



GOVERNMENT OF KARNATAKA

**REPORT**  
ON  
**WASTAGE AND STAGNATION**  
IN  
**AGRICULTURAL EDUCATION IN KARNATAKA**

MANPOWER AND EMPLOYMENT DIVISION  
PLANNING DEPARTMENT  
BANGALORE  
1985

GOVERNMENT OF KARNATAKA

R E P O R T  
O N  
WASTAGE AND STAGNATION  
IN AGRICULTURAL EDUCATION  
IN KARNATAKA

MANPOWER AND EMPLOYMENT DIVN.

PLANNING DEPARTMENT

BANGALORE

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## F O R E W O R D

The availability of trained personnel has a crucial role in accelerating agricultural development. An important aspect which determines the speed with which the transformation into modern agriculture is achieved is the quality and size of manpower working and availability in key posts in the field of agricultural development, extension, agricultural research and agricultural education.

In this report, an attempt is made to assess the efficiency of the educational System which has to produce the required manpower to man the different posts in order to be able to achieve the targets prescribed in developmental plans. The area of coverage is Undergraduates in Agriculture, Fisheries and Diploma Holders in Agricultural Engineering. The broad magnitudes of drop outs and stagnation are given.

I hope that the findings of this report would help in taking appropriate remedial measures to improve the availability of skilled manpower as well as help in building up a data base so that more meaningful studies are taken up in future.

I am thankful for the co-operation of my colleagues working in the Manpower & Employment Division of the Planning Department in preparing this report.

Bangalore,  
Date:9/9/85

(Dr.D.M.Nanjundappa)  
Commissioner and Secretary to Govt.,  
Planning Department &  
Department of Institutional Finance  
and Statistics.

## P R E F A C E

To assess the efficiency of the Educational System, repeat studies are conducted about the Wastage and Drop outs in Technical and Professional Education. This type of an analysis serves two purposes; one, it helps in finding out the rate of stagnation and drop outs and helps in instituting appropriate remedial measures by which the rates are brought down to a reasonable level. Secondly, wastage rates are needed for purposes of estimation of available supply for assessing the demand and supply of skilled manpower at different points of time. Education and Manpower Planners attach equal importance about both these objectives.

Due to the fact that the analysis has to allow for completion of the normal period of the course plus additional number of attempts allowed to complete the course in the choice of the reference period, address of drop outs available in the institution's Admission Registers and Registers of their results get outdated. For instance if the prescribed duration of the course is Five years and the candidate is allowed as per statute 3 attempts before he is disqualified for the appearing for the Examination one has to choose a reference year where normal plus 3 years are over. The analysis for reasons for drop outs is not effective because either the addresses are not available or even if available, the response would be poor because the addresses are not likely to be in the places indicated.

The data for the present analysis was obtained from the University of Agricultural Sciences, Agricultural Engineering Institute, Raichur, and Agricultural College, Dharwar, After the draft report was ready, the report was sent to the University of Agricultural Sciences for their comments on the recommendations made in this report. The comments of the University of Agricultural Sciences are given in page 7 of the report.

Sri.M.Satyanaraya<sup>n</sup>, Joint Director, and Sri.K.Firoze Ahmed, Deputy Director, with the assistance of Sri.N.L.Putte Gowda and Sri.J.Sridhar, Senior Investigators, have prepared the draft report.

We are thankful to the University and the Principals of the Colleges who furnished the required information quickly.

Bangalore.  
Date:6-9-85

( M.A.SREENIVAS )  
Director,  
Manpower & Employment Division,  
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## Introduction:

1. Availability of trained personnel has a crucial role in accelerating Agricultural Development. An important determinant of the speed with which desired transformation into modern agriculture is achieved, is the quality and number of manpower working and available in key posts in the field of agricultural development, extension, agricultural research and agricultural education. Problems connected with one aspect or other of trained manpower in Agricultural Sector have received the attention it deserves. But it is also necessary to assess the efficiency of the educational system which has to produce the required manpower to man the different posts in order to be able to achieve the targets prescribed in developmental plans.

## Coverage:-

2. Keeping this objective in view, an attempt has been made to estimate the magnitude of drop outs from certain courses in Agricultural Education, assess the extent of stagnation and estimate yearwise proportion of pass outs from a particular cohort year. The coverage includes Diploma Course in Agricultural Engineering, Degree and Post Graduate Course in Agriculture and Degree Course in Fisheries Education. The analysis covers 3 batches of students. The batch years selected for the Degree and Diploma Courses are 1972-73, 1973-74 and 1974-75. For the Post Graduate Course, the batch years selected are 1977-78, 1978-79 and 1979-80. Depending upon the duration of the courses, the corresponding out turns of the cohort years have been considered. Although efforts were made to have full information from all the institutions imparting education in Agriculture, Information with respect to Agriculture College, Bangalore, and Veterinary Sciences College, Bangalore, could not be collected as these agencies were not in a position to furnish the information required. University of Agricultural Sciences have informed that the information required individual student wise for this type of analysis has not been maintained and that only Basic information about the number of students admitted and, number of students completed is only maintained.

3. To facilitate full analysis, it is necessary that University of Agricultural Science should maintain individual students cards. It is necessary that these cards are maintained atleast for a period of five years from the date of student finally leaves the Institution. This card is to be maintained for each examination starting from the first Trimester or the first annual as the case may be till he completes the course. Once these cards are maintained, University of Agricultural Sciences on their own should take up studies of this type to find out how the Educational system is functioning. Based on the results of these studies, appropriate remedial measures are to be devised to remove the defects noticed in the training system.

4. Utilisation Capacity:- In the case of under graduate courses including diploma courses, there is a fixed sanctioned intake but in the case of post graduate courses there is no sanctioned intake. It varies from year to year. Further as can be seen from the University records, selections are made for admission to the various under graduate courses according to the sanctioned strength. The selected students take admission but do not register their names for the various courses. In the meanwhile they leave the institutions without any intimation to the institutions/university. According to the university regulations the vacancies caused after two weeks of the commencement of the courses can not be filled up as the minimum stipulated attendance for taking the examination is 80%. As such some sanctioned seats remain vacant, due to circumstances beyond the control of the university. Keeping in view the above facts an analysis of utilisation of capacity has been made in the case of degree and diploma courses only.

5. The utilisation of intake capacity ranges from 55.00% in 1973-74 to 85.00% in 1974-75 in diploma courses, 80.00 per cent in 1973-74 to 97.50 per cent in 1974-75 in respect of B.F.Sc., and 94.29% in 1972-73 to 101.43% in 1974-75 in respect of B.Sc., (Agril).



6. College wise average utilisation of intake capacity was lowest in the Agricultural Institute, Raichur. The overall per centage of utilisation was 70.83%. In the Agricultural College Dharwar, the overall intake capacity utilisation during 3 years (1972-75) was 96.67%. Details are furnished in table 1.

7. Outturn and Wastage in the Courses:-

The outturn in the case of under graduates and diploma courses can be easily calculated since there are set number of specific courses in the curricula offered and completed within the given number of years or trimisters. But in the case of post graduate courses the university regulations mention only the minimum period of two years and also minimum number of credits (grades) to be completed and not the actual number of credits (grades) that have to be completed by the students which vary from students to student depending upon the courses prescribed by the advisory committee and the subjects given for each one. The final date of completion in the case of post graduates would be the date of viva-voce by which time the student is expected to have completed his research project, including analysis of the data, preparation of the thesis and the receipt of evaluation report. Thus the normal period for passing the Post Graduate Courses varies from student to student and batch to batch.

8. Comparing outturn to actual intake, it is found that in the year 1973-74 in respect of Diploma Course the percentage of outturn was 95.45%, which has been the highest during the 3 years under study. The lower percentage of outturn (86%) was in the year 1972-73. The outturn ranges from 65.71% in 1972-73 to 100% in 1974-75, in respect of B.F.Sc., while in B.Sc., Agril. the outturn which was 79.55% in 1973-74 increased to 83% in 1974-75.

9. Institution wise, it is noticed that Agricultural College at Dharwad (M.Sc., Agril) has recorded lowest average percentage of students completing the course (48.98%) while in Agricultural Institute, Raichur the overall percentage of cutturn was highest i.e., 91.76%. Details are given in Table 1 & 5.

10. Wastages are of two kinds. Namely stagnation and dropouts. Stagnation index shows a decline from year to year in the, Diploma and Degree Courses, which was as high as 38.10% (Diploma) in the year 1973-74 reduced to 22.92% in 1974-75. In respect of B.F.Sc., B.Sc., (Agril) there are fluctuation from year to year. Stagnation index for post graduate courses is not relevant. The average effective duration for Diploma course was 4.08 years, 4.14 years, & 3.69 years in the years 1972-73, 1973-74 & 1974-75 respectively. Likewise the effective duration in B.F.Sc., course was 4.17 years, 4.07 years and 4.12 years in 1972-73, 1973-1974 and 1974-75 respectively. In case of B.Sc., Agril. the effective duration was 4.39 years, 4.14 years and 4.22 years in 1972-73 1973-74 and 1974-75 respectively. Details are given in Table 2.

11. The percentage of students passing within the normal period in the degree courses has been showing an increase, 60.00% of the students belonging to cohort batch year 1972-73 in respect of B.F.Sc., completed the course within the normal period and this percentage increased to 92.31% in respect of cohort batch year 1974-75. The percentage of students passing the course within the normal i.e., prescribed period in respect of B.Sc., (Agril) has increased from 56.82% in 1972-73 to 72.53% in 1974-75. In respect of Diploma course it has shown a mixed trend. The highest percent of students passing within the normal period was 55.89% in 1974-75 and the lowest was 31.82% in 1973-74. Among the institutions the stagnation index (31.20%) was very high in the Agricultural Institute, Raichur and the average effective duration was 3.94 year. In other words average percentage of passes within the normal period was low. The overall average of the students who have passed within the prescribed normal period was 43.53%.

12. In the Agricultural College, Dharwad (Degree courses) the overall average of the students who passed within the normal period was 66.75%. Details are given in table 2.

13. 34.29% of the students belonging to cohort years 1972-73 in B.F.Sc., dropped out of the course. This drop out ratio came to 15.62% in cohort batch year 1973-74. There were no drop outs during 1974-75. In the M.F.Sc., course the drop out ratio was 21.05% in respect of cohort batch year 1978-79, sharply declined to 19.05% in respect of 1979-80. In M.Sc., (Agril), the drop out ratio was as high as 29.41% for the cohort batch year 1977-78, reduced to 5.15% in respect of cohort batch year 1979-80. An analysis of stage of drop out indicates that all the drop outs have taken place before the completion of the courses. The details are given in table 1.

#### RECOMMENDATIONS

1. To introduce the student career card as suggested in para 3.
2. To ensure a better utilisation of intake capacity in the degree and diploma courses, only three days from the date of commencement should be fixed for a student to register for the course after they take admission failing which his admission should be cancelled and the seat allotted to another candidate. It may also be necessary to compel the students to continue the course once he got registered. Amendment to University regulations in this regard may be thought of.
3. To increase percentage of passed within the normal period it may be necessary to introduce entrance examination to eliminate students having no aptitude. Only students with merit should be admitted to the course. Periodical tests to make the students capable of facing the examinations are to be introduced.

UNIVERSITY OF AGRICULTURAL SCIENCES  
STUDENTS PROGRESS CARD

- 1) Name of the Student :
- 2) ID No :
- 3) Year of Admission :
- 4) Course to which admitted ;

Progress Achieved (AGP/CGPA)

-----  
IYr. IIYr. IIIYr. IV Yr. VYr. VIYr. VIIYr. VIIIYr.

I Trimester

II Trimester

III Trimester  
-----

AGP/CGPA  
obtained  
at the end  
of the year  
-----

Asst.Regist rar/Superintendent

COMMENTS OF THE UNIVERSITY OF  
AGRICULTURAL SCIENCES, KARNATAKA  
ON THE RECOMMENDATIONS ON WASTAGE  
AND STAGNATION IN AGRICULTURAL  
EDUCATION

Recommendations-1

We have already informed that maintaining individual cards may not be possible with the existing staff strength and it could well be done when additional staff is recruited for the Academic units. However a draft card is developed and enclosed.

Recommendations-2

Fixing only three days for registration after the commencement needs amendment to regulations. This matter will be further examined. It may be mentioned that while the vacancies arising during the first week would be filled up, the vacancies that arise after the first two weeks cannot be filled in. In fact most of the vacancies and consequential wastage is of the latter type.

As regards compelling the students to continue the course once he registers, it may not be either desirable or legally possible, because, sometimes meritted students changeover to Medical or Engineering when they get seats at a later stage. We cannot prevent them for leaving. Similarly if a student gets admission to a course other than that of his choice for want of higher percentage, he may try to take re-admission next year or even in the same year he may change over to another course in the University when he gets a seat in the subsequent list of subjects of higher preference for which his name had been kept in reserve. At that stage we cannot fill in the/<sup>vacancy</sup> in the course from which he has left. Hence it will be difficult to accept this suggestion.

Recommendations-3

We are not sure that the low percent of passes if it could be considered low, can be solved by mere entrance examination. In the first place, on an average about 75-80 percent of the students pass within the normal period, barring some individual years. This by no means a low percentage. No system can ensure 100 per cent passes. In fact, the students admitted under each category are of high merit. Under any system certain percentage of failure cannot be avoided.

TABLE - I  
COLLEGE WISE, BATCHES YEARWISE, UTILISATION CAPACITY AND  
DROP OUT RATIOS

Sl. No.	Name of the Institution	Course and duration of the course	Batch years	Sanctioned intake	Actual intake	% of the actual intake	Drop Outs Nos	%	Transferred to other institution Nos.	%
1.	Agricultural Institution Raichur	Diploma in Agril. Engineering 3 years	1972-73	40	29	72.50	4	13.79	-	-
			1973-74	40	22	55.00	1	4.55	-	-
			1974-75	40	34	85.00	2	5.88	-	-
			Total	120	85	70.83	7	8.24	-	-
2.	Fisheries College, Mangalore	B.F.Sc., 4 years	1972-73	40	35	87.50	12	34.29	-	-
			1973-74	40	32	80.00	5	15.62	-	-
			1974-75	40	39	97.50	-	-	-	-
			Total	120	106	88.36	17	16.04	-	-
3.	Agricultural College Dharwad	B.Sc., (Agril) 4 years	1972-73	140	132	94.29	-	-	14	10.61
			1973-74	140	132	94.29	-	-	24	18.18
			1974-75	140	142	101.43	-	-	16	11.27
			Total	420	406	96.67	-	-	54	13.30
4.	Fisheries College Mangalore	M.F.Sc.,	1977-78	9	9	100.00	-	-	-	-
			1978-79	19	19	100.00	4	21.05	-	-
			1979-80	21	21	100.00	4	19.05	-	-
			Total:	49	49	100.00	8	16.33	-	-

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5. Agricultural		1977-78	85	85	100.00	25	29.41	1	1.18
College,	M.Sc.,	1978-79	116	116	100.00	5	4.31	2	1.72
Dharwad	Agri.	1979-80	136	136	100.00	7	5.15	7	5.15
		Total	337	337	100.00	37	10.98	10	2.97

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T A B L E - 2

COLLEGE WISE, BATCH YEARWISE PASS OUT PATTERN, STAGNATION INDEX AND EFFECTIVE DURATION:

Sl No	Name of the College	Course/ : duration of the course : (normal) time	Batch year	Actual : in - take	Passed in : normal : time		Passed in : N+1 year		Passed in : N+2 year		Passed in : N+3 year		Total : passed : (out - turn)		Star - : on in - dex	Effective : duration : in years
					No	%	No	%	No	%	No	%	No	%		
1.	Agricultural Institute Raichur	Diploma in Agricultural Engineering (3 years)	1972-73	20	11	37.94	6	20.69	3	10.34	5	17.24	25	86.21	36.00	4.08
			1973-74	22	7	31.82	8	36.36	2	9.09	4	18.18	21	95.45	38.10	4.14
			1974-75	34	19	55.89	7	20.59	3	8.82	3	8.82	32	94.12	22.92	3.69
			Total	85	37	43.53	21	24.70	8	9.41	12	14.12	78	91.76	31.20	3.94
2.	Fisheries College, Mangalore.	B.F.Sc., (4years)	1972-73	35	21	60.00	-	-	2	5.71	-	-	23	65.71	4.35	4.17
			1973-74	32	25	78.13	2	6.25	-	-	-	-	27	84.38	1.85	4.07
			1974-75	39	36	92.31	1	2.56	2	5.13	-	-	39	100.00	3.20	4.12
			Total	106	82	76.36	3	2.83	4	3.77	-	-	89	83.96	2.25	4.09
3.	Agricultural college, Dharwad.	B.Sc., Agricul- tural (4years)	1972-73	132	75	56.82	37	28.03	4	3.03	-	-	116	87.88	9.70	4.39
			1973-74	132	93	70.46	9	6.82	3	2.27	-	-	105	79.55	3.57	4.14
			1974-75	142	103	72.53	9	6.34	4	2.82	3	2.11	119	83.80	5.16	4.22
			Total	406	271	66.75	55	13.55	11	2.70	3	0.74	340	83.74	6.32	4.25

In Agricultural College, Dharwad in B.Sc., Agril. Course, 12 students did not complete the course.

( Batch yearwise 2,3, and 7 students ).

TABLE - 3  
POST - GRADUATION

Sl No	Batch year	:Sanctioned: intake	:Actual: Intake:	:Drowned: out	:Transferred: to other institution		:Total: passed		:Yet to: complete the course		
					No:	%	No:	%	No:	%	No:
1. Fisheries College, Mangalore - M.F.Sc.,											
1.	1977-78	9	9	-	-	-	-	9	100.00	-	-
2.	1978-79	19	19	4	21.05	-	-	15	78.95	-	-
3.	1979-80	21	21	4	19.05	-	-	17	80.95	-	-
4.	Total	49	49	8	16.33	-	-	41	83.67	-	-
2. Agricultural College, Dharwad - M.Sc., (Agriculture)											
1.	1977-78	85	85	25	29.41	1	1.18	56	65.88	3	3.53
2.	1978-79	116	116	5	4.31	2	1.72	68	58.63	41	35.34
3.	1979-80	136	136	7	5.15	7	5.15	41	30.15	81	59.55
4.	Total	337	337	37	10.98	10	2.97	165	48.96	125	37.09

PROFORMA

WASTAGE AND STAGNATION IN AGRICULTURAL EDUCATION IN KARNATAKA (MASTER DEGREE LEVEL)

1. Name of the Institution. 3. Name of the course.  
 2. Year of Establishment. 4. Duration of the course.

No. of students who dropped out (discontinued)

Sl. No.	Academic year	Sanctioned intake (seats)	No. of students actually admitted	No. of students actually admitted	No. of students transferred to other institutions	During 1st Yr	During 2nd Yr	During 3rd Yr	During 4th Yr	During 5th Yr	No. of students who discontinued after completing the course
1	2	3	4	5	6	7	8	9	10	11	

1977-78  
 78-79  
 79-80

- 13 -

Contd...

No. of students who passed the course in the normal period.	Distribution of No. of students who took additional time to obtain the degree if additional time taken.			Remarks
	Normal + 1 Yr	Normal + 2 Yrs	Normal + 3 Yrs	
12	13	14	15	16

Data should be furnished in all the columns about the batch of students admitted in the year indicate in the column. Column 4 is equal to the columns from 6 to 18-5.

PROFORMA  
WASTAGE AND STAGNATION IN AGRICULTURAL EDUCATION IN KARNATAKA (DEGREE/DIPLOMA LEVEL)

1. Name of the Institution.  
2. Year of establishment.

3. Name of the course  
4. Duration of the course.

No. of students who dropped out (discontinued)

Sl.No	Academic year	Sanctioned intake	No. of students actually admitted	No. of students transferred to other institutions.	During 1st Yr	During 2nd Yr	During 3rd Yr	During 4th Yr	During 5th Yr	No. of students who discontinued after completing the course.
1	2	3	4	5	6	7	8	9	10	11

1972-73  
73-74  
74-75

No. of students who passed the course in the normal period,	Distribution of No. of students who took addl. time to obtain the degree/diploma if addl. time taken.			Remarks
	Normal + 1 Yr	Normal + 2 Yrs.	Normal + 3 Yrs.	
12	13	14	15	

Data should be furnished in all the columns about the batch of students admitted in the year indicate in the column.  
Column 4 is equal to the columns from 6 to 10-5.

Note:- Sanctioned strength should include any additional admissions for which special sanctions accorded by the appropriate authority regarding the intake capacity fixed earlier.

In Col.No.11 the information should be furnished in respect of students who had completed the final year who may or may not take the examination and qualify for the post. It may also include information pertain to students who may yet to take examination but have not been able to complete the course even after 3 years.

In Col.No.12 information of such students who have passed the course within the stipulated period without being detained in any class.