

Evaluation Report of Comprehensive District Agriculture Plan- Jalgaon District

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**GIPE-RP
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Acknowledgements

The National Development Council in order to give a boost to the agricultural and allied sector, conceived a centrally sponsored scheme namely- *Rashtriya Krishi Vikas Yojana* with a view to achieve a growth rate of 4 per cent per annum during the XI th Five Year Plan Period. In order to be eligible to receive funds under this scheme, each district in every state was required to prepare a Comprehensive District Agricultural Plan (CDAP) indicating its budgetary requirements for innovative as well as on-going schemes. A large number of districts in the country have already prepared this plan.

In view of the above, the Planning Commission felt the need for evaluation of CDAP of certain districts. Accordingly, our AERC was assigned the task of undertaking evaluation of CDAP of Jalgaon District. The evaluation was possible only because of the help and support that we received from a number of persons.

First of all we would like to thank the Planning Commission members – Prof Abhijeet Sen, Shri V.V. Sadamate, Shri Pankaj Kumar for providing us with valuable inputs on evaluation of CDAP in a meeting held in Institute of Social and Economic Change, Bangalore in January, 2009. Our sincere thanks to Prof R.S. Deshpande (Director, ISEC, Bangalore) and his colleague Dr. Bhende for coordinating the meeting and giving necessary guidelines. Shri Daljeet Singh, Director, Planning Commission also visited our institute and we had useful discussions regarding evaluation of CDAP. Dr. S.M. Jharwal, Principal Adviser, Department of Agriculture and Cooperation (DAC), Ministry of Agriculture, Government of India, New Delhi, has always been a big support to our centre and he actively participated in discussions related to evaluation of CDAP. We thank Shri Vinay Awate and his staff, Planning Department, Government of Maharashtra for necessary help and support.

During our field visit to Jalgaon, we received immense support and cooperation from Shri Subhash Nagare, District Superintending Agriculture Officer, Jalgaon and his colleagues notably, Shri Anil V. Bhokre and Shri Jivaraj Amale. We are very grateful to them for arranging meetings with entire Technical Support Group as well as field visit to several farms and discussion with large number of farmers. Discussions with Sarpanch and officials of Krishi Vigyan Kendras and ATMA also provided useful insights about the potential and constraints in the agricultural sector. We also thank all the farmers, government officials and private stakeholders for their kind cooperation.

We also thank Prof Arup Maharatna, former Officiating Director, GIPE and Prof. Rajas Parchure, Officiating Director, GIPE and Dr. R. Nagrajan (Officiating Registrar) for support and cooperation.

It is only because of the help that we received from all the persons mentioned above, could it be possible for us to undertake this evaluation report.

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August 17, 2009

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Evaluation Report of Comprehensive District Agriculture Plan- Jalgaon District

The Comprehensive District Agriculture Plan of Jalgaon District was received by us from Director, Agricultural Processing and Marketing Division, Commissionerate of Agriculture, Government of Maharashtra, Pune, on May 8, 2009.

After going through the report, we visited the office of the District Superintendent Agriculture Officer (DSAO), Jalgaon in the first week of August and discussed the plan with his team (Technical Support Group - Scientist from National Research Centre on Oilseed, Research Station on Banana (MPKV, Rahuri) and Officers of Agriculture and Allied departments). A field level visit to two villages (Jalke village in Jalgaon Taluka and Waghoda village in Raver taluka) was also conducted by us to observe whether the plan has been prepared by involving persons at the grass root level. Discussions on status of agriculture in the district with respect to problems, constraints and potential were held with scientists of Krishi Vigyan Kendra (KVK), Pal; members of Agriculture Technology Management Agency (ATMA), Progressive Farmers, Banana Growers Association, etc. Further, we also visited Jain Irrigation system Ltd. which is playing a major role in the economy of Jalgaon and Aryan Farms which is making efforts to promote agro-tourism in Jalgaon.

The following observations are made:

I. Status of C-DAP preparation in the states

- i. Number of districts in the state? : **Not Applicable**
- ii. Number of districts for which C-DAP prepared : **Not Applicable**
- iii. If C-DAPs for all districts not prepared, by what time rest of C-DAPs will be ready? : **Not Applicable**

II. Constitutional aspects of planning

1. General

- i. DPCs formed or not? : **Formed (but not supported with document)**
- ii. C-DAP approved by the DPC or not? If not, what is the institutional mechanism at the district level through which it was passed?- : **No**

iii. Has C-DAP been integrated with DDP : Yes or not?

2. Has participatory bottom-up approach been followed or not?

Was information collected from 'Gram Sabhas'?

- We were informed that informal meetings were held at village level to understand and take into consideration the needs of the farming community.

Furnish information in the given table If the information from 'Gram Sabhas' not collected:

a) What other consultative process (es) were followed in the plan preparation? What is the extent to which inputs from sub-district level have contributed to the planning exercise? Here the factual position may be described.

- For the preparation of C-DAP, the following officers were engaged-
 1. District Superintendent Agriculture Officer, Jalgaon
 2. Officers from Agriculture and Allied Department of Jalgaon district
 3. Scientists from Mahatma Phule Krishi Vidyapeeth, Rahuri
 4. Scientist from National Research Centre for Oilseed and Research Centre For Banana (MPKV, Rahuri).
 5. Scientist/Subject Matter Experts of Krishi Vigyan Kendra (KVK), Pal

As such the above mentioned officials served as the Technical Support Group (TSI) in preparation of C-DAP.

b) Whether agriculture planning units (APUs) at village, block/taluka and district level viz. VAPU, BAPU and DAPU actually exist. If not, what other mechanism was used for preparation of C-DAP.

- Several meetings were held at district level and informal meetings at taluka/village level. BAPU/TAPU are not formally formed.

Name of District	No. of Blocks/ talukas	No. of Villages	No. of Gram Sabhas held	No. of Block/ Taluka level meetings*	No. of District level meetings*
Jalgaon	15	1519 (inhabited)	Not formally recorded	Not formally recorded	Several meetings were held

*Schedule of these meetings circulated/announced well in advance or not?

- Yes (but not supported with document).

III. Technical aspect of planning

1. Is Plan Comprehensive?

i) Is C-DAP based on the felt-needs of the farmers or not?

- Yes

ii) Was a separate vision document prepared or not? If yes, was this vision reflected in C-DAP preparation in the form of vision statement or not?

- No

iii) Were all departments (agriculture and allied activities) involved in planning?

- **Yes (except Sericulture)**. Sericulture is not yet being undertaken as an economic activity in Jalgaon district.

iv) All agricultural and allied developmental activities being carried out in the district by governmental and non-governmental agencies, accommodated in the C-DAP or not? Provide following information:

- **Yes**

Name of District	No. of Govt. Schemes /Programmes			Schemes/Programmes Referred in C-DAP		
	Central	State	LB	Central	State	LB
Jalgaon	Not indicated separately			Not indicated separately		

Name of District	No. of Non-Govt. Schemes/Programmes**		Schemes/Programmes Referred in C-DAP		
	NGS1	NGS2	NGS1	NGS2	NGS3
Jalgaon	-	-	-	-	-

**NGS1, NGS2, NGS3 refer to non government programmes/schemes effectively being implemented in the district by agency like Bank, SHG, or any other agency.

- v) Were efforts made to address a) Emerging challenges from global trade and climate changes? b) Innovative approaches which can improve the livelihood and economic condition of the people in the area c) Priority areas as per agro-ecological situation.

a) The major crops cultivated in Jalgaon district are Cotton, Jowar, and Banana, which occupy around 41 percent, 18 percent and 5 percent of the gross cropped area, respectively. Oilseeds occupy 5 percent of gross cropped area and as in other districts of Maharashtra, soybean crop is gaining popularity.

On field visit to cotton farms, it was observed that since past three years or so, farmers are cultivating only Bt varieties of Cotton. Farmers explained that they had switched over to Bt varieties as it was resistant to boll worm attacks and hence their expenditure on pesticide reduced substantially. This reduced pest infestation on the crop and thus led to increase in yield. In Jalke village of Jalgaon taluka, it was observed that the average yield of Bt cotton was 600 kg lint per hectare with drip facility. This yield level is much higher than state average (373 kg lint per hectare in 2007-08) as well as non Bt cotton yields. The farmers explained that with the adoption of Bt cotton, their expenditure on pesticide has reduced considerably. However, they feared that gradually sucking pest (aphids, jassids, thrips, etc.) attack on the crop have begun to take place which might again increase cost on pesticide.

Jalgaon district has the advantage of having Jain Irrigation Systems located in the district. This company has greatly popularised the use of drip irrigation and also offered extension services to the farmers. Drought conditions are often faced by the district due to climate changes and drip irrigation enables farmers to give protective irrigation in case of delay or failure of monsoons. Besides, 781 farm ponds were constructed in the district (which is close to the target of 900 ponds) under RKVY. Farmers received 70 percent subsidy to construct these ponds. These ponds greatly helped to harvest rain water which was used in case of irregular rainfall.

Although allied activities play a major role in providing supplementary and complementary income to farmers, it was observed that in Jalgaon, this activity is very limited. Dairy is unable to take off due to several limitations. Due to high temperatures, cross bred cows are under stress conditions and hence optimum milk yields are not obtained. Discussion with the officials revealed that maintaining *deshi* cows was less risky as fodder was easily available and was consumed in a lesser quantity as compared to cross bred cows. Marinating cross bred cows was costly and these cows could not tolerate heat stress.

It was also revealed to us by the district officials that poultry sector received a major setback due to bird flu in 2006. The entire poultry business was wiped out and has not been able to revive since then.

b) The per capita district domestic product of Jalgaon district was Rs 32072/- at current prices in 2006-07. This is below state average of Rs 41,331/- during the corresponding period. About 56 percent of workforce is engaged in agriculture and allied sector. It is thus necessary to give boost to this sector so as to improve the livelihood of majority of persons engaged in this sector.

As mentioned earlier, the major cash crops cultivated in Jalgaon is cotton while banana is a major horticultural crop in the district. Jalgaon district has 43725 hectares under banana cultivation which accounts for 60 percent of area in the state. Cultivation of banana can secure remunerative returns to farmers. Jain Irrigation System Ltd. has a huge unit in the district which produces tissue culture disease free seedlings of banana. Majority of farmers use tissue culture plants as seedlings which enables them to secure higher yields. In one hectare, about 4444 banana seedlings were planted. A discussion with President of Banana Growers' Association revealed that farmers using tissue culture plants can reap gross returns of Rs 4.0 lakhs per hectare. With a cost of production per hectare of Rs 2.5 lakhs, farmers can earn a net profit of Rs 1.50 lakhs per hectare. The mortality of plants is also much lower in case of tissue culture as against traditional seedlings. However, to maximise returns from banana cultivation, interview with several banana growers revealed that there are constraints in banana cultivation. Inputs especially seedlings are not available on time and are in short supply. Canal irrigation is needed and any shortage of water would ruin the banana cultivation. Fertilizers purchased by farmers which often come from Madhya Pradesh are spurious. Although drip irrigation is very popular, there are several hours of load shedding. The transformer often gets burnt or stolen. Labour is also in shortage and agricultural labourers do not regularly report for work. However, farmers as well as government officials explained that while technology is advanced with respect to banana cultivation, the major problem is that of post harvest infrastructure. The district lacks adequate packaging centres and mobile reefer vans to transport the produce. Banana is an extremely perishable crop and improper handling leads to huge post harvest losses. The vehicles that transport the produce are over loaded which often destroys the quality of the crop. In the event improper and inadequate post harvest facilities, farmers are unable to fetch good price for their produce and thus incur huge losses. Thus all their efforts to reap a rich harvest are in vain due to post harvest losses.

In view of the above, the farming community and officials of Banana Growers' Association highlighted the need for packaging centres, reefer vans, cold storage units etc. so that their produce could reach the final consumer without any loss in quality. This would enable them to earn much higher returns for their produce. Banana is cultivated by a large number of marginal and small farmers and hence improvement in the

input market as well as supply chain would go a long way in improving their livelihood conditions.

The Banana farmers were dissatisfied as the district administration collected an education cess at the rate of Rs.55/- per acre up to 5 acres which increase to Rs. 110 per acre for land holdings above 5 acres.

The farmers explained to us that the water of the Mega Recharge Canal should reach them without which the banana economy of Jalgaon will collapse.

The crop was also threatened by major natural calamities (such as high velocity wind) and sometimes stolen. A research centre of Indian Meteorological Department should be set up so that farmers are forewarned about prevailing climatic conditions.

The poor condition of internal roads damaged the crop during transport. There was complaint from farmers that the railway authorities did not consider banana crop as a fruit crop. Wagons carrying fertilisers and other manure were downloaded and the same wagons were used to transport banana. The farmers greatly felt the need for special wagons in trains to transport their produce.

An important by-product of banana was its fibre which can be used for manufacturing good quality thread.

In Raver taluka in Jalgaon district, it was also observed that farmers have started diversifying their cropping pattern by cultivating spice crops such as ginger and turmeric. Ginger was a very remunerative crop and while cost of cultivation was Rs 5.0 lakh per hectare, the gross returns were Rs 15.0 lakh per hectare. Thus the farmer could earn a net return of as much as Rs 10.0 lakh per hectare from ginger cultivation. Turmeric also provided good returns to farmers and while cost of cultivation was Rs 1.25 lakhs per hectare, the gross returns were Rs 2.50 lakhs per hectare. Thus the net returns were Rs 1.25 lakhs per hectare. Thus cultivation of spice crops played an important role in diversifying the cropping pattern, preventing monoculture thus maintaining soil health and enabling the farmers to reap better returns.

Finally it was observed that attempts have been made in Jalgaon taluka to promote agri-tourism. *Aryan Farms* has made headway in this direction. Several farmers showed interest in this activity.

- c) As per *Strategic Research Extension and Marketing Plan of Jalgaon District 2006-07*, prepared by Agricultural Technology Management Agency (ATMA), Jalgaon, the district has been divided into two agro-ecological situations. One is Scarcity Zone and another is zone which is numbered as AES I and II respectively.

Agro-Ecological Situation	Characteristics	Blocks Covered	Priority Areas
AES I	Light to medium black soils with assured rainfall, poor in soil fertility, major crops are of dry land agriculture included Jowar, Bajra, Pulses, dry land horticulture and milk production are a a-major subsidiary occupations.	Parola, Amalner, Chalisagaon, Bhadgaon, Pachora	Cultivation of dry land crops such as Jowar, Bajra, Pulses, dry land horticulture
AES II	Medium to heavy soils, black cotton soils with assured rainfall zone. Soils are rich in P and K content.	Raver, Muktanagar, Yawal, Bhusawal, Jalgaon, Jamner, Erandol, Dharangaon, Chopada, Bodwad	Cultivation of cotton, jowar, soybean, maize and banana

2. Capacity building of Planning Committees (PCs) and APUs and others involved in planning

(i) Number of trainings/workshops/meetings conducted for capacity building of the planning units

- Meetings were held with TSI and supportive departments.

(ii) Material for No. (i) Prepared and distributed or not? If yes, enclose specimens

-Yes

(iii) Has *plan plus* or any other software been used to facilitate planning or not?

- Not used

3. Data Collection and Analysis for Planning (Quantity and Quality of data)

i. Sources —

a. Name the sources:

-Taluka/District Agriculture and Allied Departments, Maharashtra State Agriculture Marketing Board (MSAMB), Soil Survey Department and related departments, etc.

b. Give suggestions for improving data sources:

-The data was not reported in the report (as per manual).

The copy of table 1-78 was submitted to us by DSAO at the time of visit to his office. The tables along with explanations should be incorporated in the report at appropriate places.

ii. Quantity and quality of data satisfactory or not? If not, what more data was needed? How the quality of data can be improved?

- The data was not reported in the report as per manual. The data available was satisfactory (as a copy of table 1-78 was submitted by DSAO to us on our visit to his office). The tables along with explanations should be incorporated in the report at appropriate places.

Parameters of data analysis –

i. SWOT analysis of LB/District done thoroughly or not? (It should be of the district and not the individual activities)-

-SWOT analysis has not been done in a separate chapter as designed in the manual. It has been done separately for each crop in different chapters and thus not according to the manual.

ii. Block data to explain spatial disparities/variabilities of the district given or not?

- The data was not reported in the report as per manual. DSAO, Jalgaon submitted a copy of table 1-78 to us at the time of visit. Most of the data is available/presented block-wise (as per manual). The tables along with explanations should be incorporated in the report at appropriate places.

- iii. Gaps for important variables worked out or not? -
- Talukwise yield gap analysis has been reported.
- iv. Trends from the data collected for important variables like land use parameters, agro-based industry, production, productivity, population, population growth and migration, employment opportunities etc. taken into account or not?; -

-The data on Sericulture, Small Scale Industries, K.V.I, D.I.C., Handlooms and textiles were not available. Most other data have been reported.
- v. Summary tables prepared or not for discussions to synthesize needs/problems/ potentials in a participatory mode?

--The data was not reported in the report (as per manual).
The copy of table 1-78 was submitted to us by DSAO at the time of visit to his office. The tables along with explanations should be incorporated in the report at appropriate places.
- vi. Base maps and district profile given or not? Are these adequate?

-All the maps indicated in Manual need to be incorporated in the report at appropriate places.

5. Synthesis of needs, problems, and potentials

These are required to draw important interventions needed for planning in a participatory manner. -

Parameters

Needs/problems/potentials were synthesized taking into account the following or not?

- a) SWOT analysis of the district
 - b) Inputs from Gram Sabhas
 - c) Detailed analysis of the data.
- a) The analysis of data collected in tables 1-78 needs to be incorporated in the report at the appropriate place. The SWOT analysis is not in a separate chapter as designed in the manual and is done separately for each crop. It needs to be strengthened with facts and figures.
 - b) Informal discussions were held with farmers, Banana Growers' Association, Sarpanch and ATMA officials. However, there is no written record of same.

c) There is scope to improve the analysis.

List of these needs / problems/potentials given or not?

- The interventions required to improve the input market and supply chain have been indicated.

Has **prioritization** of needs been done or not? Give the list of prioritized needs.

- Prioritization has not been done. However, on discussion at village level, it was observed that the most pressing need of farmers was lack of irrigation facilities. Although drip irrigation was gaining popularity, farmers faced problems of depleting ground water resources and major power cuts. Even in case of kharif crops, rainfall was not received at the appropriate time. Hence protective irrigation was needed. But with insufficient ground water and power cut this proved to be a major constraint. The potential yield of Bt cotton which accounted for 41 percent of GCA in Jalgaon cannot be realised in the absence of irrigation.

In case of banana which was a very important horticultural crop in the district, the major constraint was lack of post harvest infrastructure facilities. Technology with respect to banana crop was advanced but farmers after using tissue culture seedlings and complementary inputs could not secure good returns for their labour due to poor post harvest infrastructure which greatly reduced the quality of the crop.

6. Study of ongoing programmes in the area

Parameters –

- i. Were on-going programmes and schemes been studied or not?
 - Steam I and II were indicated. Necessary intervention required for improving productivity were suggested.
- ii. How many needs, problems, potentials and solution interventions have been addressed through on-going programmes/schemes?
 - This was not clear from the report.
- iii. How many funds were available from on-going programmes? Were these converged to formulate C-DAP or not?

-This was not clear from report.

7. Formulation of projects in C-DAP

Parameters –

- i. Were the projects and works identified on the basis of: a) Prioritized needs, b) benefits expected, c) expenditure involved, and d) availability of needed material or infrastructure taken into account
Proposed outlay for Stream 1 and II were indicated for agriculture and allied sector.
- ii. Was the decision logistics in deciding projects and works improved by discussion with the planning committee or not? (This ensures participation at various levels of C-DAP preparation)

As mentioned above, the following officers were engaged in the preparation of C-DAP-

1. District Superintendent Agriculture Officer, Jalgaon
2. Officers from Agriculture and Allied Department of Jalgaon district
3. Scientists from Mahatma Phule Krishi Vidyapeeth, Rahuri
4. Scientist from National Research Centre for Oilseed and Research Centre For Banana (MPKV, Rahuri).
5. Scientist/Subject Matter Experts of Krishi Vigyan Kendra (KVK), Pal

As such the above mentioned officials served as the Technical Support Group (TSI) in preparation of C-DAP.

Informal meeting were held at block and village level as well as with ATMA to sense the need of the farmers. However, there is no record of same.

8. In a number of district plans so far received, the procedure followed (in the plan preparation) is not clear. As a result some of the issues will become difficult to review. Therefore, the planning units may be advised to include one chapter/section describing methodology of preparing C-DAPs with the following details.
 - i) Sources of data – official documents, sample surveys, Rapid Rural Appraisal (RRA), Participatory Rural Appraisal (PRA), case-study method or any other method followed

-Not Explained

- ii) Technical methodology followed in arriving at the cost estimates of the proposed projects in the plan or at least a reference to the respective DPR s

-Not Explained

- iii) Description of the consultative processes followed. Details of the procedure followed in village level, block level and district level consultations may be provided. A copy of the village and block level schedules canvassed, if any, may also be included.

-Not explained

- iv) A scheme of convergence (functional and convergence) among the existing programs/schemes.

-Not explained

- v) Any other detail important to preparation of C-DAP

-Not explained

(This will help the reader to know about the procedure followed and activities undertaken during preparation of C-DAP)

9. Programme delivery spelt out or not? A table showing Name of department, project/ works/ activities entrusted to each department and funds provided are shown in C-DAP or not?

- For the XI Five Year Plan, outlay for Stream I and II have been indicated for agriculture and allied sector.

10. Monitoring and evaluation mechanism suggested or not?

- There was no formal monitoring and evaluation mechanism.

11. Others

AERCs should also comment on awareness about this planning initiative of the Government among people, departments, administrators and politicians of the area.

- During the field visit, it was observed that farmers are aware of subsidies on Farm pond, micro-irrigation, National Horticulture Mission, EGS linked Horticulture Scheme, NREGS. However, they were not actively involved in preparation of C-DAP.

In addition to the above, the AERCs may suggest inclusions of details which they may deem necessary for a review/monitoring/evaluation in future.

On going through the report, following observations were made:

- The Chapter pattern as represented in CDAP manual was not followed. The report has to be redesigned as per manual, i.e. Chapter I to VI.
- The tables 1-78 are not used in the text of the report. The analysis of data in table 1-78 should be incorporated in the text with explanations at the appropriate place.
- The chapters should contain the areas mentioned in the manuals
- SWOT analysis should be strengthened and incorporated in chapter 3 as per manual.
- The data presented which are not relevant to the report should be deleted.
- Table number should be given as per Chapter plan(for example Chapter II...Table 2.1, 2.2.....)
- The maps should be included at appropriate places
- Figures based on data should be added at appropriate places
- Page numbers should be indicated properly.
- List of tables, list of figures and Maps, List of Abbreviations should be included.
- Executive Summary should be included
- Design of Manual (given on Page 3) should be corrected and rewritten.

Photo 1: Meeting with District Superintending Agriculture Officer and his team at DSAO Office, Jalgaon on August 5, 2009



Photo. 2: Our meeting with farmers at Jalke village of Jalgaon Taluka and Waghoda village of Raver taluka, Jalgaon on August 5-6, 2009



Photo 3: Visit to Post Harvest Infrastructure sanctioned by APEDA and Private Plant at Jalke village of Jalgaon Taluka

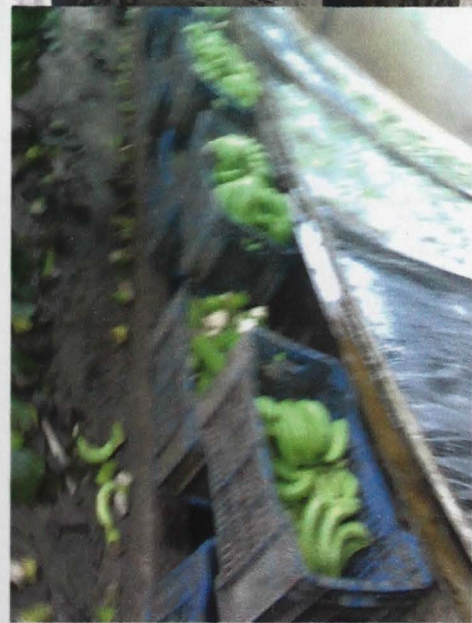


Photo 4: Visit to Aryan Farms (Agro-Tourism)



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