent. Thus, the sampled beneficiary farmers showed higher proportion of net sown area under irrigation as against sampled beneficiary farmers.

5.3.5.2 Cropping Pattern in Rabi Season

The cropping pattern of both beneficiary and non-beneficiary farmers was found to be similar in rabi season since cereal crops dominated the cropping pattern in both the cases. All the sampled beneficiary farmers put together showed a net sown area of 83.76

hectares in rabi season, whereas the net sown area for non beneficiary farmers in this respect was 47.78 hectares. The proportion of net sown area under irrigation stood at much higher for beneficiary as against non-beneficiary farmers, and it was estimated at 73.32 per cent for beneficiary farmers and 46.30 per cent for non-beneficiary farmers. However, while beneficiary farmers showed about 69 per cent of net sown area in rabi season under cereal crops, the proportion of area under cereal crops in rabi season for non-beneficiary farmers was as much as 83 per cent. Further, though sampled beneficiary farmers showed lower proportion of net sown area under cereal crops as against non-beneficiary farmers, the proportion of net sown area under other crops was significantly high for beneficiary as against non-beneficiary farmers. The proportion of net sown area under pulse crops in rabi season remained same, and it stood at 8 per cent for both beneficiary and non-beneficiary farmers. Unlike kharif season, the area under oilseed crops as proportion of net sown area was very low in rabi season for both beneficiary and non-beneficiary farmers.

5.3.5.3 Cropping Pattern in Zaid Season

The sampled beneficiary and non-beneficiary farmers by and large showed similar cropping pattern in zaid season. There were very few crops which found place in cropping pattern in zaid season, and, these crops included some oilseeds and other crops like fodder and ginger. The net sown area in zaid season was estimated at 2.42 hectares for sampled beneficiary farmers and 1.21 hectares for non-beneficiary farmers. While sampled beneficiary farmers, in general, allocated 17 per cent of net sown area in zaid season under oilseed crops and 83 per cent under other zaid crops like fodder and ginger, the allocation of net sown area for non-beneficiary farmers was 100 per cent under other zaid crops. Further, both sampled beneficiary and non-beneficiary farmers showed entire net sown area in zaid season under irrigation.

5.3.5.4 Area under Perennial Crops

The estimates clearly underscored the fact that both beneficiary and non-beneficiary farmers allocated significant area under perennial crops such as sugarcane, pomegranate, banana, papaya, grape, lemon, chiku, guava and coconut. With all the sampled farmers put together, the area allocation under perennial crops was estimated at 98.99 hectares for beneficiaries and 29.19 hectares for non-beneficiaries. The major perennial cropped area was noticed to be under sugarcane since both sampled beneficiary and non-beneficiary farmers showed 54 per cent of the perennial cropped area under this crop. Another important perennial crop was found to be pomegranate, which accounted

for 39 per cent share in total perennial cropped area for beneficiary farmers and 32 per cent share for non-beneficiary farmers. Further, while sampled beneficiary farmers showed about 98 per cent of the perennial cropped area under irrigation, this share of perennial cropped area under irrigation was 83 per cent for non-beneficiary farmers. In general, the sampled beneficiary farmers allocated much larger area under perennial crops as against sampled non-beneficiary farmers, and were better off in terms of perennial cropped area under irrigation.

5.3.5.5 Irrigated and Gross Cropped Area

The area allocation under different seasons varied significantly for sampled beneficiary and non-beneficiary farmers. Although area allocation under kharif crops as proportion of GCA was the highest for both sampled beneficiary and non-beneficiary farmers, the beneficiary farmers also showed significantly high proportion of GCA under perennial crops as against non-beneficiary farmers. In general, the GCA for sampled beneficiary farmers was estimated at 295.45 hectares, whereas non-beneficiary farmers showed a GCA of 148.00 hectares. While sampled beneficiary farmers showed 37.33 per cent of the GCA under kharif season, 28.35 per cent under rabi season, 0.82 per cent under summer season and 35.50 per cent under perennial crops, the area allocation as proportion of GCA for non-beneficiary farmers was 47.18 per cent under kharif crops, 32.28 per cent under rabi crops, 0.82 per cent under summer crops and 19.72 per cent under perennial crops. The estimates further showed higher proportion of GCA under irrigation for sampled beneficiary farmers as against non-beneficiary farmers since GIA as proportion of GCA was 73 per cent for beneficiary farmers and 51 per cent for non-beneficiary farmers. The sampled beneficiary farmers also showed a tendency of rise in proportion of GCA under perennial crops and a decline in proportion of GCA under kharif and rabi crops with the increase in land holding size of farmers. On the other hand, the sampled beneficiary farmers showed a rise in proportion of GCA only under kharif crops with the increase in their land holding size.

5.3.6 Input Cost, Output Value and Income from Crops

5.3.6.1 Input Cost and Output Value for Kharif Crops

Both sampled beneficiary and non-beneficiary farmers showed wide variations in input cost and output value for various crops cultivated in kharif seasons. While the per hectare input cost for sampled beneficiary farmers in kharif season varied from Rs.11,618 for oilseeds to Rs.45,460 for other kharif crops, which chiefly included various vegetable and cotton crop, this variation for non-beneficiary farmers in per hectare cost was from

Rs.12,603 for pulses to Rs.23,521 for other kharif crops. Further, the sampled beneficiary and non-beneficiary farmers also showed a tendency of rise in per hectare input cost as well as output value for various kharif crops with the increase in their land holding size. The per hectare input cost for various kharif crops increased from Rs.13,860 for marginal category to Rs.17,848 for the large category in case of beneficiary farmers and from Rs.13,163 for marginal category to Rs.16,327 for the large category for non-beneficiary farmers. Similarly, the per hectare output value for various kharif crops increased from Rs.28,120 for marginal category to Rs.36,473 for the large category in case of beneficiary farmers and from Rs.23,675 for marginal category to Rs.32,107 for the large category for non-beneficiary farmers. In general, per hectare input cost with all the kharif crops put together was estimated at Rs.16,540 for sampled beneficiary farmers and Rs.14,815 for sampled non-beneficiary farmers. On the other hand, the per hectare output value with all the kharif crops put together was worked out at Rs.33,509 for sampled beneficiary farmers and Rs.28,253 for sampled non-beneficiary farmers.

Although sampled beneficiary farmers showed higher per hectare input cost for various kharif crops as against sampled non-beneficiary farmers, the per hectare output value was proportionately higher for beneficiary as against non-beneficiary farmers. As for per household input cost and output value, sampled beneficiary farmers showed relatively lower input cost and output value as against sampled non-beneficiary farmers.

5.3.6.1.1 Income from Kharif Crops

The sampled beneficiary and non-beneficiary farmers derived reasonable income from various kharif crops cultivated by them. The per hectare income generation from various kharif crops put together was to the tune of Rs.16,969 for sampled beneficiary farmers and Rs.13,438 for non-beneficiary farmers, showing 26.28 per cent higher income generation from kharif crops for beneficiary farmers as against non-beneficiary farmers. Further, both beneficiary and non-beneficiary farmers showed a tendency of rise in per hectare income from kharif crops with the increase in their land holding size, which increased from Rs.14,260 for marginal category to Rs.18,625 for large category in case of beneficiary farmers, and from Rs.10,512 for marginal category to Rs.15,780 for large category for non-beneficiary farmers. However, there was hardly any difference in per household income generation from kharif crops for sampled beneficiary and non-beneficiary farmers since per household income generation from kharif crops turned out to be Rs.18,714 for beneficiary farmers and Rs.18,765 for non-beneficiary farmers.

Further, both beneficiary and non-beneficiary farmers showed a steady increase in per household income from various kharif crops with the increase in their land holding size.

5.3.6.2 Input Cost and Output Value for Rabi Crops

The observations in terms of input cost and output value clearly showed significantly higher input cost and output value for rabi crops as against kharif crops. Generally, farmers spend more on rabi crops due to their better quality, longer shelf life and higher prices on offer, which results in higher value of output. Both sampled beneficiary and non-beneficiary farmers showed considerable variations in input cost and output value for various rabi crops. The per hectare input cost in rabi season for sampled beneficiary farmers varied from Rs.19,682 for cereals to Rs.75,372 for other rabi crops, whereas this variation in case of non-beneficiary farmers was from Rs.16,314 for cereals to Rs.27,086 for other rabi crops. On the other hand, the per hectare output value in rabi season for sampled beneficiary farmers ranged from Rs.41,026 for cereals to Rs.1,11,541 for other rabi crops. The non-beneficiary farmers showed a variation in per hectare value of output in rabi season from Rs.34,491 for cereals to Rs.72,300 for oilseeds. In general, while per hectare input cost for rabi crops was estimated at Rs.31,321 for beneficiary farmers and Rs.17,426 for non-beneficiary farmers, the per hectare value of output turned out to be Rs.60,128 for beneficiary farmers and Rs.38,289 for non-beneficiary farmers. As for per household input cost and output value, rabi crops showed an input cost to the tune of Rs.26,235 for beneficiary farmers and Rs.16,652 for non-beneficiary farmers, and output value of the order of Rs.50,363 for beneficiaries and Rs.36,589 for non-beneficiaries. Thus, sampled beneficiary were having a cutting edge over non-beneficiary farmers since they not only showed much higher output value on per hectare basis but also on per household basis as against non-beneficiary farmers.

5.3.6.2.1 Income from Rabi Crops

The estimates showed that the extent of income generation from rabi crops was much higher than kharif crops for both beneficiary and non-beneficiary farmers. However, beneficiary farmers showed invariably higher income from rabi crops as against non-beneficiary farmers. The per hectare income generation from various rabi crops put together was of the order of Rs.28,807 for beneficiary farmers and Rs.20,863 for non-beneficiary farmers, which showed 38.08 per cent higher income generation from rabi crops for beneficiary farmers as against non-beneficiary farmers. The estimates also showed a steady increase in per hectare income from rabi crops with the increase in land holding size of farmers, which increased from Rs.16,762 for marginal category to

Rs.34,227 for large category in case of beneficiary farmers, and from Rs.16,772 for marginal category to Rs.23,146 for large category for non-beneficiary farmers. Further, the beneficiary farmers not only showed higher per hectare income but also higher per household income from rabi crops. The per household income from rabi crops was estimated at Rs.24,128 for beneficiary farmers and Rs.19,937 for non-beneficiary farmers. Thus, beneficiary farmers generated 21.02 per cent higher per household income from rabi crops as against non-beneficiary farmers. Incidentally, the per household income generation in rabi season was the highest from cereal crops and lowest from oilseed crops for both beneficiary and non-beneficiary farmers. Another interesting trend was the sharp rise in per household income from rabi crops with the increase in land holding size of beneficiary and non-beneficiary farmers. Thus, beneficiary farmers were found to have a cutting edge over non-beneficiary farmers since beneficiaries generated 38 per cent higher income from rabi crops on per hectare basis and 21 per cent higher income on per household basis as against non-beneficiaries.

5.3.6.3 Input Cost and Output Value for Zaid Crops

The estimates clearly showed that very few beneficiary and non-beneficiary farmers were cultivating zaid crops. While sampled beneficiary farmers cultivated some oilseeds and other crops in zaid season, the crops cultivated by non-beneficiary farmers were mainly fodder and ginger crop. The per hectare input cost for zaid crops was estimated at Rs.24,463 for beneficiary farmers and Rs.39,669 for non-beneficiary farmers. On the other hand, the per hectare value of output for zaid crops was estimated at Rs.65,289 for beneficiary farmers and Rs.71,901 for non-beneficiary farmers. Thus, non-beneficiary farmers showed not only higher per hectare input cost but also output value in zaid season. Further, the total input cost in zaid season encompassed 52 per cent share towards expenses on owned inputs and 48 per cent share on purchased inputs in case of beneficiary farmers and 47 per cent share towards owned input 53 per cent share on purchased input for non-beneficiary farmers. In general, while per household input cost in zaid season was estimated at Rs.592 for beneficiary farmers and Rs.960 for non-beneficiary farmers, the output value in this respect stood at Rs.1,580 for beneficiary farmers and Rs.1,740 for non-beneficiary farmers. Thus, sampled non-beneficiary farmers showed higher input cost as well as output value in zaid season.

5.3.6.3.1 Income from Zaid Crops

A comparison of income generation from zaid crops for beneficiary and non-beneficiary farmers revealed significantly higher income in case of beneficiary as against

non-beneficiary farmers. While beneficiary farmers showed per hectare net income of the order of Rs.40,826 from zaid crops, the extent of per hectare income generation in this respect for non-beneficiary farmers was Rs.32,231. Thus, beneficiary farmers derived 27 per cent higher per hectare income from zaid crops as against non-beneficiary farmers. The per household income from zaid crops was estimated at Rs.988 for beneficiary and Rs.780 for non-beneficiary farmers, showing again 27 per cent higher per household income for beneficiary as against non-beneficiary farmers. Thus, although very few crops were cultivated in zaid season, the beneficiary showed higher per hectare and per household income during this season as against non-beneficiary farmers.

5.3.6.4 Input Cost and Output Value for Perennial Crops

The estimates showed that though beneficiary farmers cultivated wide range of field crops during kharif, rabi and summer seasons, the input cost and output value stood at much higher for perennial crops. The per hectare input cost for perennial crops varied from Rs.60,991 for other perennial crops to Rs.1,27,482 for pomegranate in case of beneficiary farmers, and from Rs.46,290 for other perennial crops to Rs.1,35,783 for pomegranate for non-beneficiary farmers. As against input cost, the per hectare output value for perennial crops varied from Rs.1,65,419 for sugarcane to Rs.4,07,419 for pomegranate for beneficiary farmers, and from Rs.1,79,537 for sugarcane to Rs.3,68,118 for pomegranate in case of non-beneficiary farmers. The general trend with all the perennial crops put together showed that while per hectare input cost stood at Rs.98,424 for beneficiary farmers and Rs.1,04,755 for non-beneficiary farmers, the per hectare output value in this respect was Rs.2,58,000 for beneficiary farmers and Rs.2,33,716 for non-beneficiary farmers. Thus, though perennial crops showed about 6 per cent higher per hectare input cost for beneficiary than non-beneficiary farmers, the per hectare output value for perennial crops was more than 10 per cent higher for beneficiary as against non-beneficiary farmers, which could be due to higher productivity, better quality and higher prices on offer for perennial crops cultivated by beneficiary as against non-beneficiary farmers. Further, the perennial crops showed per household input cost of the order of Rs.97,430 for beneficiary and Rs.61,160 for non-beneficiary farmers, whereas per household output value in this respect was Rs.255,395 for beneficiary and Rs.1,36,453 for non-beneficiary farmers. Therefore, per hectare as well as per household output value for perennial crops was much higher for beneficiary as against non-beneficiary farmers.

5.3.6.4.1 Income from Perennial Crops

Thus, both beneficiary and non-beneficiary farmers generated substantial income from various perennial crops. However, the extent of income generation from perennial crops was much higher for beneficiary as against non-beneficiary farmers. Since per hectare income generation from various perennial crops put together was to the tune of Rs.1,59,576 for beneficiary and Rs.1,28,961 for non-beneficiary farmers, the beneficiary farmers derived 24 per cent higher per hectare income from perennial crops as against non-beneficiary farmers. Further, the beneficiary farmers showed an increase in per hectare income from perennial crops with the increase in their land holding size, which increased from Rs.1,22,062 for marginal category to Rs.1,96,384 for large category. Contrary to this, the non-beneficiary farmers showed a decline in per hectare income from perennial crops with the rise in their land holding size, which declined from Rs.1,51,949 for small category to Rs.1,00,969 for the large category. The estimates further showed that the extent of income generation from perennial crops was even higher on per household basis as compared to per hectare basis for beneficiary farmers as against non-beneficiary farmers. The estimates revealed that income generation from various perennial crops put together on per household basis was of the order of Rs.1,57,965 for beneficiary farmers and Rs.75,293 for non-beneficiary farmers, showing as much as 110 per cent higher per household income for beneficiary as against non-beneficiary farmers. The major reasons for significantly high income generation from perennial crops for beneficiary farmers could be traced in better management of cultivation practices, better quality of produce, higher productivity and higher prices on offer as against non-beneficiary farmers. Not only this, the beneficiary farmers allocated much larger area under perennial crops as against non-beneficiary farmers.

5.3.6.5. Input Cost, Output Value and Income from All Crops

The comparative estimates relating to input cost, output value and income generation revealed much higher net income for beneficiary as against non-beneficiary farmers with all the crops put together. While per hectare income generation from all crops put together was Rs.68,301 for beneficiary and Rs.38,775 for non-beneficiary farmers, the per household income in this respect turned out to be Rs.2,01,795 for beneficiary and Rs.1,14,775 for non-beneficiary farmers. These estimates are concomitant of the fact that the beneficiary farmers generated 76 per cent higher income from various crops on per hectare basis and also 76 per cent higher income from various crops on per household basis as against non-beneficiary farmers. The higher income generation in case

of beneficiary farmers was on account of the fact that they allocated much higher area under high value perennial crops, apart from showing higher productivity, better quality and better management of cultivation practices of various crops as against non-beneficiary farmers.

5.3.7 Input Cost, Output Value and Income from Animals

5.3.7.1 Input Cost, Output Value and Income from Milch Animals

Although sampled beneficiary and non-beneficiary farmers possessed various species of milch animals such as cross-bred and local cows, local buffaloes and *murrah* buffaloes, the annual input cost, output value and net income generation from these animals differed considerably among beneficiary and non-beneficiary farmers, especially on per household basis. A comparison of estimates relating to annual input cost, output value and net income generation on per milch animal basis revealed significantly higher net income and output value for beneficiary as against non-beneficiary farmers. The average annual income on per milch animal basis was estimated at Rs.44,044 for beneficiary and Rs.37,230 for non-beneficiary farmers, showing 18 per cent higher income generation for beneficiary as against non-beneficiary farmers. Further, while beneficiary farmers showed an increase in per milch animal annual income with the increase in their land holding size, the annual income on per milch animal basis was the lowest for large category and highest for medium category of non-beneficiary farmers. The major difference in annual income from milch animals was noticed on per household basis. The average annual income from milch animals on per household basis was estimated at Rs.1,43,585 for beneficiary and Rs.1,01,266 for non-beneficiary farmers, which showed 42 per cent higher income generation for beneficiary as against non-beneficiary farmers. A significantly higher annual income generation from milch animals on per household basis could be due to superior breed/species of milch animals, higher productivity, higher prices on offer and relatively larger herd size for beneficiary as against non-beneficiary farmers.

5.3.7.2 Input Cost, Output Value and Income from Draught Animals

A comparative scenario in terms of input cost, output value and net income generation from draught animals for beneficiary and non-beneficiary farmers revealed much higher input cost as against output value for draught animals, which resulted in negative returns from these animals for both beneficiary and non-beneficiary farmers. The draught animals were found to work for 60-90 days in a year. Therefore, the output value of draught animals included imputed value of work rendered by draught animals, apart

from sale value of dung. The extent of negative annual income per draught animal was of the order of Rs.5,614 for beneficiary farmers and Rs.6,601 for non-beneficiary farmers, showing hardly any discernible difference in negative annual returns from draught animals for beneficiary and non-beneficiary farmers. The estimated per household negative annual income from draught animals also did not differ much and it was estimated at Rs.2,582 for beneficiary and Rs.2,773 for non-beneficiary farmers. However, in general, the beneficiary farmers possessed marginally higher number of draught animals as against non-beneficiary farmers.

5.3.7.3 Input Cost, Output Value and Income from Other Animals

The estimates relating to input cost, output value and income generation from calves and heifers for beneficiary and non-beneficiary farmers revealed much higher input cost as against output value, resulting in negative returns from these animals. While input cost for these animals mainly encompassed feeds and fodder cost, labour cost, etc., the output value was in the form of sale value of dung. Incidentally, beneficiary farmers not only showed lower input cost and higher output value but also lower negative income from calves and heifers as against non-beneficiary farmers. While per calf/heifer annual input cost was estimated at Rs.4,015 for beneficiary and Rs.5,962 for non-beneficiary farmers, the output value in this respect stood at Rs.1,072 for beneficiary and Rs.730 for non-beneficiary farmers. As a consequence, the per calf/heifer negative annual income for beneficiary farmers stood at Rs.2,943 as against Rs.5,232 for non-beneficiary farmers. Thus, non-beneficiary farmers showed 78 per cent higher per calf negative annual income as against beneficiary farmers. The negative annual income from calves and heifers did not differ much on per household basis and it was estimated at Rs.3,238 for beneficiary and Rs.3,139 for non-beneficiary farmers. The negative income generation from calves and heifers is obvious to expect as there is hardly any output value for these animals.

5.3.7.4 Input Cost, Output Value and Income from Goats

The comparative estimates relating to input cost, output value and net income generation from goat rearing showed higher herd size of goats with non-beneficiary as against beneficiary farmers since non-beneficiary farmers possessed 1.96 goats per household as compared to 1.60 goats for beneficiary farmers. It is to be noted that input cost in case of goat rearing included feed expenditure on adult goats and their male and female calves. On the other hand, the output value in goat rearing was in the form of sale value of male and female calves of adult goats. In general, while annual input cost per goat was estimated at Rs.1,510 for beneficiary and Rs.1,400 for non-beneficiary farmers,

the output value in this respect stood at Rs.3,553 for beneficiary and Rs.3,051 for non-beneficiary farmers. Therefore, the extent of net annual income generation in goat rearing on per goat basis was Rs.2,043 for beneficiary and Rs.1,651 for non-beneficiary farmers. Further, there was hardly any difference in annual income generation from goat rearing on per household basis for beneficiary and non-beneficiary farmers since it was estimated at Rs.3,269 for beneficiary and Rs.3,235 for non-beneficiary farmers. However, within the land holding size categories, marginal category of non-beneficiary farmers generated significant amount of annual income in goat rearing on per household basis.

5.3.7.5 Input Cost, Output Value and Income from All Animals

The herd size of beneficiary and non-beneficiary farmers included several species, breeds and types of animals. There was a marked difference in input cost, output value and income generation from these animals due to the differences in breed, species types of animals possessed by beneficiary and non-beneficiary farmers. With all the animals put together, the estimates showed per animal annual input cost of the order of Rs.12,144 for beneficiary and Rs.11,451 for non-beneficiary farmers. Since annual output value from these animals on per animal basis was Rs.34,112 for beneficiary and Rs.28,747 for non-beneficiary farmers, the annual income generation on per animal basis turned out to be Rs.21,968 for beneficiary and Rs.17,296 for non-beneficiary farmers, showing higher income generation for beneficiary as against non-beneficiary farmers. Further, it is to be noted that the beneficiary farmers not only possessed superior breeds of animals but also much larger herd strength as against non-beneficiary farmers. The herd size on per household basis was estimated at 6.42 for beneficiary and 5.70 for non-beneficiary farmers. Consequently, the annual income generation from various animals on per household basis was estimated at Rs.1,41,034 for beneficiary and Rs.98,589 for non-beneficiary farmers. The beneficiary farmers, therefore, generated 27 per cent higher annual income from various animals on per animal basis and 43 per cent higher income on per household basis as against non-beneficiary farmers. It deserves mention here that income generation from milch animals played a crucial role in total income generation from various animals since income generation from draught animals and calves and heifers was negative, whereas goats showed very low income generation for both beneficiary and non-beneficiary farmers.

5.3.8 Input Cost, Output Value and Income from All Crops Grown and Animals Reared

A comparison of estimates with respect to annual input cost, output value and net income generation from various crops and animals put together revealed vast differences

in costs and returns for beneficiary and non-beneficiary farmers. Although both beneficiary and non-beneficiary farmers cultivated wide range of kharif, rabi, zaid and perennial crops, and also reared large number species and types of animals, the annual input cost, output value and income generation from these crops grown and animals reared differed significantly for beneficiary and non-beneficiary farmers. This is concomitant from the fact that, in general, while annual input cost on per household basis with all the crops and animals put together was estimated at Rs.2,20,463 for beneficiary and Rs.1,64,729 for non-beneficiary farmers, the per households annual output value in this respect stood at Rs.5,63,292 for beneficiary and Rs.3,78,093 for non-beneficiary farmers. As a result, the annual income generation on per household basis with all the crops and animals put together was of the order of Rs.3,42,829 for beneficiary and Rs.2,13,364 for the non-beneficiary farmers. Therefore, the beneficiary farmers showed 61 per cent higher annual income generation from crops and animals as against non-beneficiary farmers. A substantially higher income generation for beneficiary farmers could be due to higher area allocation under high value crops, better management of cultivation practices, higher productivity of crops, better quality, higher prices on offer for output, scientific methods of rearing animals, higher yield, prices, and, consequently higher value of output from animals, etc.

5.3.9 Distribution of Income Generation from Crops and Animals

The extent of annual income generation on per household basis for beneficiary farmers with all the crops and animals put together was Rs.3,42,830, which encompassed 5.46 per cent of the total annual income from kharif crops, 7.04 per cent from rabi crops, 0.29 per cent from zaid crops and 46.08 per cent from perennial crops with a sum of 58.86 per cent from all crops, 41.88 per cent from milch animals, -0.75 per cent from draught animals, -0.94 per cent from calves and heifers and 0.95 per cent from goats with a sum of 41.14 per cent from all animals. The non-beneficiary farmers showed an annual income generation on per household basis with all the crops and animals put together to the tune of Rs.2,13,364, which encompassed 8.79 per cent of the total annual income from kharif crops, 9.34 per cent from rabi crops, 0.37 per cent from zaid crops and 35.29 per cent from perennial crops with a sum of 53.79 per cent from all crops, 47.46 per cent from milch animals, -1.30 per cent from draught animals, -1.47 per cent from calves and heifers and 1.52 per cent from goats with a sum of 46.21 per cent from all animals. These estimates clearly showed that though both beneficiary and non-beneficiary farmers derived more than 80 per cent of annual income from perennial crops and milch animals,

the proportion of annual income generation from milch animals was higher for non-beneficiary farmers, whereas beneficiary farmers showed higher proportion of annual income generation from perennial crops. It is to be further noted that the beneficiary farmers generated 61 per cent higher annual income from crops and animals as against non-beneficiary farmers. The estimates also showed that, among various categories of beneficiary farmers, the extent of annual income generation from crops and animals for large farmers was 300 per cent higher as compared to marginal farmers, 208 per cent higher against small farmers and 100 per cent higher against medium farmers. On the other hand, in case of non-beneficiary farmers, the extent of annual income generation from crops and animals for large farmers was 172 per cent higher as against marginal farmers, 94 per cent higher against small farmers and 70 per cent higher against medium farmers. Thus, the extent of annual income generation from crops and animals differed widely among various land holding size categories of beneficiary and non-beneficiary farmers with large category of beneficiary farmers showing many folds higher annual income generation from crops and animals put together as against marginal category of beneficiary and non-beneficiary farmers.

5.4 Benefits Received from ACABC/Venture

The central sector scheme of ACABC, as mentioned earlier, was launched in 2002 to provide value added extension services to farmers on various technologies including soil health, cropping practices, plant protection, crop insurance, clinical services for animals, feed and fodder management, etc. The main purpose of this scheme was thus to increase the productivity of crops/animals and thus increase the incomes of farmers. Accordingly, in the field survey, an attempt was made to observe the extent to which beneficiary farmers availed extension services from ACABCs. This can be observed from Table 5.51.

It can be observed from Table 5.51 that by and large all beneficiary farmers in the sample had availed of services of ACABCs. About four entrepreneurs in the sample had opened shops to supply inputs to farmers and infact catered to the requirements of thousands of farmers for inputs. In addition, they also provide extension services to farmers in the form of advice and information so as to help them to solve their problems. The input suppliers discuss matters specific to the land holding of the farmer and provide them with appropriate knowledge and information. For example, extension officers in our sample discussed with farmers the cause of damage to the crop, reasons why germination of seed can be low, awareness about indiscriminate use of fertilizers, the methods in

which manure and compost are broken down to provide plant nutrients and general principles of pest control. The input suppliers also provide information to farmers on new ideas developed by agricultural research stations, improved crop varieties, improved water management and also information about plant diseases. All these extension services have helped to increase productivity of beneficiary farmers. There was also regular visit by input suppliers to the farm so as to monitor the health of the crop. In the sample, there was one dynamic entrepreneur who workshops in order to educate farmers to adopt technologies to suit local conditions. He also developed systems which guided the farmers to limit the use of fertilizers, maintain the health of the soil and thus increase the productivity of the crop. Discussions with this entrepreneur revealed that he had developed expertise in sustainable agricultural development, pomegranate farming and management, land management and training through workshops. . An important crop for which the entrepreneur provided extension services was pomegranate through several workshops which is attended by thousands of farmers. In the workshop, appropriate guidance is given to farmers on management of the pomegranate crop so as to prevent diseases and pest attacks. The focus of the workshop is production of high quality fruit which will benefit both farmers and consumers.

Table 5.51: Category-Wise Details of Extension Services received from Agri. Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Maharashtra
(No. of Beneficiaries)

Sl. No.	Category of Sample Beneficiary Farmers	Sample size	Extension Services Received From Ventures on				
			Farm Machine	Dairy Poultry Etc.	Apiary, Sericulture Etc.	Other extension services including Production Trend and Advices etc.	All Extension Services Received
A.	Proper Agri. Services						
I	Marginal Farmers	10	1	0	0	10	11
II	Small Farmers	24	2	0	0	24	26
III	Medium Farmers	23	0	0	0	23	23
IV	Large Farmers	13	0	0	0	13	13
	Sub Total Proper Agri. Services	70	3	0	0	70	73
B.	Allied Agri. Services						
I	Marginal Farmers	10	0	9	0	10	19
II	Small Farmers	13	0	13	0	6	19
III	Medium Farmers	6	0	5	0	4	9
IV	Large Farmers	1	0	1	0	0	1
	Sub Total Allied Agri. Services	30	0	28	0	20	48
C.	Both Agri. + Dairy Services						
I	Marginal Farmers	20	1	9	0	20	30
II	Small Farmers	37	2	13	0	30	45
III	Medium Farmers	29	0	5	0	27	32
IV	Large Farmers	14	0	1	0	13	14
	Sub Total Both Agri.+ Dairy Services	100	3	28	0	90	121

Source: Field Survey

One of the input suppliers in the sample also provided the service of soil testing and maintained a soil testing laboratory. Soil testing is especially important because the soil of several farmers has deteriorated due to distorted use of fertilizers, low use of organic matter and non-replacement of depleted micro and secondary nutrients in the soil. Hence with the availability of this service, the beneficiary farmers could get a complete evaluation of their soil with respect to its functional characteristics, water and nutrient content and other biological properties. The farmers are thus aware of the good properties as well as the weakness of their soil and awareness of nutrient deficiency, if any, in their soil. Farmers who got their soil tested were able to get their soil monitored on a regular basis and experts provided them with solutions to improve the quality and fertility of their soil.

With respect to allied services, field visit to the dairy farm revealed that those who had set up dairy ventures provided a wide variety of services to farmers who maintained milch animals. One such entrepreneur maintained day to day record on services provided for dairy activity with a negligible fee of Rs 20/- per service. The following were the services provided:

1. Guidance regarding the use of appropriate fodder,
2. To keep the animals loose;
3. To guide with respect to agro processing of milk;
4. To guide with respect to vaccination in animals;
5. To provide guidance for pregnancy diagnosis of the animal;
6. To use milking machine;
7. Appropriate technology for production of green fodder;
8. Suitable transport of milk and milk products;
9. To provide guidance for modern technology of vermin compost units; etc.

By and large, most services related to maintenance of milch animals were provided by the entrepreneur of the dairy farm. Also a day to day register was maintained on services performed to beneficiaries.

In case of two samples, the entrepreneurs who had undergone the course had set up nurseries. With diversification of agriculture to horticulture and other vegetative species, there is a huge demand for such seeds and saplings. Field survey revealed that the entrepreneurs made a huge contribution to planting material and beneficiary farmers revealed that they received the required seeds in time before planting season. Hence entrepreneurs made easy availability of quality planting material at reasonable cost which can help to sustain agriculture. They also produce planting material grown under favorable conditions and maintain them until they are ready for planting. This assured the beneficiaries improved quality planting material which ensures good germination and yield.

Thus from Table 5.51 it can be observed that beneficiary farmers had availed of extension services of ACABCs. However, other than extension services, it appears from Table 5.52 that farmers except in 3 cases did not hire any machines from ACABCs at an average cost of Rs 83.3 per day.

Table 5.52: Category-Wise Details of Hiring Machines from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

(Charges in Rs)

Category of Sample Beneficiary Farmers	Sample size	Respondents	Details of Hiring Machines from Ventures			
			Machine (I)		All Machine	
			Type	Charges (Rs)	Type	Charges (Rs)
Proper Agri. Services						
Marginal Farmers	10	1	Spraying Pump	50	Spraying Pump	50
Small Farmers	24	2	Spraying Pump	100	Spraying Pump	100
Medium Farmers	23		-	-	-	-
Large Farmers	13		-	-	-	-
Sub Average Proper Agri. Services	70	3	Spraying Pump	83.3	Spraying Pump	83.3
Allied Agri. Services						
Marginal Farmers	10		-	-	-	-
Small Farmers	13		-	-	-	-
Medium Farmers	6		-	-	-	-
Large Farmers	1		-	-	-	-
Sub Average Allied Agri. Services	30		-	-	-	-
Both Agri. + Dairy Services						
Marginal Farmers	20	1	Spraying Pump	50	Spraying Pump	50
Small Farmers	37	2	Spraying Pump	100	Spraying Pump	100
Medium Farmers	29		-	-	-	-
Large Farmers	14		-	-	-	-
Sub Avg Both Agri.+ Dairy Services	100	3	Spraying Pump	83.3	Spraying Pump	83.3

Source: Field Survey; Spraying pumps cost is per day

From Table 5.53, it can be observed that beneficiaries did not hire implements from ACABCs. The main reason is that by and large the ACABCs did not provide these services and since most farmers were marginal and small, their operations were mostly labor intensive.

An important purpose of setting up ACABCs was to provide training to farmers on various methods of farming. Accordingly, in Table 5.54 the beneficiary farmers were asked to indicate if they received any training from ACABCs.

Table 5.53: Category-Wise Details of Hiring Implements from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

(Charges in Rs)

Sl. No.	Category of Sample Beneficiary Farmers	Sample size	Details of Hiring Implements from Ventures									
			Implement (I)		Implement (II)		Implement (III)		Implement (IV)		All Implements	
			Type	Charges (Rs)	Type	Charges (Rs)	Type	Charges (Rs)	Type	Charges (Rs)	Type	Charges (Rs)
A.	Proper Agri. Services											
I	Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
II	Small Farmers	24	-	-	-	-	-	-	-	-	-	-
III	Medium Farmers	23	-	-	-	-	-	-	-	-	-	-
	Large Farmers	13										
	Sub Total Proper Agri. Services	70	-	-	-	-	-	-	-	-	-	-
B.	Allied Agri. Services		-	-	-	-	-	-	-	-	-	-
I	Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
II	Small Farmers	13	-	-	-	-	-	-	-	-	-	-
III	Medium Farmers	6	-	-	-	-	-	-	-	-	-	-
	Large Farmers	1										
	Sub Total Allied Agri. Services	30	-	-	-	-	-	-	-	-	-	-
C.	Both Agri. + Dairy Services		-	-	-	-	-	-	-	-	-	-
I	Marginal Farmers	20	-	-	-	-	-	-	-	-	-	-
II	Small Farmers	37	-	-	-	-	-	-	-	-	-	-
III	Medium Farmers	29	-	-	-	-	-	-	-	-	-	-
	Large Farmers	14										
	Sub Total Both Agri.+ Dairy Services	100	-	-	-	-	-	-	-	-	-	-

Source: Field Survey

It can be observed from Table 5.54 that only 8 farmers from the sample of 100 beneficiary farmers received training which was informal in nature. The farmers indicated that the training was mainly informal but provided them with skills and technical knowledge on use of farm equipment. Though the training was only informal in nature, the beneficiary farmers who got access to it found it useful.

Table-5.54: Category-Wise Details of Training Received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

(In Numbers)

Category of Sample Beneficiary Farmers	Sample size	Nature of Training		Was it Useful	
		Formal	Informal	Yes	No
Proper Agri. Services					
Marginal Farmers	10	-	1	1	-
Small Farmers	24	-	2	2	-
Medium Farmers	23	-	2	2	-
Large Farmers	13	-	0	0	-
Sub Total Proper Agri. Services	70	-	5	5	-
Allied Agri. Services					
Marginal Farmers	10	-	0	0	-
Small Farmers	13	-	1	1	-
Medium Farmers	6	-	1	1	-
Large Farmers	1	-	1	1	-
Sub Total Allied Agri. Services	30	-	3	3	-
Both Agri. + Dairy Services					
Marginal Farmers	20	-	1	1	-
Small Farmers	37	-	3	3	-
Medium Farmers	29	-	3	3	-
Large Farmers	14	-	1	1	-
Sub Total Both Agri.+ Dairy Services	100	-	8	8	-

Source: Field Survey

The support received by beneficiary farmers was of various types and can be observed in Table 5.55. About 35.71 percent received support in the form of availability of inputs, and with respect to marketing of output also 35.71 percent received support as they were given information about prices prevailing in various markets. However, all farmers in the sample have received some form of support from ACABCs.

Table 5.55: Category-Wise Details of Support Received from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

(In Numbers)

Category of Sample Beneficiary Farmers	Sample size	Availability of Inputs	Marketing Services of Output	Repairs & Maintenance	Others Supports (Advice and Guidelines)
Proper Agri. Services					
Marginal Farmers	10	2	3	1	10
Small Farmers	24	9	13	1	24
Medium Farmers	23	7	8	3	23
Large Farmers	13	7	1	0	13
Sub Total Proper Agri. Services	70	25	25	5	70
Allied Agri. Services					
Marginal Farmers	10	2	4	1	10
Small Farmers	13	2	5	3	13
Medium Farmers	6	1	3	1	6
Large Farmers	1	0	0	1	1
Sub Total Allied Agri. Services	30	5	12	6	30
Both Agri. + Dairy Services					
Marginal Farmers	20	4	7	2	20
Small Farmers	37	11	18	4	37
Medium Farmers	29	8	11	4	29
Large Farmers	14	7	1	1	14
Sub Total Both Agri.+ Dairy Services	100	30	37	11	100

Source : Field Survey

From Table 5.56, it can be observed that farmers gained maximum from ACABCs through information on farm technology. About 90 percent of those who were mainly in proper agriculture, benefitted from expert advice in farm technology while for the entire sample it was 80 percent. Another important advice which 88.7 percent of farmers in proper agriculture benefitted was with respect to information on protection of pests and diseases.

With respect to those who were mainly involved in allied activities, all benefitted from advice and guidelines of ACABCs. They received information on animal health services, vaccination programme and prevention of diseases which are common. Overall, it can be observed that farmers had benefitted from ACABCs through access to farm technology, information on cropping practices, suitable pesticides to be used, cropping practices and even prices prevailing in various markets. All farmers who were in allied services had information on maintenance of proper health of animals so that maximum output could be achieved. The farmers were thus in a position to confront their problems more successfully.

Table 5.56: Category-Wise Details of Extension Services and Expert Advices from Ventures which Increased Income of Beneficiary Farmers under ACABC Scheme in Maharashtra
(In Number of Farmers)

Category of Sample Beneficiary Farmers	Sample size	Advices and Extension Services on				
		Farm Technology	Cropping Practices	Protection from Pests & Diseases	Prices of Crop Outputs in Market	Animals Health Services
Proper Agri. Services						
Marginal Farmers	10	10	4	10	3	-
Small Farmers	24	21	16	21	14	2
Medium Farmers	23	22	17	21	13	3
Large Farmers	13	10	8	10	5	5
Sub Total Proper Agri. Services	70	63	45	62	35	10
Allied Agri. Services						
Marginal Farmers	10	6	-	2	2	10
Small Farmers	13	7	3	1	3	13
Medium Farmers	6	4	2	2	2	6
Large Farmers	1	-	-	-	-	1
Sub Total Allied Agri. Services	30	17	5	5	7	30
Both Agri. + Dairy Services						
Marginal Farmers	20	16	4	12	5	9
Small Farmers	37	28	19	22	17	14
Medium Farmers	29	26	19	23	15	9
Large Farmers	14	10	8	10	5	6
Sub Total Both Agri.+ Dairy Services	100	80	50	67	42	40

Source: Field Survey

The beneficiary farmers who availed of various types of extension services from ACABCs were also questioned on details of increase in income due to increase in productivity of crops and animals. The same is indicated in Table 5.57. It can be observed that beneficiary farmers benefitted maximum with respect to perennial crops which were mainly horticultural crops such as pomegranate and banana. In case of those farmers who were in proper agriculture, about 88.57 percent claimed that they benefitted in increased incomes from crops such as pomegranate. It was also observed earlier, that there was an ACABC in our sample, which was providing very useful services to farmers on cultivation of pomegranates so that high quality produce could be obtained. Due to appropriate extension services offered, the farmers cultivating pomegranate benefitted from increase in productivity of pomegranates as well as better quality produce. This greatly enhanced their incomes.

Table 5.57: Category-Wise Details on Increase in incomes due to increase in productivity of Crops and Animals on the Farms of Beneficiary Farmers under ACABC Scheme in Maharashtra (Names of Crops and Animals)

Category of Sample Beneficiary Farmers	Sample size	Names of Crops whose Productivity increased					Names of animals whose Productivity increased			
		Cereals	Pulses	Oilseeds	Other and Perennial	Total	Milch Animal	Draught Animals	Other Animals	Total
Proper Agri. Services										
Marginal Farmers	10	0	1	0	9	10	0	0	0	0
Small Farmers	24	0	0	0	22	22	0	0	0	0
Medium Farmers	23	1	0	1	20	22	0	0	0	0
Large Farmers	13	0	0	0	11	11	2	0	0	2
Sub Total Proper Agri. Services	70	1	1	1	62	65	2	0	0	2
Allied Agri. Services							0			
Marginal Farmers	10	1	0	0	0	1	4	3	3	10
Small Farmers	13	2	0	0	0	2	7	3	2	12
Medium Farmers	6	0	0	0	2	2	0	1	0	1
Large Farmers	1	0	0	0	1	1	0	0	0	0
Sub Total Allied Agri. Services	30	3	0	0	3	6	11	7	5	23
Both Agri. + Dairy Services							0			
Marginal Farmers	20	1	1	0	9	11	4	3	3	10
Small Farmers	37	2	0	0	22	24	7	3	2	12
Medium Farmers	29	1	0	1	22	24	0	1		1
Large Farmers	14	0	0	0	12	12	2	0	0	2
Sub Total Both Agri.+ Dairy Services	100	4	1	1	65	71	13	7	5	25

Source: Field Survey

With respect to allied services, it was observed that about 36.6 percent beneficiaries indicated that the productivity of milch animals increased. It was earlier observed from sample ACABCs that several services are provided to beneficiaries so as to maintain utmost animal health. Due to the availability of such services, it is possible that beneficiaries experienced increased productivity of milch animals. Overall out of 30 beneficiaries in allied activities it was observed that 23 beneficiaries or 76.7 percent experienced increase in productivity from milch and other animals. .

Table 5.58: Category-Wise Details of Inputs and Other Services delivered by Ventures which Enhanced income of the Beneficiary Farmers under ACABC Scheme in Maharashtra
(Costs of Inputs in Rs, Charges of Services in Rs.)

Category of Sample Beneficiary Farmers	Sample size	Charges of Farm Equipments		Costs of Farm Inputs (Rs.)				Charges of Other Services			
		Spray Pumps		Nimboli Ark		Varmi Compost		Soil Testing		Soil and Water Testing	
		No.of Respondents	Price	No of Respondents	Price (5 litres)	No of Respondents	3 tonnes Price	No of Respondents	Price (per sample)	No of Respondents	Price (per sample)
Proper Agri. Services											
Marginal Farmers	10	1	50	-	-	4	4000	2	300	-	-
Small Farmers	24	2	100	1	150	7	4000	8	300	-	-
Medium Farmers	23	-	-	-	-	4	4000	5	300	2	550
Large Farmers	13	-	-	-	-	-	-	3	300	-	-
Sub Total Proper Agri. Services	70	3	150	1	150	15	4000	19	300	2	550
Allied Agri. Services											
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-
Small Farmers	13	-	-	-	-	1	4000	-	-	-	-
Medium Farmers	6	-	-	-	-	-	-	-	-	-	-
Large Farmers	1	-	-	-	-	-	-	-	-	-	-
Sub Total Allied Agri. Services	30	-	-	-	-	1	4000	-	-	-	-
Both Agri. + Dairy Services											
Marginal Farmers	20	1	50	-	-	4	4000	2	300	-	-
Small Farmers	37	2	100	1	150	8	4000	8	300	-	-
Medium Farmers	29	-	-	-	-	4	4000	5	300	2	550
Large Farmers	14	-	-	-	-	-	-	3	300	-	-
Sub Total Both Agri.+ Dairy Services	100	3	150	1	150	16	4000	19	300	2	550

Source: Field Survey

In Table 5.58, the inputs as well as services delivered by ACABCs which enhanced income of beneficiary farmers is indicated. It can be observed that out of 70 beneficiaries in proper agriculture, 15 or 21.42 percent purchased vermicompost from ACABCs while 27 percent used the soil testing facilities offered by the ACABC. Farmers realized the importance of soil testing as it helped them to evaluate the quality of their soil and take corrective measures. Once the soil health was restored, the farmers experienced higher yields as proper dose of fertilizers and micronutrients were applied to the soil.

From Table 15.59 to Table 15.61 details of inputs purchased by sample beneficiary farmers are indicated. It can be observed from Table 15.26 that the sample beneficiary farmers could purchase seed of different crops as well as horticultural crops from ACABCs at reasonable prices. Further, the beneficiary farmers also revealed that the seed was of good quality and germination took place.

The average cost of fertilizers and pesticides purchased by beneficiary farmers from ACABCs reveals that the inputs were purchased at suitable prices. Further, the ACABC also provided them with the appropriate fertilizer and pesticide to suit the requirement of the crop. Hence alongwith purchase of inputs, the beneficiary farmers also received extension services regarding the correct usage of fertilizer and pesticide. Further,

since these inputs were branded and administered at the appropriate time, the beneficiary farmers experienced higher yields and increased incomes.

Table 5.59: Category-Wise Details of seed (per kg) Purchased from Ventures by the Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category	Bajra	Jowar	Maize	Wheat	Tur	Mung	Chana	Groundnut	Soyabean	Brinjal (for 100 Gram)	Chilli (Per Plant)	Onion	Tomato (for 100 Gram)	Zendu (100 Gram)	Banana	Mango (Per Plant)	Papaya	Pomegranate	Sugarcane	Grand Total
Marginal Farmers	-	173	-	-	50	-	-	-	480	-	-	-	-	-	-	-	-	20	6	150
Small Farmers	450	125	350	225	220	-	-	-	-	150	15	-	200	68	30	30	8	-	7	136
Medium Farmers	-	120	-	120	110	250	-	550	308	-	10	600	-	150	-	-	-	-	6	179
Large Farmers	-	-	-	-	120	-	100	-	200	-	15	-	-	-	-	-	30	20	6	109
Sub Average Proper Agri. Services	450	148	350	173	125	250	100	550	276	150	13	600	200	95	30	30	19	20	6	146
Allied Agri. Services																				
Marginal Farmers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Farmers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Avg Allied Agri. Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Both Agri. + Dairy Services																				
Marginal Farmers	-	173	-	-	50	-	-	-	480	-	-	-	-	-	-	-	-	20	6	150
Small Farmers	450	125	350	225	220	-	-	-	-	150	15	-	200	68	30	30	8	-	7	136
Medium Farmers	-	120	-	120	110	250	-	550	308	-	10	600	-	150	-	-	-	-	6	179
Large Farmers	-	-	-	-	120	-	100	-	200	-	15	-	-	-	-	-	30	20	6	109
Avg Both Agri.+ Dairy Services	450	148	350	173	125	250	100	550	276	150	13	600	200	95	30	30	19	20	6	146

Source: Field Survey

Table 5.60 Average Fertilizer Cost per kg

Row Labels	Jowar	Wheat	Gram	Soybean	Onion	Pomegranate	Sugarcane
Marginal Farmers	-	-	13	8	12	-	19
Small Farmers	-	9	-	-	-	19	16
Medium Farmers	10	-	-	14	18	20	18
Large Farmers	-	-	-	9	15	28	20
Sub Total Proper Agri. Services	10	9	13	11	15	22	18
Allied Agri. Services							
Marginal Farmers	-	-	-	-	16	-	-
Small Farmers	-	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-	-
Sub Total Allied Agri. Services	-	-	-	-	16	-	-
Both Agri. + Dairy Services							
Marginal Farmers	-	-	13	8	14	-	19
Small Farmers	-	9	-	-	-	19	16
Medium Farmers	10	-	-	14	18	20	18
Large Farmers	-	-	-	9	15	28	20
Sub Total Both Agri.+ Dairy Services	10	9	13	11	15	22	18

Source: Field Survey

Table 5.61 Average Pesticide Cost per kg

Row Labels	Jowar	Wheat	Tur	Mung	Soybean	Onion	Pomegranate	Sugarcane	Grand Total
Marginal Farmers	-	-	44	-	40	15	-	42	23
Small Farmers	-	18	-	-	-	-	31	38	14
Medium Farmers	20	-	-	18	19	30	67	52	28
Large Farmers	-	-	-	-	15	39	69	64	38
Sub Average Proper Agri. Services	20	18	44	18	24	31	47	50	25
Allied Agri. Services									
Marginal Farmers	-	-	-	-	-	-	-	-	-
Small Farmers	-	-	-	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-	-	-	-
Sub Average Allied Agri. Services	-	-	-	-	-	-	-	-	-
Both Agri. + Dairy Services									
Marginal Farmers	-	-	44	-	40	15	-	42	23
Small Farmers	-	18	-	-	-	-	31	38	14
Medium Farmers	20	-	-	18	19	30	67	52	28
Large Farmers	-	-	-	-	15	39	69	64	38
Sub Average Both Agri.+ Dairy Services	20	18	44	18	24	31	47	50	25

Source: Field Survey

5.5 Extension services with respect to Non –Beneficiaries:

The government made concerted attempts to promote ACABCs as the ratio of farm households to extension workers is still very low and the country suffers from a crying need for extension services. Accordingly, the number of ventures established has increased over the years and in Maharashtra till date there are about 5310 ventures and about 44.83 percent of trained candidates have set up such ventures. Given the increase in ACABCs over the years since inception, an attempt was made to observe if farmers who were non beneficiaries of ACABCs were atleast aware of existence of ACABCs and if so, the reasons for not resorting to their services. The same is indicated in Table 5.62.

As the non- beneficiaries were not aware of the availability of standardized inputs from ACABCs, they had to resort to other sources for procurement of inputs. The same can be observed from Table 5.63 and 5.64.

From Table 5.64, it can be observed that 78 percent of non-beneficiary farmers largely resorted to Krishi Seva Kendras for purchase of inputs. The Krishi Seva Kendras normally provide quality inputs such as seed, planting material, pesticides, fertilizers, plant protection chemicals to farmers. In case of farmers who were involved in dairy and other activities, they purchased inputs from Baramati Agro-foods or Warana dairy.

Table 5.62 Category-wise Details of Answers against the Questions from Non- Beneficiary Farmers of the Same Area of ACABC Scheme in Maharashtra

Category of Non-Beneficiary Farmers	Sample size	Heard about Agri-Clinic		If yes reasons for not Availing Services			Heard about the Agri-Business Centres		If yes reasons for not Purchasing Inputs		
		Yes	No	(1)	(2)	(3)	Yes	No	(1)	(2)	(3)
Proper Agri. Services											
Marginal Farmers	9		9	-	-	-		9	-	-	-
Small Farmers	8		8	-	-	-		8	-	-	-
Medium Farmers	12		12	-	-	-		12	-	-	-
Large Farmers	6		6	-	-	-		6	-	-	-
Sub Total Proper Agri. Services	35		35	-	-	-		35	-	-	-
Allied Agri. Services				-	-	-			-	-	-
Marginal Farmers	6		6	-	-	-		6	-	-	-
Small Farmers	5		5	-	-	-		5	-	-	-
Medium Farmers	3		3	-	-	-		3	-	-	-
Large Farmers	1		1	-	-	-		1	-	-	-
Sub Total Allied Agri. Services	15		15	-	-	-		15	-	-	-
Both Agri. + Dairy Services				-	-	-			-	-	-
Marginal Farmers	15		15	-	-	-		15	-	-	-
Small Farmers	13		13	-	-	-		13	-	-	-
Medium Farmers	15		15	-	-	-		15	-	-	-
Large Farmers	7		7	-	-	-		7	-	-	-
Sub Total Both Agri.+ Dairy Services	50		50	-	-	-		50	-	-	-

Source: Field Survey

Table 5.63 Category-wise Details of the Sources of Procuring Inputs by the Sample Non-Beneficiary Farmers of the Area of ACABC Scheme in Maharashtra

(In Numbers)

Category of Non-Beneficiary Farmers	Sample size	Own Sources	On Hire from Shopkeepers	As Subsidy by Govt. Deptt.	Other Sources
Proper Agri. Services					
Marginal Farmers	9	-	-	-	9
Small Farmers	8	-	-	-	8
Medium Farmers	12	-	-	-	12
Large Farmers	6	-	-	-	6
Sub Total Proper Agri. Services	35	-	-	-	35
Allied Agri. Services					
Marginal Farmers	6	-	-	-	6
Small Farmers	5	-	-	-	5
Medium Farmers	3	-	-	-	3
Large Farmers	1	-	-	-	1
Sub Total Allied Agri. Services	15	-	-	-	15
Both Agri. + Dairy Services					
Marginal Farmers	15	-	-	-	15
Small Farmers	13	-	-	-	13
Medium Farmers	15	-	-	-	15
Large Farmers	7	-	-	-	7
Sub Total Both Agri.+ Dairy Services	50	-	-	-	50

Source : Field Survey

Table 5.64 Category-wise Details of Extension Services Received by Non-Beneficiary Farmers of the Same Area of ACABC Scheme in Maharashtra

Category of Non-Beneficiary Farmers	Baramati Agro Feeds	Krushi Seva Kendra	Narayangao n Nursery	Rahuri Agro Centre	Sugar Factory Outlet	Warna Dairy	Total
Proper Agri. Services							
Marginal Farmers	0	7	1	1	0	0	9
Small Farmers	0	7	1	0	0	0	8
Medium Farmers	0	9	3	0	0	0	12
Large Farmers	0	5	0	0	1	0	6
Sub Total Proper Agri. Services	0	28	5	1	1	0	35
Allied Agri. Services							
Marginal Farmers	1	4	0	0	0	1	6
Small Farmers	1	4	0	0	0	0	5
Medium Farmers	1	2	0	0	0	0	3
Large Farmers	0	1	0	0	0	0	1
Sub Total Allied Agri. Services	3	11	0	0	0	1	15
Both Agri. + Dairy Services							
Marginal Farmers	1	11	1	1	0	1	15
Small Farmers	1	11	1	0	0	0	13
Medium Farmers	1	11	3	0	0	0	15
Large Farmers	0	6	0	0	1	0	7
Sub Total Both Agri.+ Allied Services	3	39	5	1	1	1	50

Source : Field Survey

Table 5.65 Category-wise Details about Satisfaction with the Availability of Inputs and Outputs to the Non-Beneficiary Farmers of the Area of ACABC Scheme in Maharashtra

Category of Non-Beneficiary Farmers	No. of Samples	Satisfied with Availability of Inputs		If No Give Reasons						Satisfied with Output of Crops		If No Give Reasons				
		Yes	No	Fertiliser is not available in time	Price of Saplings not Reasonable	Shortage of Fodder	Timely Feed is not Available	Grand Total	Yes	No	Low Yield	Sale Price of Goats low	Low Sale Price of crops	Water Scarcity	Grand Total	
Proper Agri. Services																
Marginal Farmers	9	8	1	1	0	0	0	1	5	4	2	0	1	4		
Small Farmers	8	7	1	0	1	0	0	1	3	5	2	0	3	5		
Medium Farmers	12	10	2	2	0	0	0	2	7	5	0	0	2	5		
Large Farmers	6	5	1	1	0	0	0	1	4	2	0	0	2	2		
Sub Total Proper Agri. Services	35	30	5	4	1	0	0	5	19	16	4	0	6	16		
Allied Agri. Services																
Marginal Farmers	6	2	4	2	0	1	1	4	2	4	0	2	1	4		
Small Farmers	5	3	2	1	0	1	0	2	3	2	1	0	0	2		
Medium Farmers	3	2	1	1	0	0	0	1	2	1	0	0	1	1		
Large Farmers	1	1	0	0	0	0	0	0	0	1	0	0	1	1		
Sub Total Allied Agri. Services	15	8	7	4	0	2	1	7	7	8	1	2	3	8		
Both Agri. + Dairy Services																
Marginal Farmers	15	10	5	3	0	1	1	5	7	8	2	2	2	8		
Small Farmers	13	10	3	1	1	1	0	3	6	7	3	0	4	7		
Medium Farmers	15	12	3	3	0	0	0	3	9	6	0	0	3	6		
Large Farmers	7	6	1	1	0	0	0	1	4	3	0	0	3	3		
Sub Total Both Agri. + Dairy Services	50	38	12	8	1	2	1	12	26	24	5	2	9	24		

Source: Field Survey

Overall, it can be observed that ACABCs have played a role in providing extension services to farmers. However, farmers who did not procure inputs from ACABCs were not aware of the existence of these clinics or ventures. They therefore were mainly dependent upon Krishi Seva Kendras and other retail outlets for inputs.

With respect to those who were non-beneficiaries in the area where ACABCs were located, an attempt was made to understand if they were satisfied with the availability of inputs and also output of the crop. The same is indicated in Table 5.65. Out of the sample size of 50, it was observed that 38 or 76 percent were satisfied with the availability of inputs. With respect to those who were not satisfied, about 66.67 percent indicated that fertilizers were not available in time. In few cases, the beneficiaries complained of shortage of fodder or untimely availability of feed.

With respect to output, it was observed that 52 percent were satisfied with output of crops. The main reason for dissatisfaction was the low market price of output which was observed in 37.5 percent of non-beneficiaries. Also water scarcity was cited as a reason for low yield in 33.3 percent of cases.

To conclude, it appears that the beneficiaries of ACABCs did benefit from the services of ACABCs in terms of suitable extension services and also with respect to purchase of inputs at reasonable prices. However, those who were non-beneficiaries in the same locality, revealed that they had never heard about ACABCs not the services provided by them. They were dependent on Krishi Seva Kendras or other sources for purchase of inputs and other extension services. However, some of them revealed that fertilizers were not available on time and also water scarcity is often the cause of low yield. The overall picture that thus emerges is that ACABCs have to still increase their outreach so that more farmers can have access to their services and benefit from higher farm productivity and income.

CHAPTER – VI

MAIN FINDINGS AND POLICY PRESCRIPTION

6.1 Main Findings

The major findings mainly revolve around district-wise and institute-wise number of candidates trained and ventures developed under the ACABC Scheme in Maharashtra, their status and growth performance over time, and other relevant aspects of the scheme, economic and social status of beneficiary and non-beneficiary farmers, their caste composition, education status, cropping pattern, irrigated area, value of input and output for various crops cultivated during different seasons, value of input and output for various animals, income generation from crops and animals, details regarding extension services received by beneficiaries, hiring of machines and implements from ventures, receipt of inputs, training and other support from ventures established under ACABC Scheme, awareness of non-beneficiary farmers regarding ACABC Scheme, sources of procuring inputs, extension services received by non-beneficiaries, etc.

6.1.1 Status of ACABC Scheme in Maharashtra

During the period between 2002 and 2016, the numerical strength of candidates trained by NTIs in India was worked out at 50,163, whereas number of agri-ventures established stood at 21,039, implying 41.94 per cent of the total candidates trained under ACABC scheme turned into ventures. This proportion turned out to be higher for Maharashtra and stood at 45.51 per cent during the same period. In fact, Maharashtra ranked first with 11,669 candidates trained and 5,310 agri-ventures developed under the ACABC Scheme during the period between 2002 and 2016.

6.1.2 Agricultural Extension Services Provided to Farmers by ACABC

The agri-clinics related ventures provide various facilities to farmers viz. soil and water quality cum input testing laboratory services, plant/crop protection service, extension consultancy services, services through veterinary dispensaries, food processing and testing units services, mobile veterinary clinics services, plant protection services, etc. The services provided by extension personal also include advises on adoption of recommended practices, advises on Integrated Nutrient Management (INM), Integrated Pest Management (IPM), application of organic manure, chemical fertilizers, etc. The crop protection services include pest surveillance, diagnostic and control services.

6.1.3 Contribution of ACABC Scheme to Agricultural Development of the State

The implementation as well as functioning of ACABC scheme has contributed immensely in increasing awareness among the farmers regarding adoption of recommended practices, increasing yield and income levels, enhancing risk bearing ability, leadership ability, decision making ability, information seeking ability, raising self confidence, management orientation, innovativeness, pre-and post harvest management, awareness regarding market forces, scientific production techniques, production and marketing linkages, etc.

6.1.4 ACABC Scheme at a Glance in Maharashtra

There has been significant variation in terms of number of candidates trained and ventures established under ACABC scheme across various districts of Maharashtra during the period between 2002 and 2016. While some districts of Maharashtra like Solapur, Kolhapur, Ahmednagar Pune, Sangli and Satara showed marked presence of agri-ventures, the other district were marked low presence in this respect. Further, the districts with higher number of candidates trained under ACABC Scheme also showed higher number of agri-ventures established during the period between 2002 and 2016. There are as many as 19 Nodal Training Institutes (NTIs) in Maharashtra, which provide training to unemployed agricultural graduates to establish agri-ventures.

6.1.5 Trend of Growth in ACABC Scheme in Maharashtra

During the period between 2002 and 2016, the number of candidates trained under ACABC Scheme increased at an annual growth rate of 16.67 per cent in Konkan division, 9.16 per cent in Nasik division, 13.28 per cent in Pune division, 15.52 per cent in Aurangabad division, 14.86 per cent in Amravati division and 29.30 per cent in Nagpur division. During the same period, the number of agri-ventures established under ACABC Scheme increased at annual growth rate of 23.38 per cent in Konkan division, 15.70 per cent in Nasik division, 21.74 per cent in Pune division, 21.27 per cent in Aurangabad division, 23.92 per cent in Amravati division and 29.19 per cent in Nagpur division. In general, the state of Maharashtra showed 13.87 per cent annual growth in candidates trained under ACABC Scheme during the period between 2002 and 2016.

6.1.6 Economic Status of Farmers

Both sampled beneficiary and non-beneficiary farmers showed that 70 per cent of them belonged to the category of proper agricultural services 30 per cent belonged to the category of allied agricultural services. The average land holding size was estimated at 2.41 hectares for beneficiary farmers and 2.29 hectares for non-beneficiary farmers. The

estimates further revealed that while agriculture was the main occupation of sampled beneficiary farmers, the subsidiary occupation practiced by them revolved around dairy and goat farming. Notably, none of the sampled non-beneficiary farmers was noticed to be a member of any agency/venture.

6.1.7 Social Group Status of Farmers

The beneficiary and non-beneficiary farmers showed hardly any difference in terms of their social group status since 75 per cent of beneficiary and 72 per cent of non-beneficiary farmers belonged to General category of social group. However, the farmers belonging to social group of SC category was higher among non-beneficiaries, whereas beneficiaries showed higher proportion belonging to OBC category.

6.1.8 Caste Status of Farmers

The caste category status did not show much difference between beneficiary and non-beneficiary farmers since 75 per cent of the beneficiary and 70 per cent of non-beneficiary farmers belonged to the caste category of Maratha. However, non-beneficiary farmers belonged to higher number of caste categories as against beneficiary farmers.

6.1.9 Educational Status of Farmers

The education status of heads of households did not differ much among beneficiary and non-beneficiary farmers since 77 per cent heads of households among beneficiary farmers and 80 per cent heads of households among non-beneficiary farmers attained education up to secondary and above level. However, the beneficiary farmers showed higher proportion of graduates and above as against non-beneficiary farmers.

6.1.10 Cropping Pattern of Farmers

The area allocation under different seasons varied significantly for beneficiary and non-beneficiary farmers. Although area allocation under kharif crops as proportion of GCA was the highest for both beneficiary and non-beneficiary farmers, the beneficiary farmers also showed significantly high proportion of GCA under perennial crops as against non-beneficiary farmers. In general, the GCA for beneficiary farmers was estimated at 295.45 hectares, whereas non-beneficiary farmers showed a GCA of 148.00 hectares. While beneficiary farmers showed 37.33 of the GCA under kharif season, 28.35 per cent under rabi season, 0.82 per cent under summer season and 35.50 per cent under perennial crops, the area allocation as proportion of GCA for non-beneficiary farmers was 47.18 per cent under kharif crops, 32.28 per cent under rabi crops, 0.82 per cent under summer crops and 19.72 per cent under perennial crops. The estimates further showed higher proportion of GCA under irrigation for beneficiary as against non-beneficiary

farmers since GIA as proportion of GCA was 73 per cent for beneficiary and 51 per cent for non-beneficiary farmers.

6.1.11 Input Cost, Output Value and Income from Crops

The estimates relating to input costs and output value have helped in computing income generation from various crops cultivated during various seasons by sampled beneficiary and non-beneficiary farmers.

6.1.11.1 Input Cost, Output Value and Income from Kharif Crops

Both beneficiary and non-beneficiary farmers showed wide variations in input cost and output value for various crops cultivated in kharif seasons. In general, per hectare input cost with all the kharif crops put together was estimated at Rs.16,540 for beneficiary and Rs.14,815 for non-beneficiary farmers. On the other hand, per hectare output value with all the kharif crops put together was worked out at Rs.33,509 for beneficiary and Rs.28,253 for non-beneficiary farmers. Thus, per hectare income generation from various kharif crops put together was to the tune of Rs.16,969 for beneficiary and Rs.13,438 for non-beneficiary farmers, showing 26.28 per cent higher income generation from kharif crops for beneficiary as against non-beneficiary farmers. However, there was hardly any difference in per household income generation from kharif crops for beneficiary and non-beneficiary farmers since per household income generation from kharif crops turned out to be Rs.18,714 for beneficiary and Rs.18,765 for non-beneficiary farmers.

6.1.11.2 Input Cost, Output Value and Income from Rabi Crops

The estimates showed significantly higher input cost and output value for rabi crops as against kharif crops. Generally, farmers spend more on rabi crops due to their better quality, longer shelf life and higher prices on offer, which results in higher value of output. In general, while per hectare input cost for rabi crops was estimated at Rs.31,321 for beneficiary and Rs.17,426 for non-beneficiary farmers, the per hectare value of output in this respect turned out to be Rs.60,128 for beneficiary and Rs.38,289 for non-beneficiary farmers. As a result, per hectare income generation from various rabi crops put together was estimated at Rs.28,807 for beneficiary and Rs.20,863 for non-beneficiary farmers, which showed 38.08 per cent higher income generation from rabi crops for beneficiary as against non-beneficiary farmers. As against, per hectare income, per household income from rabi crops was estimated at Rs.24,128 for beneficiary and Rs.19,937 for non-beneficiary farmers, showing 21.02 per cent higher per household income generation from rabi crops for beneficiary as against non-beneficiary farmers.

Thus, beneficiaries were found to have a cutting edge over non-beneficiary farmers since beneficiaries generated 38 per cent higher income from rabi crops on per hectare basis and 21 per cent higher income on per household basis as against non-beneficiaries.

6.1.11.3 Input Cost, Output Value and Income from Zaid Crops

The estimates showed that very few beneficiary and non-beneficiary farmers were cultivating zaid crops. While beneficiary farmers cultivated some oilseeds and other crops in zaid season, the crops cultivated by non-beneficiary farmers were mainly fodder and ginger crop. The per hectare input cost for zaid crops was estimated at Rs.24,463 for beneficiary and Rs.39,669 for non-beneficiary farmers, whereas per hectare value of output for zaid crops stood at Rs.65,289 for beneficiary and Rs.71,901 for non-beneficiary farmers. Thus, the extent of per hectare income generation from zaid crops was of the order of Rs.40,826 for beneficiary and Rs.32,231 for non-beneficiary farmers, showing 27 per cent higher income generation from zaid crops for beneficiary as against non-beneficiary farmers. The estimates also showed 27 per cent higher per household income generation for beneficiary as against non-beneficiary farmers.

6.1.11.4 Input Cost, Output Value and Income from Perennial Crops

Though beneficiary and non-beneficiary farmers cultivated wide range of field crops during kharif, rabi and summer seasons, the input cost and output value stood at much higher for perennial crops. The general trend with all the perennial crops put together showed that while per hectare input cost stood at Rs.98,424 for beneficiary and Rs.1,04,755 for non-beneficiary farmers, the per hectare output value in this respect was Rs.2,58,000 for beneficiary and Rs.2,33,716 for non-beneficiary farmers. Thus, both beneficiary and non-beneficiary farmers generated substantial income from various perennial crops. However, the extent of income generation from perennial crops was much higher for beneficiary as against non-beneficiary farmers. Per hectare income generation from various perennial crops put together was to the tune of Rs.1,59,576 for beneficiary and Rs.1,28,961 for non-beneficiary farmers, showing 24 per cent higher per hectare income generation from perennial crops for beneficiary as against non-beneficiary farmers. The estimates further revealed that income generation from various perennial crops put together on per household basis was of the order of Rs.1,57,965 for beneficiary farmers and Rs.75,293 for non-beneficiary farmers, showing as much as 110 per cent higher per household income for beneficiary as against non-beneficiary farmers. The major reasons for significantly high income generation from perennial crops for beneficiary farmers could be traced in better management of cultivation practices, better

quality of produce, higher productivity and higher prices on offer as against non-beneficiary farmers. Not only this, the beneficiary farmers allocated much larger area under perennial crops as against non-beneficiary farmers.

6.1.11.5 Input Cost, Output Value and Income from All Crops

The comparative estimates relating to input cost, output value and income generation revealed much higher net income for beneficiary as against non-beneficiary farmers with all the crops put together. While per hectare income generation from all crops put together was Rs.68,301 for beneficiary and Rs.38,775 for non-beneficiary farmers, the per household income in this respect turned out to be Rs.2,01,795 for beneficiary and Rs.1,14,775 for non-beneficiary farmers. These estimates are concomitant of the fact that the beneficiary farmers generated 76 per cent higher income from various crops on per hectare basis and also 76 per cent higher income from various crops on per household basis as against non-beneficiary farmers. The higher income generation in case of beneficiary farmers was on account of the fact that they allocated much higher area under high value perennial crops, apart from showing higher productivity, better quality and better management of cultivation practices of various crops as against non-beneficiary farmers.

6.1.12 Input Cost, Output Value and Income from Animals

The beneficiary and non-beneficiary farmers of the ACABC Scheme were not only found to cultivate various kharif, rabi, zaid and perennial crops but also reared various animals to supplement their income from crop production. The estimates relating to input cost, output value and net income generation for beneficiary and non-beneficiary farmers of ACABC Scheme are assessed separately for milch animals, draught animals, calves/heifers and goats.

6.1.12.1 Input Cost, Output Value and Income from Milch Animals

Although beneficiary and non-beneficiary farmers possessed various species of milch animals such as cross-bred and local cows, local buffaloes and *murrah* buffaloes, the annual input cost, output value and net income generation from these animals differed considerably among beneficiary and non-beneficiary farmers, especially on per household basis. The average annual income on per milch animal basis was estimated at Rs.44,044 for beneficiary and Rs.37,230 for non-beneficiary farmers, showing 18 per cent higher income generation for beneficiary as against non-beneficiary farmers. On the other hand, the average annual income from milch animals on per household basis was estimated at Rs.1,43,585 for beneficiary and Rs.1,01,266 for non-beneficiary farmers, which showed

42 per cent higher income generation for beneficiary as against non-beneficiary farmers. A significantly higher annual income generation from milch animals on per household basis could be due to superior breed/species of milch animals, higher productivity, higher prices on offer and relatively larger herd size for beneficiary as against non-beneficiary farmers.

6.1.12.2 Input Cost, Output Value and Income from Draught Animals

Draught animals play an important role in various farm operations in the absence of mechanized sources of power. Generally, draught animal power is more suitable to small size of farm as against mechanized sources of power. However, as for input cost, output value and net income generation, draught animals showed higher input cost in relation to output value, resulting in negative returns from these animals for both beneficiary and non-beneficiary farmers. The draught animals were found to work for 60-90 days in a year. Therefore, the output value of draught animals included imputed value of work rendered by draught animals, apart from sale value of dung. The extent of negative annual income per draught animal was of the order of Rs.5,614 for beneficiary and Rs.6,601 for non-beneficiary farmers, showing hardly any discernible difference in negative annual returns from draught animals for beneficiary and non-beneficiary farmers. The estimated per household negative annual income from draught animals also did not differ much and it was estimated at Rs.2,582 for beneficiary and Rs.2,773 for non-beneficiary farmers.

6.1.12.3 Input Cost, Output Value and Income from Other Animals

The beneficiary and non-beneficiary farmers not only possessed milch and draught animals but also calves and heifers, which were treated as other animals. The estimates relating to input cost, output value and income generation from calves and heifers for beneficiary and non-beneficiary farmers revealed much higher input cost as against output value, resulting in negative returns from these animals. While input cost for these animals mainly encompassed feeds and fodder cost, labour cost, etc., the output value was in the form of sale value of dung. The extent of per calf/heifer negative annual income for beneficiary farmers stood at Rs.2,943 as against Rs.5,232 for non-beneficiary farmers. Thus, non-beneficiary farmers showed 78 per cent higher per calf negative annual income as against beneficiary farmers. However, the negative annual income from calves and heifers did not differ much on per household basis and it was estimated at Rs.3,238 for beneficiary and Rs.3,139 for non-beneficiary farmers.

6.1.12.4 Input Cost, Output Value and Income from Goats

In addition to milch and draught animals, calves and heifers, many of the beneficiary and non-beneficiary farmers also reared goats, which included adult goats and their male and female calves. Input cost in case of goat rearing included feed expenditure on adult goats and their male and female calves. On the other hand, the output value in goat rearing was in the form of sale value of male and female calves of adult goats. The herd size of goats was higher for non-beneficiary as against beneficiary farmers. In general, while annual input cost per goat was estimated at Rs.1,510 for beneficiary and Rs.1,400 for non-beneficiary farmers, the output value in this respect stood at Rs.3,553 for beneficiary and Rs.3,051 for non-beneficiary farmers. Therefore, the extent of net annual income generation in goat rearing on per goat basis was Rs.2,043 for beneficiary and Rs.1,651 for non-beneficiary farmers. However, within the land holding size categories, marginal category of non-beneficiary farmers generated significant amount of annual income in goat rearing on per household basis.

6.1.12.5 Input Cost, Output Value and Income from All Animals

The herd size of beneficiary and non-beneficiary farmers included several species, breeds and types of animals. With all the animals put together, the estimates showed per animal annual input cost of the order of Rs.12,144 for beneficiary and Rs.11,451 for non-beneficiary farmers. Since annual output value from these animals on per animal basis was Rs.34,112 for beneficiary and Rs.28,747 for non-beneficiary farmers, the annual income generation on per animal basis turned out to be Rs.21,968 for beneficiary and Rs.17,296 for non-beneficiary farmers. The herd size on per household basis was estimated at 6.42 for beneficiary and 5.70 for non-beneficiary farmers. Consequently, the annual income generation from various animals on per household basis was estimated at Rs.1,41,034 for beneficiary and Rs.98,589 for non-beneficiary farmers. The beneficiary farmers, therefore, generated 27 per cent higher annual income from various animals on per animal basis and 43 per cent higher income on per household basis as against non-beneficiary farmers. Notably, among various types of animals, the major income generation was from milch animals.

6.1.13 Input Cost, Output Value and Income from All Crops Grown and Animals Reared

A comparison of estimates with respect to annual input cost, output value and net income generation from various crops and animals put together revealed vast differences in costs and returns for beneficiary and non-beneficiary farmers. In general, while annual input cost on per household basis with all the crops and animals put together was

estimated at Rs.2,20,463 for beneficiary and Rs.1,64,729 for non-beneficiary farmers, the per households annual output value in this respect stood at Rs.5,63,292 for beneficiary and Rs.3,78,093 for non-beneficiary farmers. As a result, the annual income generation on per household basis with all the crops and animals put together was of the order of Rs.3,42,829 for beneficiary and Rs.2,13,364 for the non-beneficiary farmers. Therefore, the beneficiary farmers showed 61 per cent higher annual income generation from crops and animals as against non-beneficiary farmers. A substantially higher income generation for beneficiary farmers could be due to higher area allocation under high value crops, better management of cultivation practices, higher productivity of crops, better quality, higher prices on offer for output, scientific methods of rearing animals, higher yield, prices, and, consequently higher value of output from animals, etc.

6.1.14 Distribution of Income Generation from Crops and Animals

The estimates showed that the extent of annual income generation on per household basis for beneficiary farmers with all the crops and animals put together was Rs.3,42,830, which encompassed 58.86 per cent income generation from crop enterprise and 41.14 per cent from animals. In case of non-beneficiary farmers, extent of annual income generation on per household basis with all the crops and animals put together was Rs.2,13,364, which encompassed 53.79 per cent income generation from crop enterprise and 46.21 per cent from animals. Though both beneficiary and non-beneficiary farmers derived nearly 90 per cent of annual income from perennial crops and milch animals, the proportion of annual income generation from milch animals was higher for non-beneficiary farmers, whereas beneficiary farmers showed higher proportion of annual income generation from perennial crops.

6.1.15 Benefits Received from ACABC/Ventures

It was observed that all beneficiary farmers had availed of the services of ACABCs which helped to increase productivity. There was also visit by input suppliers to the farm to monitor the health of the crop. Farmers were encouraged to avail of soil testing services. The dairy ventures that were set up provided complete guidance to farmers so as to enable the beneficiaries to achieve higher productivity and also on matters related to transport of milk.

The nature of training was mainly informal but the farmers found it useful. About 80 percent farmers benefitted from advise on farm technology while 67 percent benefitted from information on protection from pests and diseases.

6.1.16 Extension Services of Non-Beneficiaries

It was observed that the non beneficiaries were totally unaware of ACABCs and the services offered by them. The main source from which they procured inputs was from Krushi Seva Kendras. However, they were by and large satisfied with the availability of inputs though 16 percent indicated that fertilizers were not available on time. However, about 18 percent non beneficiaries felt that the sale price of output was low.

The overall picture that emerges from the study on ACABCs is that although farmers who have availed of their services have benefitted, they have to still increase their outreach so that more farmers can have access to their services and take advantage from higher farm productivity.

6.2 Policy Prescription

The study showed a positive impact of ACABC Scheme in the state of Maharashtra since beneficiaries of the Scheme not only generated substantial income from crop enterprise but also from various animals reared by them as against non-beneficiaries. The extent of annual income generation on per household basis with all the crops and animals put together was Rs.3,42,829 for beneficiary and Rs.2,13,364 for the non-beneficiary farmers, showing 61 per cent higher annual income generation for beneficiary as against non-beneficiary farmers. A substantially higher income generation for beneficiary farmers could be due to higher area allocation under high value perennial crops, better management of cultivation practices, higher productivity of crops, better quality, higher prices on offer for output, scientific methods of rearing animals, higher yield, prices, and, consequently higher value of output from animals, etc.

The extension officers in the study were found to provide several remedial measures to farmers, especially with respect to low germination of seeds, causes for the damage of crops, creation of awareness about indiscriminate use of fertilizers, etc. The input suppliers also provided information to farmers on new ideas developed by agricultural research stations, improved crop varieties, improved water management and also information about plant diseases. These extension services have helped to increase productivity of beneficiary farmers.

In case of allied services, ventures related to dairy and goat keeping were found to provide a wide variety of services to farmers, which encompassed guidance to farmers regarding use of appropriate feeds and fodder and scientific method of feeding, processing and marketing of milk and milk products, vaccination of animals, pregnancy diagnosis of the animal, modern technology of vermin compost units; provision of door-

step A.I. services, timely insemination to achieve higher conception rate, scientific method of tackling infertility problem among bovines, scientific rearing of calves, better feeds and fodder management practices, etc.

It deserves mention that timely supply of planting material and seeds ensured good germination and higher yield of crops for beneficiaries. The extension services received by beneficiaries helped them to increase their income from sugarcane and pomegranate cultivation, apart from raising their income from allied sector.

Although the beneficiaries of ACABCs Scheme did benefit from the services of ACABCs in terms of suitable extension services and also with respect to purchase of inputs at reasonable prices, the non-beneficiaries in this respect depended on Krishi Seva Kendras or other sources for purchase of inputs and other extension services. The non-beneficiaries showed concern for the delay in availability of fertilizer and scarcity of water, which caused low yield. As for functioning of Scheme, there is still a need for the ACABCs to increase their outreach so that more farmers can have access to their services and benefit from higher farm productivity and income. Another suggestion is that loans should be made available more easily so that more clinics/ventures may be established.

The study has come across some problems faced by the agri-preneurs, which revolve around lack of availability of loan facility from commercial banks under the scheme, lengthy procedure to get bank loan sanctioned, higher risk, seasonal nature of business, lack of subsidy facility despite provision, lack of training on economically viable projects, etc. These problems need to be addressed in order to make the scheme more effective and vibrant.

In brief, it could be pointed out that the role of commercial banks in extending financial assistance and credit facilities for the establishment of agri-venture is extremely essential. Further, there should be proper coordination and cooperation among various entities in order to ensure smooth implementation, monitoring and evaluation of ACABC scheme. Not only this, there is also a need for the government to incorporate policies in accordance with the requirement of agripreneurs, banks and categories of projects with a view to achieve objectives of ACABC scheme.

EXECUTIVE SUMMARY

Background:

Around 20 percent of the agricultural extension workers in India are qualified agricultural graduates and the rest become incapable to explain the intricacies of agricultural production system and the linkage of production with complex marketing activities. Therefore, transferring the emerging technologies to the poor and illiterate farmer at village level becomes a challenging task for these qualified agricultural extension workers. Recognizing the importance of agricultural extension services to the farmers and in order to tap potential of unemployed agriculture graduates, the Government of India on 9th April, 2002 launched a scheme of setting up of Agri Clinic and Agri Business Centres (ACABCs) by agriculture graduates with the financial support of National Bank for Agriculture and Rural Development (NABARD). It is a subsidy based credit linked scheme for setting up of agricultural ventures by unemployed agricultural graduates, especially to strengthen technology transfer, public extension system and employment generation in rural areas. MANAGE is not only responsible for providing training to eligible candidates through its nodal training institutes (NTIs) but also motivating them to set-up Agri-Clinics and Agri-Business Centres. Further, MANAGE also ensures sponsoring of sufficient number of cases to the participating banks for their financial support under the scheme, besides arranging to establish required number of units at the ground level in order to make the scheme a success.

In view of the above background, the Directorate of Economics and Statistics, Government of India, Ministry of Agriculture and Farmers welfare had entrusted AERC, University of Allahabad, U.P. to coordinate and conduct this All India Research Study on “Impact Study on Agricultural Extension Services to Farmers By Agri-Clinics & Agri-Business Centres (ACABCs Scheme)”. The impact study on ACABC Scheme in India includes four major states and the state of Maharashtra is one among them.

Objectives:

1. To identify the benefits accrued to farmers through extension services by ACABCs.
2. To analyse comparative effectiveness of extension services to Beneficiary farmers by ACABCs and non-beneficiary farmers of the same area.
3. To assess the extent of effects on income of beneficiary farmers through extension services by ACABCs and the income of non-beneficiary farmers.
4. To examine the problems / factors hampering the effects of extension services on farmers by ACABCs.
5. To explore measures and suggestions for strengthening extension services by ACABCs more effective to farmers.
6. To suggest changes in imparting extension services to farmers under the Scheme.

Findings:

During the period between 2002 and 2016, the numerical strength of candidates trained by NTIs in India was worked out at 50,163, whereas number of agri-ventures established stood at 21,039, implying 41.94 per cent of the total candidates trained

under ACABC scheme turned into ventures. This proportion turned out to be higher for Maharashtra and stood at 45.51 per cent during the same period. In fact, Maharashtra ranked first with 11,669 candidates trained and 5,310 agri-ventures developed under the ACABC Scheme during the period between 2002 and 2016.

The agri-clinics related ventures provide various facilities to farmers viz. soil and water quality cum input testing laboratory services, plant/crop protection service, extension consultancy services, services through veterinary dispensaries, food processing and testing units services, mobile veterinary clinics services, plant protection services, etc. The services provided by extension personal also include advises on adoption of recommended practices, advises on Integrated Nutrient Management (INM), Integrated Pest Management (IPM), application of organic manure, chemical fertilizers, etc. The crop protection services include pest surveillance, diagnostic and control services.

The implementation as well as functioning of ACABC scheme has contributed immensely in increasing awareness among the farmers regarding adoption of recommended practices, increasing yield and income levels, enhancing risk bearing ability, leadership ability, decision making ability, information seeking ability, raising self confidence, management orientation, innovativeness, pre-and post harvest management, awareness regarding market forces, scientific production techniques, production and marketing linkages, etc.

Both sampled beneficiary and non-beneficiary farmers showed that 70 per cent of them belonged to the category of proper agricultural services 30 per cent belonged to the category of allied agricultural services. The average land holding size was estimated at 2.41 hectares for beneficiary farmers and 2.29 hectares for non-beneficiary farmers. The estimates further revealed that while agriculture was the main occupation of sampled beneficiary farmers, the subsidiary occupation practiced by them revolved around dairy and goat farming. Notably, none of the sampled non-beneficiary farmers was noticed to be a member of any agency/venture.

The beneficiary and non-beneficiary farmers showed hardly any difference in terms of their social group status since 75 per cent of beneficiary and 72 per cent of non-beneficiary farmers belonged to General category of social group. However, the farmers belonging to social group of SC category was higher among non-beneficiaries, whereas beneficiaries showed higher proportion belonging to OBC category.

The caste category status did not show much difference between beneficiary and non-beneficiary farmers since 75 per cent of the beneficiary and 70 per cent of non-beneficiary farmers belonged to the caste category of Maratha. However, non-beneficiary farmers belonged to higher number of caste categories as against beneficiary farmers.

The education status of heads of households did not differ much among beneficiary and non-beneficiary farmers since 77 per cent heads of households among beneficiary farmers and 80 per cent heads of households among non-beneficiary farmers attained education up to secondary and above level. However, the beneficiary farmers showed higher proportion of graduates and above as against non-beneficiary farmers.

The area allocation under different seasons varied significantly for beneficiary and non-beneficiary farmers. Although area allocation under kharif crops as proportion of GCA was the highest for both beneficiary and non-beneficiary farmers, the beneficiary farmers also showed significantly high proportion of GCA under perennial crops as against non-beneficiary farmers. In general, the GCA for beneficiary farmers was estimated at 295.45 hectares, whereas non-beneficiary farmers showed a GCA of 148.00 hectares. While beneficiary farmers showed 37.33 of the GCA under kharif season, 28.35 per cent under rabi season, 0.82 per cent under summer season and 35.50 per cent under perennial crops, the area allocation as proportion of GCA for non-beneficiary farmers was 47.18 per cent under kharif crops, 32.28 per cent under rabi crops, 0.82 per cent under summer crops and 19.72 per cent under perennial crops. The estimates further showed higher proportion of GCA under irrigation for beneficiary as against non-beneficiary farmers since GIA as proportion of GCA was 73 per cent for beneficiary and 51 per cent for non-beneficiary farmers.

The estimates relating to input costs and output value have helped in computing income generation from various crops cultivated during various seasons by sampled beneficiary and non-beneficiary farmers.

The comparative estimates relating to input cost, output value and income generation revealed much higher net income for beneficiary as against non-beneficiary farmers with all the crops put together. While per hectare income generation from all crops put together was Rs.68,301 for beneficiary and Rs.38,775 for non-beneficiary farmers, the per household income in this respect turned out to be Rs.2,01,795 for beneficiary and Rs.1,14,775 for non-beneficiary farmers. These estimates are concomitant of the fact that the beneficiary farmers generated 76 per cent higher income from various crops on per hectare basis and also 76 per cent higher income from various crops on per household basis as against non-beneficiary farmers. The higher income generation in case of beneficiary farmers was on account of the fact that they allocated much higher area under high value perennial crops, apart from showing higher productivity, better quality and better management of cultivation practices of various crops as against non-beneficiary farmers.

The beneficiary and non-beneficiary farmers of the ACABC Scheme were not only found to cultivate various kharif, rabi, zaid and perennial crops but also reared various animals to supplement their income from crop production. The estimates relating to input cost, output value and net income generation for beneficiary and non-beneficiary farmers of ACABC Scheme are assessed separately for milch animals, draught animals, calves/heifers and goats.

The herd size of beneficiary and non-beneficiary farmers included several species, breeds and types of animals. With all the animals put together, the estimates showed per animal annual input cost of the order of Rs.12,144 for beneficiary and Rs.11,451 for non-beneficiary farmers. Since annual output value from these animals on per animal basis was Rs.34,112 for beneficiary and Rs.28,747 for non-beneficiary farmers, the annual income generation on per animal basis turned out to be Rs.21,968 for beneficiary and Rs.17,296 for non-beneficiary farmers. The herd size on per household basis was estimated at 6.42 for beneficiary and 5.70 for non-beneficiary farmers. Consequently, the annual income generation from various animals on per household basis was estimated at Rs.1,41,034 for beneficiary and Rs.98,589 for non-beneficiary farmers. The beneficiary

farmers, therefore, generated 27 per cent higher annual income from various animals on per animal basis and 43 per cent higher income on per household basis as against non-beneficiary farmers. Notably, among various types of animals, the major income generation was from milch animals.

A comparison of estimates with respect to annual input cost, output value and net income generation from various crops and animals put together revealed vast differences in costs and returns for beneficiary and non-beneficiary farmers. In general, while annual input cost on per household basis with all the crops and animals put together was estimated at Rs.2,20,463 for beneficiary and Rs.1,64,729 for non-beneficiary farmers, the per households annual output value in this respect stood at Rs.5,63,292 for beneficiary and Rs.3,78,093 for non-beneficiary farmers. As a result, the annual income generation on per household basis with all the crops and animals put together was of the order of Rs.3,42,829 for beneficiary and Rs.2,13,364 for the non-beneficiary farmers. Therefore, the beneficiary farmers showed 61 per cent higher annual income generation from crops and animals as against non-beneficiary farmers.

The estimates showed that the extent of annual income generation on per household basis for beneficiary farmers with all the crops and animals put together was Rs.3,42,830, which encompassed 58.86 per cent income generation from crop enterprise and 41.14 per cent from animals. In case of non-beneficiary farmers, extent of annual income generation on per household basis with all the crops and animals put together was Rs.2,13,364, which encompassed 53.79 per cent income generation from crop enterprise and 46.21 per cent from animals. Though both beneficiary and non-beneficiary farmers derived nearly 90 per cent of annual income from perennial crops and milch animals, the proportion of annual income generation from milch animals was higher for non-beneficiary farmers, whereas beneficiary farmers showed higher proportion of annual income generation from perennial crops.

It was observed that all beneficiary farmers had availed of the services of ACABCs which helped to increase productivity. There was also visit by input suppliers to the farm to monitor the health of the crop. Farmers were encouraged to avail of soil testing services. The dairy ventures that were set up provided complete guidance to farmers so as to enable the beneficiaries to achieve higher productivity and also on matters related to transport of milk.

The nature of training was mainly informal but the farmers found it useful. About 80 percent farmers benefitted from advise on farm technology while 67 percent benefitted from information on protection from pests and diseases.

It was observed that the non beneficiaries were totally unaware of ACABCs and the services offered by them. The main source from which they procured inputs was from Krushi Seva Kendras. However, they were by and large satisfied with the availability of inputs though 16 percent indicated that fertilizers were not available on time. However, about 18 percent non beneficiaries felt that the sale price of output was low.

The overall picture that emerges from the study on ACABCs is that although farmers who have availed of their services have benefitted, they have to still increase their outreach so that more farmers can have access to their services and take advantage from higher farm productivity.

Policy Prescriptions:

- The study showed a positive impact of ACABC Scheme in the state of Maharashtra since beneficiaries of the Scheme not only generated substantial income from crop enterprise but also from various animals reared by them as against non-beneficiaries. The extent of annual income generation on per household basis with all the crops and animals put together was Rs.3,42,829 for beneficiary and Rs.2,13,364 for the non-beneficiary farmers, showing 61 per cent higher annual income generation for beneficiary as against non-beneficiary farmers. A substantially higher income generation for beneficiary farmers could be due to higher area allocation under high value perennial crops, better management of cultivation practices, higher productivity of crops, better quality, higher prices on offer for output, scientific methods of rearing animals, higher yield, prices, and, consequently higher value of output from animals, etc.
- The extension officers in the study were found to provide several remedial measures to farmers, especially with respect to low germination of seeds, causes for the damage of crops, creation of awareness about indiscriminate use of fertilizers, etc. The input suppliers also provided information to farmers on new ideas developed by agricultural research stations, improved crop varieties, improved water management and also information about plant diseases. These extension services have helped to increase productivity of beneficiary farmers.
- In case of allied services, ventures related to dairy and goat keeping were found to provide a wide variety of services to farmers, which encompassed guidance to farmers regarding use of appropriate feeds and fodder and scientific method of feeding, processing and marketing of milk and milk products, vaccination of animals, pregnancy diagnosis of the animal, modern technology of vermin compost units; provision of door-step A.I. services, timely insemination to achieve higher conception rate, scientific method of tackling infertility problem among bovines, scientific rearing of calves, better feeds and fodder management practices, etc.
- Although the beneficiaries of ACABCs Scheme did benefit from the services of ACABCs in terms of suitable extension services and also with respect to purchase of inputs at reasonable prices, the non-beneficiaries in this respect depended on Krishi Seva Kendras or other sources for purchase of inputs and other extension services. The non-beneficiaries showed concern for the delay in availability of fertilizer and scarcity of water, which caused low yield. As for functioning of Scheme, there is still a need for the ACABCs to increase their outreach so that more farmers can have access to their services and benefit from higher farm productivity and income. Another suggestion is that loans should be made available more easily so that more clinics/ventures may be established.
- The study has come across some problems faced by the agri-preneurs, which revolve around lack of availability of loan facility from commercial banks under the scheme, lengthy procedure to get bank loan sanctioned, higher risk, seasonal nature of business, lack of subsidy facility despite provision, lack of training on economically viable projects, etc. These problems need to be addressed in order to make the scheme more effective and vibrant.

References

Abu-Bakar, M.; Rozita Hassan and Norhamimah (2003), 'An Encouraging Factor for Entrepreneurs in Franchising: A Malaysian Experience', University Technology Malaysia. Paper presented at 16th Annual Conference of 'Small Enterprises Association of Australia and New Zealand', 28th September to 1st October 2003.

Ahire, L. M., B. Sontakki and P. Punna Rao (2008), 'Agripreneurs and their Opinion on Agriclincs and Agribusiness Centres Scheme', *Journal of Agricultural Extension Management*, Vol. 9, No. 1, pp. 23-35.

Ahmed, Taufiq, Shamsul Hasan and Rifat Haneef (2011), 'Entrepreneurial Characteristics of the Agripreneurs under the Scheme of Agriclincs & Agri-buisness Centres', *Journal of Community Mobilization and Sustainable Development*, Vol. 6, No. 2, pp. 145-149.

Bairwa, Shoji Lal, Saket Kushwaha, Lokesh Kumar Meena and Kerobim Lakra (2014), 'Present Status of Agriclincs and Agribusiness Centers Scheme in India: An Analysis', *International Journal of scientific research and management (IJSRM)*, Vol. 2., Issue 9, September, pp. 1431-1440.

Bairwa, Shoji Lal, S. Kushwaha, Lokesh Kumar Meena and Kerobim Lakra (2014), 'Roles of Different Entities in the Implementation of Agri-clincs and Agri-business Centres Scheme in India', *International Journal of Commerce and Business Management*, Vol. 7, No. 1, pp. 220-225.

Bairwa, Shoji Lal, Saket Kushwaha and Chandra Sen (2015), 'Problems Faced by Agripreneurs in Starting and Operating Agri ventures under ACABCs Scheme in Rajasthan State', *International Journal of Agricultural Science and Research*, Vol. 5, No. 2, pp. 203-208.

Banerjee, M. and R.K. Talukdar (1997), 'Problem in Women Entrepreneurship in Assam', *Indian Journal of Extension Education*, Vol. 33, No. 3&4, pp. 107-115.

Chandrashekara, P and P. Kanaka Durga (2007), 'Impact of Agriclincs and Agribusiness Centres on the Economic Status of the Farmers', *The Icfai Journal of Agricultural Economics.*, Vol. 4, No. 3, pp. 66 – 78.

Chargotra, Meenakshi and K.L. Dangi (2011), 'Aspiration Level of the Agricultural Graduates Regarding Agri-Clinics and Agri-Business Centres', *Rajasthan Journal of Extension Education*, Vol. 19, pp. 229-230.

Das, Ashutosh, Debabrata, Basu and Rupak Goswami (2010), 'Factors Influencing Retailing Performance of Farm Inputs in South 24 Parganas District of West Bengal', *Indian Research Journal of Extension Education*, Vol. 10, No. 3, pp. 49-53.

Davis, K., Swanson, B., Amudavi, D., Mekonnen, D.A., Flohrs, A., Riese, J., Lamb, C. and Zerfu, E. (2010), 'In-depth Assessment of the Public Agricultural Extension System of Ethiopia and Recommendations for Improvement', *Discussion Paper 01041, IFPRI*, Washington, D.C.

Duschesnean, D and N. Gartner (1990), 'A Profile of New Venture Success and Failure in an Emerging Industry', *Journal of Business Venturing*, Vol. 5, pp. 197-312.

FAO (1989), 'The FAO's Experience in Agricultural Extension for Agriculture and Rural Development', *Report of the Global Consultation on Agricultural Extension, Food and Agriculture Organisation of the United Nations*, Rome, Italy, 1989.

Gandhi, V. P., G. Kumar and R. Marsh (2001), 'Agro-industry for Rural and Small Farmer Development-Issues and Lessons from India', *International Food and Agribusiness Management Review*, Vol. 2, Nos. 3-4,, pp. 331-344.

Greger, K.R. and J.S. Peterson (2000), 'Leadership Profile for the New Millennium', *Cornell Hotel and Restaurant Administration*., *Quarterly*, Vol. 41, No. 1, pp. 16-29.

Indian Council of Agricultural Research (1998), 'Educational background and Professional Expertise of Village Level Extension Worker', *Research Report*, New Delhi.

Kanwat, Manish, Meenakshi Chargoitra, P. Suresh Kumar and B.P. Mishra (2011), 'Attitude of the Agricultural Graduate towards Agri-clinic and Agri-business Centers in Arunachal Pradesh', *Indian Research Journal of Extension Education*, Vol. 11, No. 1, pp. 117-119.

Karjagi, R. (2006), 'Performance of Agriclincs and Agribusiness Centres Scheme in South India', *Ph.D. Thesis*, University of Agricultural Sciences, Dharwad, Bangalore.

Karjagi, Rajashekar, H.S.S. Khan, and H.S. Vijayakumar (2007), 'Factors Affecting Participation in Agriclincs and Agribusiness Centres Programme in South India', *Karnataka Journal of Agricultural Sciences*, Vol. 20, No. 4, pp. 873-875.

Karjagi, Rajashekhar, H.S.S. Khan, H.S. Vijaykumar and L.B. Kunnal (2009), 'Problems of Trained Agripreneurs under the Scheme of Agriclincs and Agribusiness Centres in Starting and Running their Agriventures- A study in South India', *Karnataka Journal of Agricultural Sciences*, Vol. 22, No. 1, pp. 233-234.

Mukherjee, A. and A. Maity (2015), 'Public-Private Partnership for Convergence of Extension Services in Indian agriculture', *Current Affairs*, Vol. 109, No. 9, November 10, pp. 1557-1563.

Murali, K. and A. Jhamtani (2003), 'Entrepreneurial Characteristics of Floriculture Farmers', *Indian Journal of Extension Education*, Vol. 9, No. 1 & 2, pp. 19-25.

Nagabhushnam, K. (2003), 'Analysis of Profile Characteristics of Watershed Farmers', *Mysore Journal of Agricultural Sciences*, Vol. 37, No. 1, pp. 75-81.

Palmurugan, M. (2006), 'A Critical Analysis of Production and Export Potential of Vanilla Crop in India', *Ph.D. Thesis*, Division of Agricultural Extension, *Indian Agricultural Research Institute*. New Delhi.

Patel, M.R., M.V. Patel and R.A. Patel (2015), 'Assessment of Kisan Mobile Advisory (KMA) Service for Dissemination of Agriculture Information in Mehsana District;

Gujarat', *International Journal on Recent and Innovation Trends in Computing and Communication*, Volume 3, Issue 7, pp. 4599-4602.

Planning Commission (2011), Draft on Faster, Sustainable and More Inclusive Growth – An approach to Twelfth Five Year Plan”, available at http://planningcommission.nic.in/plans/planrel/12appdrft/approach_12plan.pdf

Rao, M. V. and K. Rupkumar (2005), ‘Concurrent Evaluation of Agriclincs and Agribusiness Centers Scheme (AAG) in Maharashtra’, *A Report Submitted to National Institute of Agricultural Extension Management*, pp. 57-124.

Rivera, W. R. and R.V. Sulaiman (2009), ‘Extension: Object of Reform, Engine for Innovation’, *Outlook on Agriculture*, Vol. 38, No 3, pp 267-273.

Sharma, S. Vishnu and S.P. Singh (2006), ‘Indo Gulf in the Service of Farmers’, *Indian Journal of Fertilizers*, Vol. 2, No. 1, pp. 139-142.

Shekar, Chandra S., R. Bahal and K. Bhagya Lakshmi (2014), ‘Effectiveness of Agri Clinics in Promoting Paid Extension Services among Farmers’, *International Journal of Extension Education*, Vol. 10, pp. 27-33.

Sulaiman R.V. and A.J. Hall (2004), ‘Extension Plus: Opportunities and Challenges, *NCAP Policy Brief 17*, National Centre for Agricultural Economics and Policy Research, New Delhi

Sulaiman, V. R., A. Hall, and N. Suresh (2005), ‘Effectiveness of Private Sector Extension in India and Lessons for the New Extension Policy Agenda’, *Agricultural Research & Extension Network*, Paper No. 141.

Venkattakumar, R., P. Chandrashekara and Bharat S. Sontakki (2016), ‘Critical Success Factors (CSF) for Agri-clinics and Agri-business Centers (AC & ABC) Scheme in India’, *Indian Research Journal of Extension Education*, Vol. 16, No. 1, pp. 1-8.

www.eaindustry.nic.in

www.agriclinics.net/act-invol-states.pdf

www.agriclinics.net/guidelines/annexure-ii.pdf

www.agricoop.nic.in

www.agriclinics.net

APPENDIX

Appendix 1: % Distribution of Trend in District-wise Candidates Trained under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1.	Mumbai	10.84	27.71	4.82	7.23	3.61	7.23	2.41	2.41	4.82	6.02	3.61	3.61	1.20	4.82	9.64	100.00
2.	Thane	3.13	1.56	1.56	4.69	12.50	14.06	4.69	0.00	12.50	9.38	0.00	9.38	7.81	12.50	6.25	100.00
3.	Raigarh	1.79	1.79	3.57	1.79	3.57	12.50	1.79	0.00	0.00	30.36	5.36	0.00	5.36	5.36	26.79	100.00
4.	Ratnagiri	0.37	0.00	0.00	2.60	1.49	2.97	3.35	1.49	1.49	17.84	7.43	22.30	23.42	8.92	6.32	100.00
5.	Sindhudurg	1.22	0.41	0.82	4.08	0.41	2.04	0.82	0.82	0.41	2.86	0.82	10.61	15.51	32.24	26.94	100.00
	Konkan Div.	2.23	3.63	1.26	3.77	2.51	4.88	2.37	1.12	2.37	11.58	3.91	13.25	15.34	16.46	15.34	100.00
6.	Nashik	8.20	1.09	1.64	12.02	4.92	5.46	3.83	7.10	7.65	19.67	3.28	4.37	7.65	4.92	8.20	100.00
7.	Dhule	5.63	6.88	5.00	12.50	8.75	6.88	1.25	4.38	7.50	3.75	1.25	2.50	5.63	17.50	10.63	100.00
8.	Nandurbar	3.39	6.78	1.69	22.03	6.78	8.47	3.39	1.69	0.00	5.08	1.69	0.00	8.47	16.95	13.56	100.00
9.	Jalgaon	2.01	2.35	1.01	3.02	5.03	4.03	4.36	2.01	2.01	11.07	2.01	3.36	15.10	25.84	16.78	100.00
10.	Ahmednagar	2.07	2.85	3.11	8.90	5.01	3.54	4.49	4.15	9.16	13.40	6.05	10.98	11.50	7.78	7.00	100.00
	Nashik Div.	3.02	3.07	2.75	8.99	5.39	4.25	4.09	4.04	7.43	12.55	4.58	8.02	11.09	11.52	9.21	100.00
11.	Pune	1.82	3.16	4.58	9.32	6.71	6.16	5.13	5.77	11.85	10.11	5.92	4.34	10.51	3.95	10.66	100.00
12.	Satara	2.57	6.63	3.79	9.88	7.31	8.80	5.01	5.68	5.28	8.25	5.95	6.22	11.37	5.82	7.44	100.00
13.	Sangli	3.41	3.61	2.11	6.93	3.31	3.51	4.42	3.41	10.64	17.67	4.52	8.73	9.74	9.04	8.94	100.00
14.	Solapur	0.95	1.07	1.18	3.73	2.43	2.49	2.61	2.61	12.49	17.35	6.99	16.28	14.33	8.53	6.99	100.00
15.	Kolhapur	0.66	0.99	1.49	2.15	2.23	2.64	1.65	2.15	2.81	11.40	11.64	17.59	11.97	19.08	11.56	100.00
	Pune Div.	1.69	2.63	2.46	5.91	4.07	4.27	3.56	3.71	9.15	13.49	7.17	11.46	11.88	9.46	9.10	100.00
16.	Aurangabad	0.91	1.82	2.73	6.36	3.64	0.91	2.73	8.18	2.73	6.36	6.36	7.27	16.36	18.18	15.45	100.00
17.	Jalna	0.00	1.72	0.00	3.45	0.00	3.45	5.17	0.00	10.34	8.62	3.45	12.07	29.31	12.07	10.34	100.00
18.	Parbhani	3.05	3.82	3.82	9.16	3.82	4.58	7.63	5.34	3.05	6.87	0.00	12.98	13.74	8.40	13.74	100.00
19.	Hingoli	0.00	1.25	1.25	7.50	1.25	2.50	7.50	2.50	0.00	12.50	1.25	16.25	15.00	18.75	12.50	100.00
20.	Beed	0.40	0.40	2.42	3.63	4.84	2.42	7.26	2.82	3.23	11.69	5.24	18.15	12.50	12.10	12.90	100.00
21.	Nanded	0.00	3.85	4.95	12.09	4.40	3.30	2.20	1.65	4.95	11.54	4.40	13.19	11.54	11.54	10.44	100.00
22.	Osmanabad	1.00	0.25	1.50	1.00	1.00	2.24	2.00	1.25	5.49	24.44	2.00	29.43	10.47	7.73	10.22	100.00
23.	Latur	1.84	2.45	6.75	11.04	1.84	7.36	3.07	2.45	3.68	7.98	2.45	9.82	9.82	9.82	19.63	100.00
	Aurangabad Div.	0.95	1.60	2.99	5.83	2.69	3.20	4.15	2.69	4.22	13.98	3.13	18.06	12.75	11.00	12.75	100.00
24.	Buldhana	1.55	1.55	3.09	5.67	3.09	1.03	3.09	4.12	5.67	1.03	1.03	10.31	24.23	21.65	12.89	100.00
25.	Akola	3.36	4.20	2.52	3.78	0.84	6.30	2.94	3.36	5.04	5.46	0.84	5.04	23.95	16.39	15.97	100.00
26.	Washim	2.24	5.22	1.49	6.72	0.75	2.24	4.48	0.00	8.21	4.48	3.73	8.21	26.12	8.96	17.16	100.00
27.	Amravati	2.16	0.86	1.29	4.74	0.86	2.80	5.82	5.82	16.81	14.22	3.45	14.66	9.27	9.91	7.33	100.00
28.	Yavatmal	3.52	3.52	4.93	3.52	2.82	7.04	3.52	1.41	2.82	4.93	0.70	10.56	10.56	19.72	20.42	100.00
	Amravati Div.	2.47	2.47	2.30	4.78	1.45	3.67	4.35	3.84	9.90	8.02	2.22	10.75	16.81	14.25	12.71	100.00
29.	Wardha	4.17	0.00	1.39	4.17	0.00	4.17	1.39	0.00	16.67	5.56	5.56	5.56	13.89	23.61	13.89	100.00
30.	Nagpur	1.47	0.88	0.29	2.35	0.29	2.06	1.18	0.29	5.59	10.59	22.35	13.82	13.24	14.41	11.18	100.00
31.	Bhandara	1.14	0.00	2.27	6.82	3.41	5.68	5.68	3.41	7.95	10.23	13.64	5.68	14.77	15.91	3.41	100.00
32.	Gondia	6.25	2.08	2.08	4.17	0.00	4.17	2.08	0.00	0.00	0.00	16.67	8.33	22.92	20.83	10.42	100.00
33.	Chandrapur	3.03	0.00	0.00	0.00	0.00	7.58	1.52	0.00	0.00	4.55	3.03	28.79	31.82	10.61	9.09	100.00
34.	Gadchiroli	0.00	0.00	0.00	2.86	2.86	5.71	0.00	0.00	2.86	5.71	0.00	31.43	34.29	11.43	2.86	100.00
	Nagpur Div.	2.16	0.62	0.77	3.08	0.77	3.70	1.85	0.62	6.01	8.32	15.72	13.87	17.26	15.56	9.71	100.00
	Total	1.95	2.51	2.38	5.99	3.57	4.09	3.62	3.33	7.78	12.44	6.06	11.86	12.86	11.22	10.33	100.00

Source: Compiled from ACABC Database

Appendix 2: % Distribution of Trend in District-wise Candidates Trained under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1.	Mumbai	3.95	7.85	1.44	0.86	0.72	1.26	0.47	0.52	0.44	0.34	0.42	0.22	0.07	0.31	0.66	0.71
2.	Thane	0.88	0.34	0.36	0.43	1.92	1.89	0.71	0.00	0.88	0.41	0.00	0.43	0.33	0.61	0.33	0.55
3.	Raigarh	0.44	0.34	0.72	0.14	0.48	1.47	0.24	0.00	0.00	1.17	0.42	0.00	0.20	0.23	1.24	0.48
4.	Ratnagiri	0.44	0.00	0.00	1.00	0.96	1.68	2.13	1.03	0.44	3.31	2.83	4.34	4.20	1.83	1.41	2.31
5.	Sindhudurg	1.32	0.34	0.72	1.43	0.24	1.05	0.47	0.52	0.11	0.48	0.28	1.88	2.53	6.04	5.48	2.10
	Konkan Div.	7.02	8.87	3.24	3.86	4.32	7.34	4.02	2.06	1.87	5.72	3.96	6.86	7.33	9.01	9.13	6.14
6.	Nashik	6.58	0.68	1.08	3.15	2.16	2.10	1.65	3.35	1.54	2.48	0.85	0.58	0.93	0.69	1.24	1.57
7.	Dhule	3.95	3.75	2.88	2.86	3.36	2.31	0.47	1.80	1.32	0.41	0.28	0.29	0.60	2.14	1.41	1.37
8.	Nandurbar	0.88	1.37	0.36	1.86	0.96	1.05	0.47	0.26	0.00	0.21	0.14	0.00	0.33	0.76	0.66	0.51
9.	Jalgaon	2.63	2.39	1.08	1.29	3.60	2.52	3.07	1.55	0.66	2.27	0.85	0.72	3.00	5.88	4.15	2.55
10.	Ahmednagar	10.53	11.26	12.95	14.74	13.91	8.60	12.29	12.37	11.67	10.67	9.90	9.18	8.86	6.88	6.72	9.92
	Nashik Div.	24.56	19.45	18.35	23.89	23.98	16.56	17.97	19.33	15.20	16.05	12.02	10.77	13.72	16.35	14.19	15.91
11.	Pune	10.09	13.65	20.86	16.88	20.38	16.35	15.37	18.81	16.52	8.82	10.61	3.97	8.86	3.82	11.20	10.85
12.	Satara	8.33	16.72	10.07	10.44	12.95	13.63	8.75	10.82	4.30	4.20	6.22	3.32	5.60	3.28	4.56	6.33
13.	Sangli	14.91	12.29	7.55	9.87	7.91	7.34	10.40	8.76	11.67	12.12	6.36	6.29	6.46	6.88	7.39	8.54
14.	Solapur	7.02	6.14	7.19	9.01	9.83	8.81	10.40	11.34	23.24	20.18	16.69	19.87	16.12	11.00	9.79	14.47
15.	Kolhapur	3.51	4.10	6.47	3.72	6.47	6.71	4.73	6.70	3.74	9.50	19.94	15.39	9.66	17.65	11.62	10.38
	Pune Div.	43.86	52.90	52.16	49.93	57.55	52.83	49.65	56.44	59.47	54.82	59.83	48.84	46.70	42.63	44.56	50.57
16.	Aurangabad	0.44	0.68	1.08	1.00	0.96	0.21	0.71	2.32	0.33	0.48	0.99	0.58	1.20	1.53	1.41	0.94
17.	Jalna	0.00	0.34	0.00	0.29	0.00	0.42	0.71	0.00	0.66	0.34	0.28	0.51	1.13	0.53	0.50	0.50
18.	Parbhani	1.75	1.71	1.80	1.72	1.20	1.26	2.36	1.80	0.44	0.62	0.00	1.23	1.20	0.84	1.49	1.12
19.	Hingoli	0.00	0.34	0.36	0.86	0.24	0.42	1.42	0.52	0.00	0.69	0.14	0.94	0.80	1.15	0.83	0.69
20.	Beed	0.44	0.34	2.16	1.29	2.88	1.26	4.26	1.80	0.88	2.00	1.84	3.25	2.07	2.29	2.66	2.13
21.	Nanded	0.00	2.39	3.24	3.15	1.92	1.26	0.95	0.77	0.99	1.45	1.13	1.73	1.40	1.60	1.58	1.56
22.	Osmanabad	1.75	0.34	2.16	0.57	0.96	1.89	1.89	1.29	2.42	6.75	1.13	8.53	2.80	2.37	3.40	3.44
23.	Latur	1.32	1.37	3.96	2.58	0.72	2.52	1.18	1.03	0.66	0.90	0.57	1.16	1.07	1.22	2.66	1.40
	Aurangabad Div.	5.70	7.51	14.75	11.44	8.87	9.22	13.48	9.54	6.39	13.22	6.08	17.92	11.66	11.54	14.52	11.77
24.	Buldhana	1.32	1.02	2.16	1.57	1.44	0.42	1.42	2.06	1.21	0.14	0.28	1.45	3.13	3.21	2.07	1.66
25.	Akola	3.51	3.41	2.16	1.29	0.48	3.14	1.65	2.06	1.32	0.90	0.28	0.87	3.80	2.98	3.15	2.04
26.	Washim	1.32	2.39	0.72	1.29	0.24	0.63	1.42	0.00	1.21	0.41	0.71	0.79	2.33	0.92	1.91	1.15
27.	Amravati	4.39	1.37	2.16	3.15	0.96	2.73	6.38	6.96	8.59	4.55	2.26	4.91	2.86	3.51	2.82	3.98
28.	Yavatmal	2.19	1.71	2.52	0.72	0.96	2.10	1.18	0.52	0.44	0.48	0.14	1.08	1.00	2.14	2.41	1.22
	Amravati Div.	12.72	9.90	9.71	8.01	4.08	9.01	12.06	11.60	12.78	6.47	3.68	9.10	13.12	12.76	12.37	10.04
29.	Wardha	1.32	0.00	0.36	0.43	0.00	0.63	0.24	0.00	1.32	0.28	0.57	0.29	0.67	1.30	0.83	0.62
30.	Nagpur	2.19	1.02	0.36	1.14	0.24	1.47	0.95	0.26	2.09	2.48	10.75	3.40	3.00	3.74	3.15	2.91
31.	Bhandara	0.44	0.00	0.72	0.86	0.72	1.05	1.18	0.77	0.77	0.62	1.70	0.36	0.87	1.07	0.25	0.75
32.	Gondia	1.32	0.34	0.36	0.29	0.00	0.42	0.24	0.00	0.00	0.00	1.13	0.29	0.73	0.76	0.41	0.41
33.	Chandrapur	0.88	0.00	0.00	0.00	0.00	1.05	0.24	0.00	0.00	0.21	0.28	1.37	1.40	0.53	0.50	0.57
34.	Gadchiroli	0.00	0.00	0.00	0.14	0.24	0.42	0.00	0.00	0.11	0.14	0.00	0.79	0.80	0.31	0.08	0.30
	Nagpur Div.	6.14	1.37	1.80	2.86	1.20	5.03	2.84	1.03	4.30	3.72	14.43	6.50	7.46	7.72	5.23	5.56
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Compiled from ACABC Database

Appendix 3: % Distribution of Trend in District-wise Ventures Established under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	total
1.	Mumbai	2.38	23.81	16.67	26.19	-	2.38	2.38	-	4.76	11.90	2.38	2.38	-	2.38	2.38	100.00
2.	Thane	-	7.69	-	11.54	3.85	11.54	15.38	-	-	19.23	7.69	-	-	11.54	11.54	100.00
3.	Raigarh	-	4.17	-	-	-	4.17	-	-	-	37.50	-	8.33	-	12.50	33.33	100.00
4.	Ratnagiri	-	-	-	1.50	0.75	3.76	1.50	0.75	0.75	6.77	9.02	10.53	30.08	24.06	10.53	100.00
5.	Sindhudurg	-	1.83	-	0.92	0.92	1.83	-	3.67	0.92	-	4.59	5.50	11.93	41.28	26.61	100.00
	Konkan Div.	0.30	4.49	2.10	5.09	0.90	3.59	2.10	1.50	1.20	8.38	5.99	6.89	15.87	25.15	16.47	100.00
6.	Nashik	1.25	6.25	1.25	11.25	3.75	11.25	3.75	2.50	6.25	13.75	11.25	5.00	11.25	6.25	5.00	100.00
7.	Dhule	2.67	6.67	8.00	16.00	2.67	4.00	5.33	4.00	5.33	4.00	2.67	6.67	4.00	12.00	16.00	100.00
8.	Nandurbar	-	-	5.26	15.79	5.26	-	-	-	-	10.53	-	5.26	5.26	10.53	42.11	100.00
9.	Jalgaon	-	3.57	0.71	0.71	2.14	5.71	5.71	1.43	2.14	1.43	11.43	4.29	4.29	38.57	17.86	100.00
10.	Ahmednagar	0.34	2.75	2.75	10.48	2.06	5.15	2.41	2.75	5.84	16.67	6.87	10.82	14.60	10.31	6.19	100.00
	Nashik Div.	0.56	3.46	2.79	9.60	2.34	5.58	3.24	2.57	5.13	12.83	7.48	8.82	11.61	14.51	9.49	100.00
11.	Pune	0.38	4.96	2.67	15.46	5.15	6.11	5.53	4.77	6.30	13.17	7.82	5.34	9.92	7.06	5.34	100.00
12.	Satara	0.66	6.29	3.97	9.93	4.30	10.26	5.96	4.30	4.97	8.28	7.95	7.62	10.93	9.93	4.64	100.00
13.	Sangli	-	4.39	2.30	9.41	0.84	2.30	3.14	1.26	14.02	13.81	11.72	6.49	12.76	8.58	9.00	100.00
14.	Solapur	0.12	0.73	1.09	3.63	1.45	1.94	2.54	1.82	8.60	12.35	16.46	12.59	13.56	14.89	8.23	100.00
15.	Kolhapur	-	1.01	0.34	2.52	0.50	2.35	1.01	0.67	4.20	5.55	16.30	14.79	20.67	21.18	8.91	100.00
	Pune Div.	0.18	2.86	1.76	7.38	2.17	3.82	3.27	2.31	7.74	10.83	12.99	10.06	13.98	13.10	7.56	100.00
16.	Aurangabad	-	2.00	2.00	10.00	4.00	4.00	4.00	8.00	2.00	6.00	4.00	4.00	14.00	24.00	12.00	100.00
17.	Jalna	-	-	-	-	-	-	9.09	0.00	9.09	4.55	4.55	4.55	31.82	27.27	9.09	100.00
18.	Parbhani	-	3.57	3.57	7.14	-	3.57	8.93	10.71	5.36	5.36	1.79	7.14	17.86	8.93	16.07	100.00
19.	Hingoli	-	0.00	0.00	0.00	-	3.57	7.14	7.14	-	21.43	3.57	10.71	21.43	14.29	10.71	100.00
20.	Beed	-	0.94	0.94	6.60	1.89	1.89	2.83	1.89	6.60	6.60	6.60	12.26	16.04	22.64	12.26	100.00
21.	Nanded	-	3.90	0.00	14.29	2.60	5.19	2.60	1.30	2.60	9.09	2.60	11.69	11.69	25.97	6.49	100.00
22.	Osmanabad	-	0.53	0.53	1.05	-	1.05	1.58	0.53	4.74	15.26	11.05	21.58	26.32	10.00	5.79	100.00
23.	Latur	-	6.12	4.08	8.16	-	6.12	-	2.04	2.04	8.16	-	4.08	24.49	12.24	22.45	100.00
	Aurangabad Div.	-	1.90	1.21	5.71	1.04	2.77	3.29	2.94	4.33	10.38	6.06	12.98	20.42	16.61	10.38	100.00
24.	Buldhana	-	-	-	2.38	2.38	-	4.76	2.38	4.76	2.38	1.19	1.19	13.10	51.19	14.29	100.00
25.	Akola	1.22	7.32	2.44	2.44	3.66	2.44	7.32	4.88	2.44	1.22	7.32	1.22	2.44	41.46	12.20	100.00
26.	Washim	-	5.56	3.70	7.41	3.70	1.85	-	3.70	5.56	5.56	5.56	11.11	5.56	35.19	5.56	100.00
27.	Amravati	-	2.27	0.57	2.27	-	2.27	3.98	7.39	10.23	13.07	7.39	15.91	16.48	14.20	3.98	100.00
28.	Yavatmal	-	3.51	-	3.51	3.51	7.02	7.02	3.51	5.26	5.26	3.51	5.26	5.26	35.09	12.28	100.00
	Amravati Div.	0.22	3.31	1.10	3.09	1.99	2.43	4.64	5.08	6.62	7.06	5.52	8.61	10.60	31.13	8.61	100.00
29.	Wardha	-	10.34	-	-	-	-	-	-	-	20.69	3.45	3.45	17.24	27.59	17.24	100.00
30.	Nagpur	-	1.70	1.14	1.14	0.57	-	1.70	1.70	0.57	9.66	15.34	19.89	9.66	19.32	17.61	100.00
31.	Bhandara	-	2.38	2.38	2.38	0.00	4.76	9.52	-	4.76	9.52	26.19	7.14	0.00	16.67	14.29	100.00
32.	Gondia	-	3.70	-	11.11	-	-	3.70	-	-	-	14.81	11.11	3.70	37.04	14.81	100.00
33.	Chandrapur	-	3.13	-	-	-	9.38	0.00	-	-	-	6.25	9.38	37.50	21.88	12.50	100.00
34.	Gadchiroli	-	-	-	-	-	-	-	-	-	-	-	11.76	23.53	58.82	5.88	100.00
	Nagpur Div.	-	2.79	0.93	1.86	0.31	1.55	2.48	0.93	0.93	8.36	13.93	14.55	12.07	23.53	15.79	100.00
	Total Maharashtra	0.23	2.99	1.79	6.72	1.86	3.73	3.26	2.52	6.01	10.49	10.28	10.11	14.00	16.65	9.34	100.00

Source: Compiled from ACABC Database

Appendix 4: % Distribution of Trend in District-wise Ventures Established under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the District	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	total
1.	Mumbai	8.33	6.29	7.37	3.08	-	0.51	0.58	-	0.63	0.90	0.18	0.19	-	0.11	0.20	0.79
2.	Thane	-	1.26	-	0.84	1.01	1.52	2.31	-	-	0.90	0.37	-	-	0.34	0.60	0.49
3.	Raigarh	-	0.63	-	-	-	0.51	-	-	-	1.62	-	0.37	-	0.34	1.61	0.45
4.	Ratnagiri	-	-	-	0.56	1.01	2.53	1.16	0.75	0.31	1.62	2.20	2.61	5.38	3.62	2.82	2.51
5.	Sindhudurg	-	1.26	-	0.28	1.01	1.01	-	2.99	0.31	-	0.92	1.12	1.75	5.09	5.85	2.05
	Konkan Div.	8.33	9.43	7.37	4.76	3.03	6.06	4.05	3.73	1.25	5.03	3.66	4.28	7.13	9.50	11.09	6.29
6.	Nashik	8.33	3.14	1.05	2.52	3.03	4.55	1.73	1.49	1.57	1.97	1.65	0.74	1.21	0.57	0.81	1.51
7.	Dhule	16.67	3.14	6.32	3.36	2.02	1.52	2.31	2.24	1.25	0.54	0.37	0.93	0.40	1.02	2.42	1.41
8.	Nandurbar	-	-	1.05	0.84	1.01	-	-	-	-	0.36	-	0.19	0.13	0.23	1.61	0.36
9.	Jalgaon	-	3.14	1.05	0.28	3.03	4.04	4.62	1.49	0.94	0.36	2.93	1.12	0.81	6.11	5.04	2.64
10.	Ahmednagar	16.67	10.06	16.84	17.09	12.12	15.15	8.09	11.94	10.66	17.41	7.33	11.73	11.44	6.79	7.26	10.96
	Nashik Div.	41.67	19.50	26.32	24.09	21.21	25.25	16.76	17.16	14.42	20.65	12.27	14.71	14.00	14.71	17.14	16.88
11.	Pune	16.67	16.35	14.74	22.69	27.27	16.16	16.76	18.66	10.34	12.39	7.51	5.21	7.00	4.19	5.65	9.87
12.	Satara	16.67	11.95	12.63	8.40	13.13	15.66	10.40	9.70	4.70	4.49	4.40	4.28	4.44	3.39	2.82	5.69
13.	Sangli	-	13.21	11.58	12.61	4.04	5.56	8.67	4.48	21.00	11.85	10.26	5.77	8.21	4.64	8.67	9.00
14.	Solapur	8.33	3.77	9.47	8.40	12.12	8.08	12.14	11.19	22.26	18.31	24.91	19.37	15.07	13.91	13.71	15.56
15.	Kolhapur	-	3.77	2.11	4.20	3.03	7.07	3.47	2.99	7.84	5.92	17.77	16.39	16.55	14.25	10.69	11.21
	Pune Div.	41.67	49.06	50.53	56.30	59.60	52.53	51.45	47.01	66.14	52.96	64.84	51.02	51.28	40.38	41.53	51.33
16.	Aurangabad	-	0.63	1.05	1.40	2.02	1.01	1.16	2.99	0.31	0.54	0.37	0.37	0.94	1.36	1.21	0.94
17.	Jalna	-	-	-	-	-	-	1.16	0.00	0.63	0.18	0.18	0.19	0.94	0.68	0.40	0.41
18.	Parbhani	-	1.26	2.11	1.12	-	1.01	2.89	4.48	0.94	0.54	0.18	0.74	1.35	0.57	1.81	1.05
19.	Hingoli	-	0.00	0.00	0.00	-	0.51	1.16	1.49	-	1.08	0.18	0.56	0.81	0.45	0.60	0.53
20.	Beed	-	0.63	1.05	1.96	2.02	1.01	1.73	1.49	2.19	1.26	1.28	2.42	2.29	2.71	2.62	2.00
21.	Nanded	-	1.89	0.00	3.08	2.02	2.02	1.16	0.75	0.63	1.26	0.37	1.68	1.21	2.26	1.01	1.45
22.	Osmanabad	-	0.63	1.05	0.56	-	1.01	1.73	0.75	2.82	5.21	3.85	7.64	6.73	2.15	2.22	3.58
23.	Latur	-	1.89	2.11	1.12	-	1.52	-	0.75	0.31	0.72	-	0.37	1.62	0.68	2.22	0.92
	Aurangabad Div.	-	6.92	7.37	9.24	6.06	8.08	10.98	12.69	7.84	10.77	6.41	13.97	15.88	10.86	12.10	10.89
24.	Buldhana	-	-	-	0.56	2.02	-	2.31	1.49	1.25	0.36	0.18	0.19	1.48	4.86	2.42	1.58
25.	Akola	8.33	3.77	2.11	0.56	3.03	1.01	3.47	2.99	0.63	0.18	1.10	0.19	0.27	3.85	2.02	1.54
26.	Washim	-	1.89	2.11	1.12	2.02	0.51	-	1.49	0.94	0.54	0.55	1.12	0.40	2.15	0.60	1.02
27.	Amravati	-	2.52	1.05	1.12	-	2.02	4.05	9.70	5.64	4.13	2.38	5.21	3.90	2.83	1.41	3.32
28.	Yavatmal	-	1.26	-	0.56	2.02	2.02	2.31	1.49	0.94	0.54	0.37	0.56	0.40	2.26	1.41	1.07
	Amravati Div.	8.33	9.43	5.26	3.92	9.09	5.56	12.14	17.16	9.40	5.75	4.58	7.26	6.46	15.95	7.86	8.53
29.	Wardha	-	1.89	-	-	-	-	-	-	-	1.08	0.18	0.19	0.67	0.90	1.01	0.55
30.	Nagpur	-	1.89	2.11	0.56	1.01	-	1.73	2.24	0.31	3.05	4.95	6.52	2.29	3.85	6.25	3.32
31.	Bhandara	-	0.63	1.05	0.28	0.00	1.01	2.31	-	0.63	0.72	2.01	0.56	0.00	0.79	1.21	0.79
32.	Gondia	-	0.63	-	0.84	-	-	0.58	-	-	-	0.73	0.56	0.13	1.13	0.81	0.51
33.	Chandrapur	-	0.63	-	-	-	1.52	0.00	-	-	-	0.37	0.56	1.62	0.79	0.81	0.60
34.	Gadchiroli	-	-	-	-	-	-	-	-	-	-	-	0.37	0.54	1.13	0.20	0.32
	Nagpur Div.	-	5.66	3.16	1.68	1.01	2.53	4.62	2.24	0.94	4.85	8.24	8.75	5.25	8.60	10.28	6.08
	Total Maharashtra	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
																	0

Source: Compiled from ACABC Database

Appendix 5: % Distribution of Trend in Institute-wise Candidates Trained under ACABC Scheme in Maharashtra: 2002-2016

Sr. No	Name of the Venture	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Krishna Valley Advanced Agriculture Foundation, Sangli	2.98	4.12	2.49	8.44	6.97	7.13	5.63	5.71	8.40	14.06	4.28	9.87	8.56	7.09	4.28	100.00
2	Mitcon Consultancy Services Ltd., Pune	1.59	3.74	3.57	7.77	9.93	11.91	9.93	9.93	15.88	21.84	3.91	-	-	-	0.00	100.00
3	Shriram Pratistan Mandal, Wadala, Solapur	-	-	-	-	-	-	-	-	19.66	19.76	6.40	22.48	15.90	9.41	6.40	100.00
4	Krishna Valley Advance Agriculture Foundation, Uttur	-	-	-	-	-	-	-	-	-	9.52	14.29	23.81	14.29	23.81	14.29	100.00
5	Krishi Vigyan Kendra, Durgapur, Dist Amravati	-	-	-	-	-	-	5.34	5.49	19.36	15.70	3.96	18.45	10.67	11.59	9.45	100.00
6	Baramati Agriculture Development Trust Krishi Vigyan Kendra, Baramati	-	-	-	-	6.75	9.51	7.21	5.98	8.59	5.37	15.80	9.51	20.86	0.00	10.43	100.00
7	Krishi Vigyan Kendra, Babhaleshwar	-	-	3.91	9.45	4.56	4.72	4.72	0.00	5.21	9.93	10.26	16.94	16.45	7.98	5.86	100.00
8	Shriram Pratisthan Mandal, Osmanabad	-	-	-	-	-	-	-	-	-	17.07	5.20	33.01	16.42	11.22	17.07	100.00
9	Krishna Valley Advanced Agriculture Foundation, Nagpur	-	-	-	-	-	-	-	-	-	6.29	18.71	18.71	24.82	18.88	12.59	100.00
10	Mahatma Phule Krishi Vidyapeeth, Pune	17.35	14.32	15.18	53.15	-	-	-	-	-	-	-	-	-	-	0.00	100.00
11	Shriram Pratisthan Mandal, Ratnagiri	-	-	-	-	-	-	-	-	-	17.99	8.74	25.45	23.65	8.23	15.94	100.00
12	Krishna Valley Advanced Agriculture Foundation, Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	9.23	27.70	27.70	35.36	100.00
13	Shashwat Sheti Vikas Pratisthan (SSVP)	-	-	-	-	-	-	-	-	-	-	-	-	30.97	38.05	30.97	100.00
14	Shriram Pratisthan Mandal, Akola	-	-	-	-	-	-	-	-	-	-	-	-	38.26	35.23	26.52	100.00
15	Vasant Prakash Vasakh Pratistan, Sangli	21.39	16.58	34.22	27.81	-	-	-	-	-	-	-	-	-	-	0.00	100.00
16	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	-	-	-	-	-	-	-	-	-	-	-	-	14.29	42.86	42.86	100.00
17	Krishna Valley Advanced Agriculture Foundation, Jalgaon	-	-	-	-	-	-	-	-	-	-	-	-	16.27	50.24	33.49	100.00
18	Manjara Charitable Trust's KRISHI VIGYAN KENDRA, Latur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.00	100.00
19	Krishi Vigyan Kendra, Narayangaon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.00	100.00
	Total	1.90	2.27	2.43	6.01	3.60	4.10	3.65	3.36	7.83	12.21	6.10	11.91	12.92	11.33	10.38	100.00

Source: Compiled from ACABC Database

Appendix 6: % Distribution of Trend in Institute-wise Candidates Trained under ACABC Scheme in Maharashtra: 2002-2016

Sr. No	Name of the Venture	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Krishna Valley Advanced Agriculture Foundation, Sangli	33.03	38.26	21.63	29.61	40.91	36.76	32.55	35.90	22.64	24.31	14.81	17.49	13.98	13.21	8.71	21.11
2	Mitcon Consultancy Services Ltd., Pune	12.67	25.00	22.34	19.60	41.87	44.12	41.27	44.87	30.77	27.13	9.73	-	-	-	0.00	15.17
3	Shriram Pratistan Mandal, Wadala, Solapur	-	-	-	-	-	-	-	-	22.97	14.80	9.59	17.27	11.25	7.59	5.64	9.15
4	Krishna Valley Advance Agriculture Foundation, Uttur	-	-	-	-	-	-	-	-	-	4.93	14.81	12.64	6.99	13.29	8.71	6.32
5	Krishi Vigyan Kendra, Durgapur, Dist Amravati	-	-	-	-	-	-	8.25	9.23	13.96	7.26	3.67	8.74	4.66	5.77	5.14	5.64
6	Baramati Agriculture Development Trust Krishi Vigyan Kendra, Baramati	-	-	-	-	10.53	13.03	11.08	10.00	6.15	2.47	14.53	4.48	9.05	0.00	5.64	5.61
7	Krishi Vigyan Kendra, Babhaleshwar	-	-	8.51	8.30	6.70	6.09	6.84	0.00	3.52	4.30	8.89	7.51	6.72	3.72	2.99	5.28
8	Shriram Pratistan Mandal, Osmanabad	-	-	-	-	-	-	-	-	-	7.40	4.51	14.67	6.72	5.24	8.71	5.29
9	Krishna Valley Advanced Agriculture Foundation, Nagpur	-	-	-	-	-	-	-	-	-	2.47	14.67	7.51	9.19	7.97	5.80	4.78
10	Mahatma Phule Krishi Vidyapeeth, Pune	36.20	25.00	24.82	35.05	-	-	-	-	-	-	-	-	-	-	0.00	3.97
11	Shriram Pratistan Mandal, Ratnagiri	-	-	-	-	-	-	-	-	-	4.93	4.80	7.15	6.13	2.43	5.14	3.35
12	Krishna Valley Advanced Agriculture Foundation, Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	2.53	6.99	7.97	11.11	3.26
13	Shashwat Sheti Vikas Pratisthan (SSVP)	-	-	-	-	-	-	-	-	-	-	-	-	6.99	9.79	8.71	2.92
14	Shriram Pratistan Mandal, Akola	-	-	-	-	-	-	-	-	-	-	-	-	6.72	7.06	5.80	2.27
15	Vasant Prakash Vasakh Pratistan, Sangli	18.10	11.74	22.70	7.44	-	-	-	-	-	-	-	-	-	-	0.00	1.61
16	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	-	-	-	-	-	-	-	-	-	-	-	-	2.33	7.97	8.71	2.11
17	Krishna Valley Advanced Agriculture Foundation, Jalgaon	-	-	-	-	-	-	-	-	-	-	-	-	2.26	7.97	5.80	1.80
18	Manjara Charitable Trust's KRISHI VIGYAN KENDRA, Latur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.08	0.11
19	Krishi Vigyan Kendra, Narayangaon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.32	0.24
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Compiled from ACABC Database

Appendix 7: % Distribution of Trend in Institute-wise Ventures Established under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the Venture	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Krishna Valley Advanced Agriculture Foundation, Sangli	0.09	4.35	3.83	7.48	1.91	5.22	6.44	2.96	10.44	12.27	12.18	7.40	13.05	6.09	6.27	100.00
2	Mitcon Consultancy Services Ltd. Pune	-	2.49	0.65	12.04	7.20	10.21	9.69	8.12	14.01	20.55	13.48	1.44	0.13	-	-	100.00
3	Shriram Pratishtan Mandal, Wadala, Solapur	-	-	-	-	-	-	-	-	10.15	16.42	16.97	14.21	15.31	17.34	9.59	100.00
4	Krishna Valley Advanced Agriculture Foundation, Uttur	-	-	-	-	-	-	-	-	-	-	17.37	20.73	24.93	29.69	7.28	100.00
5	Krishi Vigyan Kendra, Babhaleshwar	-	-	3.68	11.04	1.53	9.20	-	-	-	16.56	6.13	16.56	19.94	7.06	8.28	100.00
6	Shriram Pratishtan Mandal, Osmanabad	-	-	-	-	-	-	-	-	-	6.25	7.24	26.32	28.95	17.11	14.14	100.00
7	Krishna Valley Advanced Agriculture Foundation, Nagpur	-	-	-	-	-	-	-	-	-	-	13.41	16.67	15.22	34.78	19.93	100.00
8	Krishi Vigyan Kendra, Durgapur, Amravati	-	-	-	-	-	-	1.98	7.91	10.67	13.44	10.67	16.21	15.02	18.97	5.14	100.00
9	Baramati Agriculture Development Trusts Krishi Vigyan Kendra, Baramati	-	-	-	-	-	11.46	7.91	7.91	4.74	11.46	9.88	17.00	11.86	11.86	5.93	100.00
10	Mahatma Fule Krishi Vidhyapeeth Pune	4.39	23.41	15.61	47.32	8.29	-	-	-	-	0.49	-	-	-	-	0.49	100.00
11	Shriram Pratishtan Mandal, Ratnagiri	-	-	-	-	-	-	-	-	-	9.14	9.14	13.44	32.80	18.82	16.67	100.00
12	Shashwat Sheti Vikas Pratishtan (SSVP)	-	-	-	-	-	-	-	-	-	-	-	-	31.37	43.14	25.49	100.00
13	Baramati Agriculture Development Trusts Krishi Vigyan Kendra, Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Shriram Pratishtan Mandal, Akola	-	-	-	-	-	-	-	-	-	-	-	-	3.60	79.28	17.12	100.00
15	Krishna Valley Advanced Agriculture Foundation, Jalgaon	-	-	-	-	-	-	-	-	-	-	-	-	-	59.38	40.63	100.00
16	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	-	-	-	-	-	-	-	-	-	-	-	-	-	60.64	39.36	100.00
17	Vasant Prakash Vasakh Pratishtan, Sangli	-	44.78	0.00	52.24	2.99	0.00	-	-	-	-	-	-	-	-	-	100.00
18	Krishna Valley Advance Agriculture Foundation Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	-	32.14	45.71	22.14	100.00
	Total	0.19	2.79	1.76	6.56	1.91	3.73	3.28	2.58	6.08	10.25	10.33	10.16	14.10	16.79	9.48	100.00

Source: Compiled from ACABC Database

Appendix 8: % Distribution of Trend in Institute-wise Ventures Established under ACABC Scheme in Maharashtra: 2002-2016

Sr. No.	Name of the Venture	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
1	Krishna Valley Advanced Agriculture Foundation, Sangli	10.00	34.01	47.31	24.86	21.78	30.46	42.77	25.00	37.38	26.06	25.69	15.86	20.16	7.90	14.40	217.8
2	Mitcon Consultancy Services Ltd. Pune	-	12.93	5.38	26.59	54.46	39.59	42.77	45.59	33.33	29.02	18.90	2.05	0.13	-	-	144.8
3	Shriram Pratishthan Mandal, Wadala, Solapur	-	-	-	-	-	-	-	-	17.13	16.45	16.88	14.37	11.16	10.61	10.40	102.7
4	Krishna Valley Advanced Agriculture Foundation, Uttur	-	-	-	-	-	-	-	-	-	-	11.38	13.81	11.96	11.96	5.20	6.77
5	Krishi Vigyan Kendra, Babbhaleshwar	-	-	12.90	10.40	4.95	15.23	-	-	-	9.98	3.67	10.07	8.74	2.60	5.40	6.18
6	Shriram Pratishthan Mandal, Osmanabad	-	-	-	-	-	-	-	-	-	3.51	4.04	14.93	11.83	5.87	8.60	5.76
7	Krishna Valley Advanced Agriculture Foundation, Nagpur	-	-	-	-	-	-	-	-	-	-	6.79	8.58	5.65	10.84	11.00	5.23
8	Krishi Vigyan Kendra, Durgapur, Amravati	-	-	-	-	-	-	2.89	14.71	8.41	6.28	4.95	7.65	5.11	5.42	2.60	4.80
9	Baramati Agriculture Development Trusts Krishi Vigyan Kendra, Baramati	-	-	-	-	-	14.72	11.56	14.71	3.74	5.36	4.59	8.02	4.03	3.39	3.00	4.80
10	Mahatma Fule Krishi Vidhyapeeth Pune	90.00	32.65	34.41	28.03	16.83	-	-	-	-	0.18	-	-	-	-	0.20	3.89
11	Shriram Pratishthan Mandal, Ratnagiri	-	-	-	-	-	-	-	-	-	3.14	3.12	4.66	8.20	3.95	6.20	3.53
12	Shashwat Sheti Vikas Pratishthan (SSVP)	-	-	-	-	-	-	-	-	-	-	-	-	6.45	7.45	7.80	2.90
13	Baramati Agriculture Development Trusts Krishi Vigyan Kendra, Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Shriram Pratishthan Mandal, Akola	-	-	-	-	-	-	-	-	-	-	-	-	0.54	9.93	3.80	2.10
15	Krishna Valley Advanced Agriculture Foundation, Jalgaon	-	-	-	-	-	-	-	-	-	-	-	-	-	6.43	7.80	1.82
16	Krishna Valley Advanced Agriculture Foundation, Sindhudurg	-	-	-	-	-	-	-	-	-	-	-	-	-	6.43	7.40	1.78
17	Vasant Prakash Vasakh Pratistan, Sangli	-	20.41	0.00	10.12	1.98	0.00	-	-	-	-	-	-	-	-	-	1.27
18	Krishna Valley Advance Agriculture Foundation Pune Regional Centre	-	-	-	-	-	-	-	-	-	-	-	-	6.05	7.22	6.20	2.65
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Compiled from ACABC Database

Appendix 9: Category- Wise Details of Inputs and Outputs of Kharif Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	(Inputs in Rs, Outputs in Rs)																	
		Cereal			Pulses			Oilseeds			Other			Total					
		Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)			
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total			
Proper Agri. Services (I)																			
Marginal Farmers	10	10000	9200	19200	37500		6500	6000	12500	32500	17700	10500	16000	26500	44000	30500	35000	65500	131700
Small Farmers	24	51500	40000	91500	180250	9000	8000	17000	37000	92000	92000	49000	67000	116000	184800	127500	134000	261500	508050
Medium Farmers	23	79900	69500	149400	286800	33500	31500	65000	92500	230250	218000	93000	125000	218000	367500	250400	274500	524900	1087050
Large Farmers	13	121000	105000	226000	398900	23500	21500	45000	187000	420200	91000	37000	54000	91000	164500	264500	284500	549000	1118100
Total Proper Agri Services	70	262400	223700	486100	903450	72500	67000	139500	323800	760150	760800	189500	262000	451500	760800	672900	728000	1400900	2844900
Allied Agri. Services (II)																			
Marginal Farmers	10	8100	8600	16700	35900	-	-	-	6200	18200	38600	11000	11200	22200	38600	23100	22000	45100	92700
Small Farmers	13	62000	53000	115000	231700	-	-	-	40300	100600	84600	29000	24000	53000	84600	110500	97800	208300	416900
Medium Farmers	6	32000	30000	62000	125000	-	-	-	17500	43400	60000	18000	19000	37000	60000	58500	58000	116500	228400
Large Farmers	1	11200	12000	23200	39900	-	-	-	30000	72600	0	0	0	0	0	25200	28000	53200	112500
Total Allied Agri Services	30	113300	103600	216900	432500	-	-	-	94000	234800	183200	58000	54200	112200	183200	217300	205800	423100	850500
Both Agri. + Allied Services (I + II)																			
Marginal Farmers	20	18100	17800	35900	73400	6500	6000	12500	13500	35900	82600	21500	27200	48700	82600	53600	57000	110600	224400
Small Farmers	37	113500	93000	206500	411950	9000	8000	17000	77300	192600	269400	78000	91000	169000	269400	238000	231800	469800	924950
Medium Farmers	29	111900	99500	211400	411800	33500	31500	65000	110000	273650	427500	111000	144000	255000	427500	308900	332500	641400	1315450
Large Farmers	14	132200	117000	249200	438800	23500	21500	45000	217000	492800	164500	37000	54000	91000	164500	289700	312500	602200	1230600
Total Proper Agri + Allied Services	100	375700	327300	703000	1335950	72500	67000	139500	417800	994950	944000	247500	316200	563700	944000	890200	933800	1824000	3695400

Appendix 10: Category-wise Details of Total Income from Kharif Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Beneficiary Farmers	No of Samples	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	10	18300	20000	10400	17500	66200
Small Farmers	24	88750	34000	55000	68800	246550
Medium Farmers	23	137400	137500	137750	149500	562150
Large Farmers	13	172900	89500	233200	73500	569100
Total Proper Agri Services	70	417350	281000	436350	309300	1444000
Allied Agri. Services (II)						
Marginal Farmers	10	19200	-	12000	16400	47600
Small Farmers	13	116700	-	60300	31600	208600
Medium Farmers	6	63000	-	25900	23000	111900
Large Farmers	1	16700	-	42600	-	59300
Total Allied Agri Services	30	215600	-	140800	71000	427400
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	20	37500	20000	22400	33900	113800
Small Farmers	37	205450	34000	115300	100400	455150
Medium Farmers	29	200400	137500	163650	172500	674050
Large Farmers	14	189600	89500	275800	73500	628400
Total Proper Agri + Allied Services	100	632950	281000	577150	380300	1871400

Note: Other crops include cotton, fodder (jowar) and vegetable crops

Appendix 11: Category-Wise Details of Inputs and Outputs of Rabi Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	(Inputs in Rs, Outputs in Rs)																													
		Cereal						Pulses						Oilseeds						Other						Total					
		Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)		
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total			
Proper Agri. Services (I)																															
Marginal Farmers	10	10000	6500	16500	33600	3700	3000	6700	27000	-	-	-	5500	6000	11500	19200	15500	34700	16000	15500	31500	19200	15500	34700	16000	15500	31500	76600			
Small Farmers	24	96000	97000	193000	371000	4500	3200	7700	33000	2500	3000	5500	106500	112000	218500	209500	215200	424700	357000	215200	572200	209500	215200	424700	357000	215200	572200	774000			
Medium Farmers	23	153500	162000	315500	673000	47000	32000	79000	332000	-	-	-	136000	152000	288000	336500	346000	682500	402500	346000	748500	336500	346000	682500	402500	346000	748500	1407500			
Large Farmers	13	155000	173000	328000	682000	49000	38000	87000	320500	-	-	-	245000	275000	520000	449000	486000	935000	769000	486000	1255000	449000	486000	935000	769000	486000	1255000	1771500			
Total Proper Agri Services	70	414500	438500	853000	1759600	104200	76200	180400	712500	2500	3000	5500	493000	545000	1038000	1014200	1062700	2076900	1544500	1062700	2607200	1014200	1062700	2076900	1544500	1062700	2607200	4029600			
Allied Agri. Services (II)																															
Marginal Farmers	10	26500	16500	43000	84100	800	650	1450	5000	-	-	-	11000	9000	20000	38300	26150	64450	30000	26150	56150	38300	26150	64450	30000	26150	56150	119100			
Small Farmers	13	71000	76500	147500	322300	3000	3000	6000	18200	-	-	-	18500	31000	49500	92500	110500	203000	70500	110500	181000	92500	110500	203000	70500	110500	181000	411000			
Medium Farmers	6	48000	52000	100000	217600	0	0	0	0	-	-	-	65000	114100	179100	113000	166100	279100	259000	166100	425100	113000	166100	279100	425100	166100	425100	476600			
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total Allied Agri Services	30	145500	145000	290500	624000	3800	3650	7450	23200	-	-	-	94500	154100	248600	243800	302750	546550	359500	302750	662250	243800	302750	546550	359500	302750	662250	1006700			
Both Agri. + Allied Services (I + II)																															
Marginal Farmers	20	36500	23000	59500	117700	4500	3650	8150	32000	-	-	-	16500	15000	31500	57500	41650	99150	46000	41650	87650	57500	41650	99150	46000	41650	87650	195700			
Small Farmers	37	167000	173500	340500	693300	7500	6200	13700	51200	2500	3000	5500	125000	143000	268000	302000	325700	627700	427500	325700	753200	302000	325700	627700	427500	325700	753200	1185000			
Medium Farmers	29	201500	214000	415500	890600	47000	32000	79000	332000	-	-	-	201000	266100	467100	449500	512100	961600	661500	512100	1173600	449500	512100	961600	661500	512100	1173600	1884100			
Large Farmers	14	155000	173000	328000	682000	49000	38000	87000	320500	-	-	-	245000	275000	520000	449000	486000	935000	769000	486000	1255000	449000	486000	935000	769000	486000	1255000	1771500			
Total Proper Agri + Allied Services	100	560000	583500	1143500	2383600	108000	79850	187850	735700	2500	3000	5500	587500	699100	1286600	1258000	1365450	2623450	1904000	1365450	3269450	1258000	1365450	2623450	1904000	1365450	3269450	5036300			

Appendix 12: Category-wise Details of Total Income from Rabi Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Beneficiary Farmers	No of Samples	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	10	17100	20300	-	4500	41900
Small Farmers	24	178000	25300	7500	138500	349300
Medium Farmers	23	357500	253000	-	114500	725000
Large Farmers	13	354000	233500	-	249000	836500
Total Proper Agri Services	70	906600	532100	7500	506500	1952700
Allied Agri. Services (II)						
Marginal Farmers	10	41100	3550	-	10000	54650
Small Farmers	13	174800	12200	-	21000	208000
Medium Farmers	6	117600	-	-	79900	197500
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	30	333500	15750	-	110900	460150
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	20	58200	23850	-	14500	96550
Small Farmers	37	352800	37500	7500	159500	557300
Medium Farmers	29	475100	253000	-	194400	922500
Large Farmers	14	354000	233500	-	249000	836500
Total Proper Agri + Allied Services	100	1240100	547850	7500	617400	2412850

Note: Other crops include fodder (jowar), Lucerne and vegetable crops

Appendix 13: Category-Wise Details of Inputs and Outputs of Zaid Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	Cereal			Pulses			Oilseeds			Other			Total		
		Input Cost			Input Cost			Input Cost			Input Cost			Input Cost		
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total
		Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)	Output (Rs)
Proper Agri. Services (I)																
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Proper Agri Services	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Allied Agri. Services (II)																
Marginal Farmers	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Allied Agri Services	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Both Agri. + Allied Services (I + II)																
Marginal Farmers	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Proper Agri + Allied Services	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix 14: Category-wise Details of Total Income from Zaid Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Beneficiary Farmers	No of Samples	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	10	-	-	-	-	-
Small Farmers	24	-	-	-	27500	27500
Medium Farmers	23	-	-	39000	-	39000
Large Farmers	13	-	-	-	-	-
Total Proper Agri Services	70	-	-	39000	27500	66500
Allied Agri. Services (II)						
Marginal Farmers	10	-	-	-	-	-
Small Farmers	13	-	-	-	15000	15000
Medium Farmers	6	-	-	-	17300	17300
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	30	-	-	-	32300	32300
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	20	-	-	-	-	-
Small Farmers	37	-	-	-	42500	42500
Medium Farmers	29	-	-	39000	17300	56300
Large Farmers	14	-	-	-	-	-
Total Proper Agri + Allied Services	100	-	-	39000	59800	98800

Note: Other crops include fodder (jowar) and ginger

Appendix 15: Category-Wise Details of Inputs and Outputs of Perennial Crops on the Farms of Sample Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Beneficiary Farmers	No. of Samples	Cereal						Pulses						Oilseeds						Other						Total			
		Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)			Total			
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	
		(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)
Proper Agri. Services (I)																													
Marginal Farmers	10	75000	65000	140000	392000	40000	35000	75000	245100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1150000	1000000	2150000	637100	
Small Farmers	24	177000	235000	412000	1175750	295000	510000	805000	3077500	15000	15000	30000	45000	60000	66000	126000	228200	228200	228200	547000	826000	1373000	1988000	3051000	4045000	547000	826000	1373000	4526450
Medium Farmers	23	645000	1285000	1930000	3523200	345000	605000	950000	3061909	35000	30000	65000	300000	38000	68000	106000	169000	169000	169000	1063000	1988000	3051000	4045000	547000	826000	1373000	1988000	3051000	7054109
Large Farmers	13	355000	780000	1135000	2008400	1145000	1725000	2870000	8806500	-	-	-	-	25000	15000	40000	82000	82000	82000	1525000	2520000	4045000	547000	826000	1373000	1988000	3051000	4045000	10896900
Total Proper Agri. Services	70	1252000	2365000	3617000	7099350	1825000	2875000	4700000	15191009	50000	45000	95000	345000	123000	149000	272000	479200	479200	479200	3250000	5434000	8684000	8684000	8684000	8684000	8684000	8684000	8684000	23114559
Allied Agri. Services (II)																													
Marginal Farmers	10	20000	30000	50000	108000	-	-	-	-	-	-	-	-	28000	45000	73000	184900	184900	184900	48000	75000	123000	123000	123000	123000	123000	123000	123000	292900
Small Farmers	13	80000	105000	185000	420000	-	-	-	-	15000	10000	25000	96000	-	-	-	-	-	-	95000	115000	210000	210000	210000	210000	210000	210000	210000	516000
Medium Farmers	6	256000	290000	546000	1211000	60000	45000	105000	279000	-	-	-	-	-	-	-	-	-	-	316000	335000	651000	651000	651000	651000	651000	651000	651000	1490000
Large Farmers	1	-	-	-	-	40000	35000	75000	126000	-	-	-	-	-	-	-	-	-	-	40000	35000	75000	75000	75000	75000	75000	75000	75000	126000
Total Allied Agri. Services	30	356000	425000	781000	1739000	100000	80000	180000	405000	15000	10000	25000	96000	28000	45000	73000	184900	184900	184900	499000	560000	1059000	1059000	1059000	1059000	1059000	1059000	2424900	
Both Agri. + Allied Services (I + II)																													
Marginal Farmers	20	95000	95000	190000	500000	40000	35000	75000	245100	-	-	-	-	28000	45000	73000	184900	184900	184900	163000	175000	338000	338000	338000	338000	338000	338000	338000	930000
Small Farmers	37	257000	340000	597000	1595750	295000	510000	805000	3077500	30000	25000	55000	141000	60000	66000	126000	228200	228200	228200	642000	941000	1583000	1583000	1583000	1583000	1583000	1583000	5042450	
Medium Farmers	29	901000	1575000	2476000	4734200	405000	650000	1055000	3340909	35000	30000	65000	300000	38000	68000	106000	169000	169000	169000	1379000	2323000	3703000	3703000	3703000	3703000	3703000	3703000	8544109	
Large Farmers	14	355000	780000	1135000	2008400	1185000	1760000	2945000	8932500	-	-	-	-	25000	15000	40000	82000	82000	82000	1565000	2555000	4120000	4120000	4120000	4120000	4120000	4120000	11022900	
Total Proper Agri + Allied Services	100	1608000	2790000	4398000	8838350	1925000	2955000	4880000	15596009	65000	55000	120000	441000	151000	194000	345000	664100	664100	664100	3749000	5994000	9743000	9743000	9743000	9743000	9743000	9743000	25539459	

Appendix 16: Category-wise Details of Total Income from Perennial Crops Generated by the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Beneficiary Farmers	No of Samples	Sugarcane	Pomegranate	Banana	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	10	252000	170100	-	-	422100
Small Farmers	24	763750	2272500	15000	102200	3153450
Medium Farmers	23	1593200	2111909	235000	63000	4003109
Large Farmers	13	873400	5936500	-	42000	6851900
Total Proper Agri Services	70	3482350	10491009	250000	207200	14430559
Allied Agri. Services (II)						
Marginal Farmers	10	58000	-	-	111900	169900
Small Farmers	13	235000	-	71000	-	306000
Medium Farmers	6	665000	174000	-	-	839000
Large Farmers	1	-	51000	-	-	51000
Total Allied Agri Services	30	958000	225000	71000	111900	1365900
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	20	310000	170100	-	111900	592000
Small Farmers	37	998750	2272500	86000	102200	3459450
Medium Farmers	29	2258200	2285909	235000	63000	4842109
Large Farmers	14	873400	5987500	-	42000	6902900
Total Proper Agri + Allied Services	100	4440350	10716009	321000	319100	15796459

Note: Other perennial crops include papaya, grape, mango, lemon, chiku, and guava

Appendix 17: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops on the Farms of the Sampled Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Input Cost, Output and Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Samples	Input Cost (Rs.)			Output (Rs)	Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	164700	150500	315200	845400	530200
Small Farmers	24	893000	1186200	2079200	5856000	3776800
Medium Farmers	23	1654400	2615000	4269400	9598659	5329259
Large Farmers	13	2238500	3290500	5529000	13786500	8257500
Total Proper Agri Services	70	4950600	7242200	12192800	30086559	17893759
Allied Agri. Services (II)						
Marginal Farmers	10	109400	123150	232550	504700	272150
Small Farmers	13	313000	331300	644300	1381900	737600
Medium Farmers	6	489700	562100	1051800	2217500	1165700
Large Farmers	1	65200	63000	128200	238500	110300
Total Allied Agri Services	30	977300	1079550	2056850	4342600	2285750
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	274100	273650	547750	1350100	802350
Small Farmers	37	1206000	1517500	2723500	7237900	4514400
Medium Farmers	29	2144100	3177100	5321200	11816159	6494959
Large Farmers	14	2303700	3353500	5657200	14025000	8367800
Total Proper Agri + Allied Services	100	5927900	8321750	14249650	34429159	20179509

**Appendix 18: Category-wise Details of Total Inputs, Outputs and Net Income from Milch Animals Reared
By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Milch Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	17	186433	81794	268228	893155	624927
Small Farmers	49	694922	318118	1013039	3314930	2301891
Medium Farmers	63	895818	432946	1328764	4167570	2838806
Large Farmers	48	731091	367136	1098227	3322960	2224733
Total Proper Agri Services	177	2508264	1199994	3708258	11698615	7990357
Allied Agri. Services (II)						
Marginal Farmers	60	724423	318744	1043166	3465675	2422509
Small Farmers	54	711129	334896	1046024	3343400	2297376
Medium Farmers	35	611589	271437	883026	2531275	1648249
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	149	2047141	925076	2972217	9340350	6368133
Both Agri. + Allied Services (I + II)						
Marginal Farmers	77	910856	400538	1311394	4358830	3047436
Small Farmers	103	1406050	653013	2059064	6658330	4599266
Medium Farmers	98	1507407	704383	2211791	6698845	4487055
Large Farmers	48	731091	367136	1098227	3322960	2224733
Total Proper Agri + Allied Services	326	4555404	2125070	6680475	21038965	14358490

**Appendix 19: Category-wise Details of Total Inputs, Outputs and Net Income from Draught Animals
Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Draught Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	2	10950	7300	18250	6650	-11600
Small Farmers	12	62050	50735	112785	44345	-68440
Medium Farmers	14	66430	64970	131400	49175	-82225
Large Farmers	2	10950	10220	21170	7650	-13520
Total Proper Agri Services	30	150380	133225	283605	107820	-175785
Allied Agri. Services (II)						
Marginal Farmers	4	21170	17520	38690	17975	-20715
Small Farmers	3	17520	16425	33945	17950	-15995
Medium Farmers	9	39420	37230	76650	30905	-45745
Large Farmers	5	-	-	-	-	-
Total Allied Agri Services	21	78110	71175	149285	66830	-82455
Both Agri. + Allied Services (I + II)						
Marginal Farmers	6	32120	24820	56940	24625	-32315
Small Farmers	15	79570	67160	146730	62295	-84435
Medium Farmers	23	105850	102200	208050	80080	-127970
Large Farmers	7	10950	10220	21170	7650	-13520
Total Proper Agri + Allied Services	51	228490	204400	432890	174650	-258240

Appendix 20: Category-wise Details of Total Inputs, Outputs and Net Income from Other Animals (Calves and Heifers) Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Calves & Heifers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	14	71175	1825	73000	9855	-63145
Small Farmers	15	62050	18250	80300	18250	-62050
Medium Farmers	20	58400	16425	74825	24820	-50005
Large Farmers	12	34675	10950	45625	12045	-33580
Total Proper Agri Services	61	226300	47450	273750	64970	-208780
Allied Agri. Services (II)						
Marginal Farmers	19	36500	14600	51100	22265	-28835
Small Farmers	14	51100	5475	56575	17885	-38690
Medium Farmers	16	45625	14600	60225	12775	-47450
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	49	133225	34675	167900	52925	-114975
Both Agri. + Allied Services (I + II)						
Marginal Farmers	33	107675	16425	124100	32120	-91980
Small Farmers	29	113150	23725	136875	36135	-100740
Medium Farmers	36	104025	31025	135050	37595	-97455
Large Farmers	12	34675	10950	45625	12045	-33580
Total Proper Agri + Allied Services	110	359525	82125	441650	117895	-323755

Appendix 21: Category-wise Details of Total Inputs, Outputs and Net Income from Goats (Adult/ Male & Female Calves) Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Goats (Adult & Calves)	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	-	-	-	-	-	-
Small Farmers	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Proper Agri Services	-	-	-	-	-	-
Allied Agri. Services (II)						
Marginal Farmers	31	35040	27740	62780	108000	45220
Small Farmers	52	53290	22995	76285	196500	120215
Medium Farmers	77	63875	38690	102565	264000	161435
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	160	152205	89425	241630	568500	326870
Both Agri. + Allied Services (I + II)						
Marginal Farmers	31	35040	27740	62780	108000	45220
Small Farmers	52	53290	22995	76285	196500	120215
Medium Farmers	77	63875	38690	102565	264000	161435
Large Farmers	-	-	-	-	-	-
Total Proper Agri + Allied Services	160	152205	89425	241630	568500	326870

Note: 1) Input cost includes feed expenditure on adult goats and their male and female calves
2) Output value is the sale value of male and female calves of adult goats

**Appendix 22: Category-wise Details of Total Inputs, Outputs and Net Income from Total Animals Reared
By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	33	268558	90919	359478	909660	550182
Small Farmers	76	819022	387103	1206124	3377525	2171401
Medium Farmers	97	1020648	514341	1534989	4241565	2706576
Large Farmers	62	776716	388306	1165022	3342655	2177633
Total Proper Agri Services	268	2884944	1380669	4265613	11871405	7605792
Allied Agri. Services (II)						
Marginal Farmers	114	817133	378604	1195736	3613915	2418179
Small Farmers	123	833039	379791	1212829	3575735	2362906
Medium Farmers	137	760509	361957	1122466	2838955	1716489
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	374	2410681	1120351	3531032	10028605	6497573
Both Agri. + Allied Services (I + II)						
Marginal Farmers	147	1085691	469523	1555214	4523575	2968361
Small Farmers	199	1652060	766893	2418954	6953260	4534306
Medium Farmers	234	1781157	876298	2657456	7080520	4423065
Large Farmers	62	776716	388306	1165022	3342655	2177633
Total Proper Agri + Allied Services	642	5295624	2501020	7796645	21900010	14103365

Note: Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

**Appendix 23: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops Grown and
Animals Reared By Sample Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	10	433258	241419	674678	1755060	1080382
Small Farmers	24	1712022	1573303	3285324	9233525	5948201
Medium Farmers	23	2675048	3129341	5804389	13840224	8035835
Large Farmers	13	3015216	3678806	6694022	17129155	10435133
Total Proper Agri Services	70	7835544	8622869	16458413	41957964	25499551
Allied Agri. Services (II)						
Marginal Farmers	10	926533	501754	1428286	4118615	2690329
Small Farmers	13	1146039	711091	1857129	4957635	3100506
Medium Farmers	6	1250209	924057	2174266	5056455	2882189
Large Farmers	1	65200	63000	128200	238500	110300
Total Allied Agri Services	30	3387981	2199901	5587882	14371205	8783323
Both Agri. + Allied Services (I + II)						
Marginal Farmers	20	1359791	743173	2102964	5873675	3770711
Small Farmers	37	2858060	2284393	5142454	14191160	9048706
Medium Farmers	29	3925257	4053398	7978656	18896679	10918024
Large Farmers	14	3080416	3741806	6822222	17367655	10545433
Total Proper Agri + Allied Services	100	11223524	10822770	22046295	56329169	34282875

Note: 1) All crops include kharif, rabi zaid and perennial crops

2) Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

Appendix 24: Category-Wise Details of Inputs and Outputs of Kharif Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	(Inputs in Rs, Outputs in Rs)																		
		Cereal			Pulses			Oilseeds			Other			Total						
		Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)	Input Cost		Output (Rs)				
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total				
Proper Agri. Services (I)																				
Marginal Farmers	9	5000	6000	11000	19300	-	-	-	13000	11000	24000	41000	8000	9000	17000	33600	26000	52000	93900	
Small Farmers	8	14100	14500	28600	52400	-	-	-	22000	18000	40000	70800	13000	17000	30000	64000	49100	49500	98600	
Medium Farmers	12	48000	53000	101000	188100	-	-	-	43000	35000	78000	142200	12000	12500	24500	55600	103000	100500	203500	
Large Farmers	6	70000	78000	148000	273900	4000	5500	9500	81000	67000	148000	270500	35000	39000	74000	172200	190000	189500	379500	
Total Proper Agri. Services	35	137100	151500	288600	533700	4000	5500	9500	159000	131000	290000	524500	68000	77500	145500	325400	368100	365500	733600	
Allied Agri. Services (II)																				
Marginal Farmers	6	10500	12000	22500	40100	-	-	-	-	-	-	-	-	-	-	-	-	10500	12000	22500
Small Farmers	5	15300	17500	32800	58100	-	-	-	13500	13000	26500	44650	12000	13500	25500	49000	40800	44000	84800	
Medium Farmers	3	12500	12500	25000	47000	-	-	-	43000	40000	83000	152400	-	-	-	-	55500	52500	108000	
Large Farmers	1	12000	13500	25500	43900	12000	9000	21000	21000	18000	39000	69900	-	-	-	-	45000	40500	85500	
Total Allied Agri. Services	15	50300	55500	105800	189100	12000	9000	21000	77500	71000	148500	266950	12000	13500	25500	49000	151800	149000	300800	
Both Agri. + Allied Services (I + II)																				
Marginal Farmers	15	15500	18000	33500	59400	-	-	-	13000	11000	24000	41000	8000	9000	17000	33600	36500	38000	74500	
Small Farmers	13	29400	32000	61400	110500	-	-	-	35500	31000	66500	115450	25000	30500	55500	113000	89900	93500	183400	
Medium Farmers	15	60500	65500	126000	235100	-	-	-	86000	75000	161000	294600	12000	12500	24500	55600	158500	153000	311500	
Large Farmers	7	82000	91500	173500	317800	16000	14500	30500	102000	85000	187000	340400	35000	39000	74000	172200	235000	230000	465000	
Total Proper Agri + Allied Services	50	187400	207000	394400	722800	16000	14500	30500	236500	202000	438500	791450	80000	91000	171000	374400	519900	514500	1034400	

Appendix 25: Category-wise Details of Total Income from Kharif Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No of Samples	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	9	8300	-	17000	16600	41900
Small Farmers	8	23800	-	30800	34000	88600
Medium Farmers	12	87100	-	64200	31100	182400
Large Farmers	6	125900	19500	122500	98200	366100
Total Proper Agri Services	35	245100	19500	234500	179900	679000
Allied Agri. Services (II)						
Marginal Farmers	6	17600	-	-	-	17600
Small Farmers	5	25300	-	18150	23500	66950
Medium Farmers	3	22000	-	69400	-	91400
Large Farmers	1	18400	34000	30900	-	83300
Total Allied Agri Services	15	83300	34000	118450	23500	259250
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	15	25900	-	17000	16600	59500
Small Farmers	13	49100	-	48950	57500	155550
Medium Farmers	15	109100	-	133600	31100	273800
Large Farmers	7	144300	53500	153400	98200	449400
Total Proper Agri + Allied Services	50	328400	53500	352950	203400	938250

Note: Other crops include fodder (jowar), vegetable and flower crops

Appendix 26: Category-Wise Details of Inputs and Outputs of Rabi Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	(Inputs in Rs, Outputs in Rs)																					
		Cereal			Pulses			Oilseeds			Other			Total									
		Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)						
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total				
Proper Agri. Services (I)																							
Marginal Farmers	9	11000	8300	19300	42900	6000	4000	10000	28500	-	-	-	-	-	17000	12300	29300	71400					
Small Farmers	8	11500	9500	21000	42800	8000	6000	14000	39500	-	-	-	-	-	5500	5500	11000	20500	25000	21000	46000	102800	
Medium Farmers	12	84500	78000	162500	343800	-	-	-	-	3000	5000	8000	29000	75000	24500	18000	42500	75000	112000	101000	213000	447800	
Large Farmers	6	97000	92000	189000	405800	20000	17000	37000	128000	-	-	-	-	-	17000	11000	28000	52500	134000	120000	254000	586300	
Total Proper Agri Services	35	204000	187800	391800	835300	34000	27000	61000	196000	3000	5000	8000	29000	148000	47000	34500	81500	148000	288000	254300	542300	1208300	
Allied Agri. Services (II)																							
Marginal Farmers	6	3000	2000	5000	9750	-	-	-	-	-	-	-	-	-	5000	4000	9000	18000	8000	6000	14000	27750	
Small Farmers	5	19000	18500	37500	75000	2000	2500	4500	18000	-	-	-	-	-	5000	5800	10800	19700	26000	26800	52800	112700	
Medium Farmers	3	51000	56000	107000	218700	4500	4000	8500	28000	-	-	-	-	-	-	-	-	-	55500	60000	115500	246700	
Large Farmers	1	55000	53000	108000	234000	-	-	-	-	-	-	-	-	-	-	-	-	-	55000	53000	108000	234000	
Total Allied Agri Services	15	128000	129500	257500	537450	6500	6500	13000	46000	-	-	-	-	-	10000	9800	19800	37700	144500	145800	290300	621150	
Both Agri. + Allied Services (I + II)																							
Marginal Farmers	15	14000	10300	24300	52650	6000	4000	10000	28500	-	-	-	-	-	5000	4000	9000	18000	25000	18300	43300	99150	
Small Farmers	13	30500	28000	58500	117800	10000	8500	18500	57500	-	-	-	-	-	10500	11300	21800	40200	51000	47800	98800	215500	
Medium Farmers	15	135500	134000	269500	562500	4500	4000	8500	28000	3000	5000	8000	29000	75000	24500	18000	42500	75000	167500	161000	328500	694500	
Large Farmers	7	152000	145000	297000	639800	20000	17000	37000	128000	-	-	-	-	-	17000	11000	28000	52500	189000	173000	362000	820300	
Total Proper Agri + Allied Services	50	332000	317300	649300	1372750	40500	33500	74000	242000	3000	5000	8000	29000	185700	57000	44500	101300	185700	432500	400100	832600	1829450	

Appendix 27: Category-wise Details of Total Income from Rabi Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No of Samples	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	9	23600	18500	-	-	42100
Small Farmers	8	21800	25500	-	9500	56800
Medium Farmers	12	181300	-	21000	32500	234800
Large Farmers	6	216800	91000	-	24500	332300
Total Proper Agri Services	35	443500	135000	21000	66500	666000
Allied Agri. Services (II)						
Marginal Farmers	6	4750	-	-	9000	13750
Small Farmers	5	37500	13500	-	8900	59900
Medium Farmers	3	111700	19500	-	-	131200
Large Farmers	1	126000	-	-	-	126000
Total Allied Agri Services	15	279950	33000	-	17900	330850
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	15	28350	18500	-	9000	55850
Small Farmers	13	59300	39000	-	18400	116700
Medium Farmers	15	293000	19500	21000	32500	366000
Large Farmers	7	342800	91000	-	24500	458300
Total Proper Agri + Allied Services	50	723450	168000	21000	84400	996850

Note: Other crops include fodder (jowar), Lucerne, vegetable crops

Appendix 28: Category-Wise Details of Inputs and Outputs of Zaid Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	Cereal						Pulses						Oilseeds						Other						Total												
		Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)			Input Cost			Output (Rs)									
		Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total	Own	Others	Total							
Proper Agri. Services (I)																																						
Marginal Farmers	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Small Farmers	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Medium Farmers	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Large Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total Proper Agri Services	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Allied Agri. Services (II)																																						
Marginal Farmers	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Small Farmers	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Medium Farmers	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total Allied Agri Services	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Both Agri. + Allied Services (I + II)																																						
Marginal Farmers	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small Farmers	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Medium Farmers	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Large Farmers	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Proper Agri + Allied Services	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix 29: Category-wise Details of Total Income from Zaid Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No of Samples	Cereals	Pulses	Oilseeds	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	9	-	-	-	-	-
Small Farmers	8	-	-	-	-	-
Medium Farmers	12	-	-	-	-	-
Large Farmers	6	-	-	-	-	-
Total Proper Agri Services	35	-	-	-	-	-
Allied Agri. Services (II)						
Marginal Farmers	6	-	-	-	39000	39000
Small Farmers	5	-	-	-	-	-
Medium Farmers	3	-	-	-	-	-
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	15	-	-	-	39000	39000
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	15	-	-	-	39000	39000
Small Farmers	13	-	-	-	-	-
Medium Farmers	15	-	-	-	-	-
Large Farmers	7	-	-	-	-	-
Total Proper Agri + Allied Services	50	-	-	-	39000	39000

Note: Other crops include fodder (jowar) and ginger

Appendix 30: Category-Wise Details of Inputs and Outputs of Perennial Crops on the Farms of Sample Non-Beneficiary Farmers under ACABC Scheme in Maharashtra

Category of Sample Non-Beneficiary Farmers	No. of Samples	(Inputs in Rs, Outputs in Rs)																				
		Sugarcane				Pomegranate				Banana				Others				Total				
		Input Cost			Output (Rs)	Input Cost			Output (Rs)	Input Cost			Output (Rs)	Input Cost			Output (Rs)	Input Cost			Output (Rs)	
		Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total		Own	Others	Total		
Proper Agri. Services (I)																						
Marginal Farmers	9	32000	40000	72000	170000	35000	30000	65000	247500	-	-	-	12000	9000	21000	90000	79000	79000	158000	90000	158000	507500
Small Farmers	8	50000	50000	105000	316000	170000	185000	355000	873125	-	-	-	-	-	-	-	220000	240000	460000	240000	460000	1189125
Medium Farmers	12	235000	235000	470000	828000	175000	280000	455000	1140000	-	-	-	10000	10000	20000	60000	420000	525000	945000	60000	945000	2028000
Large Farmers	6	300000	425000	725000	1236000	60000	65000	125000	360000	40000	60000	100000	50000	40000	90000	154000	450000	590000	1040000	154000	1040000	1937500
Total Proper Agri. Services	35	617000	755000	1372000	2550000	440000	560000	1000000	2620625	40000	60000	100000	72000	59000	131000	304000	1169000	1434000	2603000	304000	2603000	5662125
Allied Agri. Services (II)																						
Marginal Farmers	6	5000	6000	11000	50000	-	-	-	-	-	-	-	-	-	-	-	5000	6000	11000	-	-	50000
Small Farmers	5	30000	60000	90000	126000	70000	75000	145000	500000	6000	8000	14000	-	-	-	45000	106000	143000	249000	143000	249000	671000
Medium Farmers	3	30000	35000	65000	103500	50000	80000	130000	336000	-	-	-	-	-	-	-	80000	115000	195000	-	-	439500
Large Farmers	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Allied Agri. Services	15	65000	101000	166000	279500	120000	155000	275000	836000	6000	8000	14000	6000	8000	14000	45000	191000	264000	455000	455000	455000	1160500
Both Agri. + Allied Services (I + II)																						
Marginal Farmers	15	37000	46000	83000	220000	35000	30000	65000	247500	-	-	-	12000	9000	21000	90000	84000	85000	169000	90000	169000	557500
Small Farmers	13	80000	115000	195000	442000	240000	260000	500000	1373125	6000	8000	14000	-	-	-	45000	326000	383000	709000	383000	709000	1860125
Medium Farmers	15	265000	270000	535000	931500	225000	360000	585000	1476000	-	-	-	10000	10000	20000	60000	500000	640000	1140000	60000	1140000	2467500
Large Farmers	7	300000	425000	725000	1236000	60000	65000	125000	360000	40000	60000	100000	50000	40000	90000	154000	450000	590000	1040000	154000	1040000	1937500
Total Proper Agri + Allied Services	50	682000	856000	1538000	2829500	560000	715000	1275000	3456625	46000	68000	114000	72000	59000	131000	304000	1360000	1698000	3058000	304000	3058000	6822625

Appendix 31: Category-wise Details of Total Income from Perennial Crops Generated by the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No of Samples	Sugarcane	Pomegranate	Banana	Others	Total
Proper Agri. Services (I)						
Marginal Farmers	9	98000	182500	-	69000	349500
Small Farmers	8	211000	518125	-	-	729125
Medium Farmers	12	358000	685000	-	40000	1083000
Large Farmers	6	511000	235000	87500	64000	897500
Total Proper Agri Services	35	1178000	1620625	87500	173000	3059125
Allied Agri. Services (II)						
Marginal Farmers	6	39000	-	-	-	39000
Small Farmers	5	36000	355000	31000	-	422000
Medium Farmers	3	38500	206000	0	-	244500
Large Farmers	1	-	-	-	-	-
Total Allied Agri Services	15	113500	561000	31000	-	705500
Both Proper Agri. + Allied Services (I + II)						
Marginal Farmers	15	137000	182500	-	69000	388500
Small Farmers	13	247000	873125	31000	-	1151125
Medium Farmers	15	396500	891000	-	40000	1327500
Large Farmers	7	511000	235000	87500	64000	897500
Total Proper Agri + Allied Services	50	1291500	2181625	118500	173000	3764625

Note: Other perennial crops include papaya, grape, mango, lemon and coconut

Appendix 32: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops on the Farms of the Sampled Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra

(Input Cost, Output and Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Samples	Input Cost (Rs.)			Output (Rs.)	Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	122000	117300	239300	672800	433500
Small Farmers	8	294100	310500	604600	1479125	874525
Medium Farmers	12	635000	726500	1361500	2861700	1500200
Large Farmers	6	774000	899500	1673500	3269400	1595900
Total Proper Agri Services	35	1825100	2053800	3878900	8283025	4404125
Allied Agri. Services (II)						
Marginal Farmers	6	46000	49500	95500	204850	109350
Small Farmers	5	172800	213800	386600	935450	548850
Medium Farmers	3	191000	227500	418500	885600	467100
Large Farmers	1	100000	93500	193500	402800	209300
Total Allied Agri Services	15	509800	584300	1094100	2428700	1334600
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	168000	166800	334800	877650	542850
Small Farmers	13	466900	524300	991200	2414575	1423375
Medium Farmers	15	826000	954000	1780000	3747300	1967300
Large Farmers	7	874000	993000	1867000	3672200	1805200
Total Proper Agri + Allied Services	50	2334900	2638100	4973000	10711725	5738725

**Appendix 33: Category-wise Details of Total Inputs, Outputs and Net Income from Milch Animals Reared
By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Milch Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	8	69350	49275	118625	415735	297110
Small Farmers	21	323025	87600	410625	1198295	787670
Medium Farmers	23	355875	124100	479975	1492485	1012510
Large Farmers	19	328500	127750	456250	891330	435080
Total Proper Agri Services	71	1076750	388725	1465475	3997845	2532370
Allied Agri. Services (II)						
Marginal Farmers	30	341275	173375	514650	1680460	1165810
Small Farmers	11	147825	76650	224475	644955	420480
Medium Farmers	12	175200	124100	299300	784020	484720
Large Farmers	12	182500	36500	219000	678900	459900
Total Allied Agri Services	65	846800	410625	1257425	3788335	2530910
Both Agri. + Allied Services (I + II)						
Marginal Farmers	38	410625	222650	633275	2096195	1462920
Small Farmers	32	470850	164250	635100	1843250	1208150
Medium Farmers	35	531075	248200	779275	2276505	1497230
Large Farmers	31	511000	164250	675250	1570230	894980
Total Proper Agri + Allied Services	136	1923550	799350	2722900	7786180	5063280

**Appendix 34: Category-wise Details of Total Inputs, Outputs and Net Income from Draught Animals
Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Draught Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	3	20075	12775	32850	13665	-19185
Small Farmers	-	-	-	-	-	-
Medium Farmers	12	80300	45625	125925	48945	-76980
Large Farmers	4	23725	21900	45625	16585	-29040
Total Proper Agri Services	19	124100	80300	204400	79195	-125205
Allied Agri. Services (II)						
Marginal Farmers	2	12775	7300	20075	6650	-13425
Small Farmers	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	2	12775	7300	20075	6650	-13425
Both Agri. + Allied Services (I + II)						
Marginal Farmers	5	32850	20075	52925	20315	-32610
Small Farmers	-	-	-	-	-	-
Medium Farmers	12	80300	45625	125925	48945	-76980
Large Farmers	4	23725	21900	45625	16585	-29040
Total Proper Agri + Allied Services	21	136875	87600	224475	85845	-138630

Appendix 35: Category-wise Details of Total Inputs, Outputs and Net Income from Other Animals (Calves and Heifers) Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Calves & Heifers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	1	5475	-	5475	730	-4745
Small Farmers	17	113150	-	113150	12319	-100831
Medium Farmers	3	18250	-	18250	2555	-15695
Large Farmers	2	10950	-	10950	1825	-9125
Total Proper Agri Services	23	147825	-	147825	17429	-130396
Allied Agri. Services (II)						
Marginal Farmers	4	14600	-	14600	2190	-12410
Small Farmers	1	5475	-	5475	821	-4654
Medium Farmers	2	10950	-	10950	1460	-9490
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	7	31025	-	31025	4471	-26554
Both Agri. + Allied Services (I + II)						
Marginal Farmers	5	20075	-	20075	2920	-17155
Small Farmers	18	118625	-	118625	13140	-105485
Medium Farmers	5	29200	-	29200	4015	-25185
Large Farmers	2	10950	-	10950	1825	-9125
Total Proper Agri + Allied Services	30	178850	-	178850	21900	-156950

Appendix 36: Category-wise Details of Total Inputs, Outputs and Net Income from Goats (Adult/ Male & Female Calves) Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra
(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Calves & Heifers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	-	-	-	-	-	-
Small Farmers	-	-	-	-	-	-
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Proper Agri Services	-	-	-	-	-	-
Allied Agri. Services (II)						
Marginal Farmers	77	71175	34675	105850	245000	139150
Small Farmers	21	21900	9490	31390	54000	22610
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Allied Agri Services	98	93075	44165	137240	299000	161760
Both Agri. + Allied Services (I + II)						
Marginal Farmers	77	71175	34675	105850	245000	139150
Small Farmers	21	21900	9490	31390	54000	22610
Medium Farmers	-	-	-	-	-	-
Large Farmers	-	-	-	-	-	-
Total Proper Agri + Allied Services	98	93075	44165	137240	299000	161760

Note: 1) Input cost includes feed expenditure on adult goats and their male and female calves
2) Output value is the sale value of male and female calves of adult goats

**Appendix 37: Category-wise Details of Total Inputs, Outputs and Net Income from Total Animals Reared
By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Animals	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	12	94900	62050	156950	430130	273180
Small Farmers	38	436175	87600	523775	1210614	686839
Medium Farmers	38	454425	169725	624150	1543985	919835
Large Farmers	25	363175	149650	512825	909740	396915
Total Proper Agri Services	113	1348675	469025	1817700	4094469	2276769
Allied Agri. Services (II)						
Marginal Farmers	113	439825	215350	655175	1934300	1279125
Small Farmers	33	175200	86140	261340	699776	438436
Medium Farmers	14	186150	124100	310250	785480	475230
Large Farmers	12	182500	36500	219000	678900	459900
Total Allied Agri Services	172	983675	462090	1445765	4098456	2652691
Both Agri. + Allied Services (I + II)						
Marginal Farmers	125	534725	277400	812125	2364430	1552305
Small Farmers	71	611375	173740	785115	1910390	1125275
Medium Farmers	52	640575	293825	934400	2329465	1395065
Large Farmers	37	545675	186150	731825	1588640	856815
Total Proper Agri + Allied Services	285	2332350	931115	3263465	8192925	4929460

Note: Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

**Appendix 38: Category-wise Details of Total Inputs, Outputs and Net Income from All Crops Grown and
Animals Reared By Sample Non-Beneficiary Farmers of ACABC Scheme Area of Maharashtra**

(Annual Input Costs, Output Value and Net Income in Rupees)

Category of Sample Non-Beneficiary Farmers	No. of Sample Farmers	Input Cost (Rs.)			Output Value (Rs)	Net Income (Rs.)
		Own	Others	Total		
Proper Agri. Services (I)						
Marginal Farmers	9	216900	179350	396250	1102930	706680
Small Farmers	8	730275	398100	1128375	2689739	1561364
Medium Farmers	12	1089425	896225	1985650	4405685	2420035
Large Farmers	6	1137175	1049150	2186325	4179140	1992815
Total Proper Agri Services	35	3173775	2522825	5696600	12377494	6680894
Allied Agri. Services (II)						
Marginal Farmers	6	485825	264850	750675	2139150	1388475
Small Farmers	5	348000	299940	647940	1635226	987286
Medium Farmers	3	377150	351600	728750	1671080	942330
Large Farmers	1	282500	130000	412500	1081700	669200
Total Allied Agri Services	15	1493475	1046390	2539865	6527156	3987291
Both Agri. + Allied Services (I + II)						
Marginal Farmers	15	702725	444200	1146925	3242080	2095155
Small Farmers	13	1078275	698040	1776315	4324965	2548650
Medium Farmers	15	1466575	1247825	2714400	6076765	3362365
Large Farmers	7	1419675	1179150	2598825	5260840	2662015
Total Proper Agri + Allied Services	50	4667250	3569215	8236465	18904650	10668185

Note: 1) All crops include kharif, rabi zaid and perennial crops

2) Total animals include milch and draught animals, calves and heifers, and goats (adult, male & female calves)

ANNEXURE I: COMMENTS ON DRAFT REPORT BY DESIGNATED ALL INDIA COORDINATING CENTRE, AERC, UNIVERSITY OF ALLAHABAD, ALLAHABAD, U.P.

TITLE OF THE STUDY REPORT: IMPACT STUDY ON AGRICULTURAL EXTENSION SERVICES TO FARMERS BY AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABCs SCHEME) IN MAHARASHTRA

AUTHORS: DEEPAK SHAH and SANGEETA SHROFF

ORGANISATION: AGRO-ECONOMIC RESEARCH CENTRE, GOKHALE INSTITUTE OF POLITICS AND ECONOMICS, PUNE

DATE OF DESPATCH of DRAFT REPORT FROM PUNE: 17th April, 2017

DATE OF RECEIPT AT ALLAHABAD: 18th April, 2017

DATE OF DESPATCH OF COMMENTS: 21st April, 2017

Chapter-wise Valuable Comments from Coordinating AERC, Allahabad, Uttar Pradesh

Chapter –I:- (1) The district-wise growth in ventures established during 2002-2016 in Maharashtra is not detailed anywhere in this chapter. Therefore, please include it to see the growth under ACABCs in Maharashtra district-wise or region-wise during 2002-16.

(2) On page 17 under point 1.7 organization of report is written in a para. Therefore, detail it chapter-wise in points.

Chapter –II:- No comments needed.

Chapter –III:- (1) Unit/Project-wise progress in Maharashtra and its percentage share in India (2002-16) is also to be included.

Chapter –IV:- No comments needed.

Chapter –V:- (1) On page 58 in Table 5.1 the units are not given on the top of the Table. As a result the total area of holding in each category is reported. While it should have been reported as average/per beneficiary. Please correct the same for meaningful result. Also the membership of agencies and subsidiary occupation must be written in yes and No with numbers to see clear results.

(2) On page 59 the Table 5.2 includes the details of non-beneficiaries. While Table 5.2 was seriated for social and educational status of beneficiaries. Thus the sequence of presenting analytical Tables has been changed. The number of analytical tables will therefore be different in the four reports of individual states. Please check the seriatum of analytical tables provided to your centre and depict with the same for similarity from the view point of the consolidation of combined report of the study by the coordinating centre.

- (3) Further the pattern of whole chapter-V has been differed in the draft report The coordinating centre AERC, Allahabad had put Table V-1 to Table V-23 for beneficiary and Table V-24 to Table-V-41 for non-beneficiaries and Tables V-42 to Tables V-44 for both beneficiaries and non-beneficiaries together. But you have changed that sequence in chapter 5th and have increased the number of total analytical tables of chapter-V too from 44 provided by coordinating AERC to total 65 in your draft report creating unnecessary troubles.
- (4) Under such circumstances how the consolidation of the combined report would be possible? So please follow the analytical tables provided by coordinating AERC only so that combined report may be consolidated timely.

Chapter –VI:- Please write only main findings and policy prescription in this chapter and delete all the detail from back -dropt to methodology etc. Please see office memorandum vide F.No 10-6/2014-AER-ES dated 19.01.2017. sent by Dte. of Economics & Statistical, G.O.I.

Executive Summary: Just after the chapter- VI please give executive summary as per the letter F.No. 10.06/2014-AER-ES dated 19.01.2017 already written to you by the Directorate Officers.

**ANNEXURE II: ACTION TAKEN BY THE AUTHORS ON THE COMMENTS
OF THE DESIGNATED CENTRE FOR THE STUDY ENTITLED**

**“IMPACT STUDY ON AGRICULTURAL EXTENSION SERVICES TO
FARMERS BY AGRI-CLINICS AND AGRI-BUSINESS CENTRES (ACABCs)
SCHEME) IN MAHARASHTRA”**

The author is thankful to the reviewer for the keen interest taken and the suggestions made by him on the report. The comments have been taken care of at length and **replies to these comments are given as follows:**

Chapter –I:- (1) The region-wise growth estimates in candidates trained and ventures established during 2002-2016 under ACABC Scheme in Maharashtra have been shown in Table 3.7. The district-wise growth estimate in this respect is not possible due data gaps in time series data.

(2) The suggestion has been incorporated on page 17 as suggested by the reviewer.

Chapter –II:- No comments needed

Chapter –III:- (1) Unit/Project-wise distribution of agri-ventures established in Maharashtra and its percentage share in India (2002-16) has been incorporated in the report on page 31.

Chapter –IV:- No comments needed

Chapter –V:- (1) On page 59 in Table 5.1, the units have been incorporated on the top of the Table. The membership of agencies and subsidiary occupation have been written in ‘Yes’ and ‘No’ with number to see clear results.

(2) On page 60 onwards and Table 5.2 onwards, the estimates for all the beneficiary farmers are now depicted, which continue up to Table 25. From Table 26 to Table 50, the estimates for all the non-beneficiary farmers are now shown. Subsequently, a comparison of beneficiary and non-beneficiary is provided.

(3) As suggested by the reviewer, a definite sequence is followed. It is true that, in our report, the number of Table have gone up to 65. However, please note that we have provided much more information and estimates as required in the report. One of the major reasons for inclusion of larger number of Tables is the fact that the cropping pattern, social group status, number of animals reared by beneficiary and non-beneficiary farmers in Maharashtra, etc. are different as against other States. As a result, the number has increased. The coordinating centre is free to omit any of the Tables if not required as the requirement has been fulfilled and only additional information is provided.

(4) It is not possible to strictly follow the number of Table as suggested by the coordinating centre. The reason has already been cited in the above note.

Chapter –VI:- As suggested by the reviewer, only the main finding and policy prescriptions have been delineated in Chapter VI, and details of backdrop to methodology, etc. have been omitted from the final report.

Executive Summary: Just after the chapter- VI, an '*Executive Summary*' of the report has been integrated. This has been done in view of the letter F. No. 10.06/2014-AER-ES dated 19.01.2017 received from Directorate Officers. As per the letter, the '*Executive Summary*' should encompass background, objectives, findings and policy prescriptions written out of the complete report, preferably in the bullet points in case of policy prescriptions.

The report has been revised thoroughly in the light of the comments received from the designated AERC, University of Allahabad, Allahabad.

The final report is now being submitted for further necessary action.

Corrections have been incorporated as suggested.