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GOVERNMENT OF KERALA

MANPOWER STUDY SERIES
No. 42

"STUDY ON THE UTILISATION
PATTERN OF TRAINED
TECHNICAL PERSONNEL
IN THE DEPARTMENT
OF AGRICULTURE"

MANPOWER DIVISION
DEPARTMENT OF ECONOMICS
AND STATISTICS, KERALA
MARCH, 1984

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' STUDY ON THE
UTILISATION OF TRAINED
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KERALA

MARCH -- '84

P R E F A C E

"Sectoral Studies, relevant for manpower planning decisions are released through 'Manpower Study Series'.

This "study on the utilisation of trained technical personnel in the Department of Agriculture", conducted Sri.K.K.SAMANTHA BHADRAN, MANPOWER OFFICER of Agriculture department, examines the extent and possibilities of utilisation of trained agricultural personnel by the department. It is hoped that findings of this study will be of immense use in ensuring effective utilization of trained technical manpower for the development and management of agriculture in the State.

Trivandrum

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19-3-1984

pb/8584

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CHAPTER - 1

GENERAL ASPECTS

1.1 Introduction

Agriculture plays an important role in Kerala's economy. Increase in agricultural productivity through various improved agricultural practices is the only possible way to attain higher living standards for the rural people. Introduction of modern techniques of production revolutionised agriculture. Effective implementation of various agricultural development programmes can be obtained through the right involvement and proper utilisation of the trained technical personnel in the field of agriculture. Agriculture department of Kerala, through various training programmes, details of which are given in Appendix II, have trained 177 technical officials in different fields of agricultural activities during 1974-75. This study is an attempt to examine the extent of utilisation of these trained technical personnel for the development of agricultural activities in the State.

1.2 Objectives:

The main objectives of the study are the following:

- i) to examine the relevance of training courses conducted by the department.
- 2) to examine the composition of trained technical personnel in the department and to examine their placement in the district.
- 3) to examine the utilisation of trained technical personnel in the development of agricultural activities in the state, in the light of conditions, favourable and unfavourable, existing in the department.
- 4) to obtain suggestions for optimal utilisation of trained personnel.

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1.3 Methodology and coverage

All the technical personnel in the department of agriculture trained during the 5th plan period (1974-73) were contacted through mailed questionnaire given in Appendix II.

1.4 Response:

Though 177 trained technical personnel in the department of agriculture were contacted, only 116 persons responded and the percentage of response is 65.5 Table 1.1 gives the category-wise details of response.

Table 1.1

Categorywise details of field response

Category of Officers	Number contacted	Number responded			Percentage of response
		Male	Female	Total	
1. Addl. Directors	5	3	--	3	60.0
2. Jt. Directors/Project Officers etc.	8	4	--	4	50.0
3. Dy. Directors/Chief Chemists etc.	37	24	--	24	64.9
4. Asst. Directors/Subject matter specialists etc.	58	44	2	46	79.3
5. Jr. Agri. Officers/Technical Assts. etc.	69	35	4	39	56.5
TOTAL	177	110	6	116	65.5

1.5 Duration of the study

The study was started in 1980 and the filled-in pro forma could be collected only by the end of 1983.

1.6 Limitations of the study

Findings of this study are based on information obtained

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from technical personnel in the department of agriculture who are trained during the 5th plan period. Only 65.5% of the mailed questionnaire could be collected. For the collection and drafting of report nearly 2 years were taken. In the mean time much changes have come about in the organisational structure of the department which is not taken care of in this report.

CHAPTER-2.
FINDINGS OF THE STUDY.

2.1. Training Programmes.

During 1974-79, the Department of Agriculture had trained its technical officers in 50 training courses relating to Agriculture and allied sectors, conducted within the State, outside the state and outside the country, having duration ranging from 3 days to 6 months. Table 2.1 gives a broad classification of the training courses.

TABLE 2.1

Category.	Within the state.	Outside the state.	Outside the country.	Total.
1. Subject Matter training.	17.	10	2	29
2. Agrl. Management training	7	11	2	20
3. Office administration training.		—	—	1
Total.	25	21	4	50

It is seen that 58 % of the training courses are in Agricultural subjects and techniques and 40 % are in Agricultural management. 50% of the training courses are conducted in the state while 42 % in other Indian states and 8% in foreign countries. It is a matter worth noting that the country is well equipped for training agricultural personnel and on its way to self sufficiency in respect training of agricultural personnel. A

detailed list of the 50 training programme referred to is given in Appendix II.

2.2. Trained technical personnel in the department of agriculture.

Trained technical personnel in the department of agriculture include higher level officers like Addl. Directors, Jt. Directors and Deputy Directors, middle level officers like Assistant Directors, and field officers in the cadre of Jr. Agrl. Officers. From Table 1.1 it can be seen that about 40 % of the trained ones are middle level Officers like Assistant Directors, Subject Matter Specialists etc. Another 34 % of the trained are Jr. Agrl. Officers, Technical Assistants etc. and 26 % higher level officers like Additional Director's, Dy. Directors etc.

2.3. Trained technical personnel in the district

District wise distribution of trained technical personnel in the department of agriculture, given in table 2.3, shows that the districts of Idukki, Malappuram, Kozhikode and Cannanore have comparatively lesser percentage of trained technical personnel in relation to the total technical persons in these districts. Trivandrum has the highest number of trained technical officers. Officers of the above mentioned districts having low percentage may be given preference in future training programmes of the department.

TABLE 2.3.

Districtwise distribution of trained technical personnel.

District.	Total Number	Trained technical personnel.	Percentage to total technical personnel.		
		Male.	Female.	Total.	
Trivandrum	154	32	4	36	23.4
Quilon	84	12	-	12	14.3
Alleppey	104	10	-	10	9.6
Kottayam	50	5	1	6	12.0

Idukki.	29	2	-	8	6.9
Ernakulam.	66	8	-	8	12.1
Trichur.	81	15	-	15	18.5
Palakkad.	110	11	1	12	10.9
Malappuram.	69	3	-	3	4.3
Kozhikode.	82	4	-	4	4.9
Cannanore.	95	8	-	8	8.4
STATE:	924	110	6	116	12.6

2.4. Course of training attended:-

Table 2.4 gives the classification of different category of officers according to the nature of the courses attended by them. It is seen that, of the total trained technical personnel in the department, 92% have undergone subject matter and other training courses, 60% have got training in agricultural management and about 35 % are trained in office administration. A high percentage of all the three category of officers have got subject matter and agricultural management trainings and comparatively lesser percentage of field officers are trained in office administration. It is evident that the type of training imparted to the officers is directly useful in the development and management of agricultural activities in the state.

TABLE: 2.4.
Nature of training courses attended.

Nature of training.	High level officers.	Middle level officers.	Field officers.	Total.		% atten-	No. atten-	No. of ded.	% of ded.	No. atten-	the to- tal No.	% of ded.	No. atten-	the to- tal No.	% of ded.	No. atten-	the to- tal No.	% of ded.	
				No.	%					No.				No.					
1. Subject matter training	26	83.9	43	93.5	38	97.4	107	92.											
2. Agri. Management training.	19	61.3	29	63.0	22	56.4	70	60.											

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3. Office administration training 11 35.3 21 45.7 8 20.5 40 34.5

Total No.of trained technical officers. 31 X 46 X 39 X 116 X

2.5 Age composition:-

Age distribution of trained technical personnel in the department of agriculture shows that the highest percentage (58.6) of trained ones are in the dynamic age group of 40-49 and have better chance of utilising their capacities in the development of agriculture in the state. About 34% of the trained ones have to retire from service within a period of five years and have comparatively lesser opportunity of utilising their trained capacities.(x) may be more effective if more of young officers are included in the future training courses.

(x) utilisation of trained capacities

Table 2.5.

Age distribution of trained technical personal.

Age-group.	Number of officers.			Percenta.e.
	Male.	Female.	Total.	
1.	2.	3.	4.	5.
Less than 40	5	4	9	7.8
40-49	63	2	68	58.6
50 and above	39	-	39	33.6
Total.	110	6	116	100.0

2.6 Educational background:

Educational qualification of trained technical personal given in table 2.6 shows that about 76% of the trained officers are agricultural graduates and about 21% are post-graduates. Training programmes are mainly meant for agricultural technical personnel and as such undergraduates who have been given some type of training constitutes only a small percentage.

TABLE 2.6

Educational qualification of trained technical personnel.

Qualification	No. of Officers			Percentage
	Male	Female	Total	
1	2	3	4	5
Agricultural under graduates.	4	..	4	3.4
Agricultural graduates	85	3	88	75.9
Agricultural Post graduates	21	3	24	20.7
Total	110	6	116	100.0

2.7 Place of training

As is seen in Table 2.7 majority of officers (93.1%) have got training either in Kerala State, other Indian States, or in combinations of the above two. Those who are trained outside India or combinations thereof constitutes only a small percentage of the total trained officers. As has already been examined India is self sufficient in training facilities for agricultural personnel.

TABLE 2.7

Classification of trained technical personnel according to place of training.

Place of training	No. of Officers			Percent- age
	Male	Female	Total	
1	2	3	4	5
Kerala State	40	4	44	37.9
Other Indian States	15	1	16	13.8

cont...

	1	2	3	4	5
Kerala & Other Indian States.	47	1	48	41.4	
Foreign countries	1	..	1	0.9	
Kerala & Foreign countries.	5	..	5	4.3	
Kerala, outside Kerala and Outside India.	2	..	2	1.7	
Total	110	6	116	100.00	

2.8 Length of Service

Length of service of trained technical personnel is a pointer to the extent of utilisation of the trained capacities of the officials. More than 89% of the trained ones had more than 10 years of service in the department of agriculture and as such it will not be erroneous if we conclude that the training given have been optionally utilised in discharging their duties as technical officers in the development of agriculture in the State.

TABLE 2.8

Length of service of trained technical personnel.

Length of service	No. of Officers			Percentage
	Male	Female	Total	
10 years and below	10	2	12	10.3
11 - 20 years	40	4	44	38.0
21 - 25 years	37	..	37	31.9
Above 25 years	19	..	19	16.4
Not reported	4	..	4	3.4
Total	110	6	116	100.0

2.9: Work experience.

Table 2.9 gives the classification of trained officials according to experience in different nature of work. Comparatively a good percentage of trained officers have experience in field and office works. Experience in field work and office administration is a factor conducive to the

cont..

effective utilisation of trained capacities in propagation and management of agriculture. Some of them are even experienced in research work and have tried to analyse the problems of development of this sector in that way. Teaching experience also can be utilised in effectively conveying the modern trends in the field to the farmers of the State.

TABLE 2.9

Classification of trained technical personnel according to work experience.

Nature of work	No. of officers	Percentage with experience to the total number of trained technical personnel.
Field work	98	84.5
Research Work	42	36.2
Teaching work	44	37.9
Office work	71	61.2
Total	116	X

2.10 Educating farmers.

Trained technical personnel in the department of Agriculture are intended to impart information to farmers in the following aspects of agricultural development:

1. Improved and high yielding varieties of seeds and their uses.
2. Manurial resources and their utilisation.
3. Chemical fertiliser and their application.
4. Irrigation and its possibilities.
5. Intensive and extensive methods of cultivation.
6. Rotation of crops and its uses.
7. Insecticides, Pesticides and suitable methods of plant protection.
8. Soil analysis and its need etc.

contd..

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In short, the services of trained technical personnel in the department of agriculture are closely associated with the development and management aspects of agricultural activity. Active involvement of farmers in agricultural development of the state depends mainly on the effective utilisation of the trained capacities of the technical officers of the department of agriculture.

2.11 Utilisation of trained technical personnel:

Availability of adequate facilities of training in the country, training of officers in relevant fields of agricultural development and management, fairly satisfactory distribution of trained officers in the district level, training of all important category of officers in the operational and supervisory levels, training of officers in the proper age-group who have much time to serve, training of officers with academic background in agricultural subjects, etc. and their rich experience in fieldwork and office administration are some of the factors which contributes to the effective utilisation of trained technical personnel in the development of agricultural activities in the state. The opinion of the informants as regards the suitability of their postings in the department for better utilisation of their trained talents too supports the proposition of effective utilisation of trained personnel in the field of agriculture. Table 2.10 gives the classification of officers according to the opinion of suitability of postings given by the department.

Table 2.10

Classification of trained technical personnel according to opinion on suitability of posting.

Opinion	No. of officers			Percentage
	Male	Female	Total	
1	2	3	4	5
Got suitable posting after training	71	4	75	64.7
Didnot get suitable posting after training	16	1	17	14.6
Got suitable posting for a short period	3	-	3	2.6
Not reported	20	1	21	18.1
Total	110	6	116	100.0

Nearly 65% of officers have got suitable posting after training, enabling them to effectively utilise their technical knowledge in the improvement of agricultural programmes of the State. The department has given special attention to give suitable postings to its trained officers.

2.12. Publications by trained technical personnel.

Though practical application of agricultural development programmes is more important, theoretical side also is given due importance in the department of Agriculture. Table 2.11 reveals that nearly 25% of the trained officers have taken particular interest in the publication of research papers, articles, books etc. on relevant topics in agriculture, believing it as an indirect way of helping agricultural planning and development in the state.

(contd...)

Table.2.11.

Classification of trained technical personnel according to interest in publication.

Category.	No. of officers			Percentage.
	Male.	Female.	Total	
1	2	3	4	5
With some publications	24	4	28	24.1
With no publications	80	1	81	69.8
Not reported	6	1	7	6.1
Total	110	6	116	100

2.13. Suggestions of trained technical personnel for their better utilisation.

The following are some of the suggestions of informants for the better utilisation of their capacities.

1. Officers trained in agricultural extension and communication may be posted as information officers in Farm Information Bureau.
2. Officers working in a particular discipline must be specialised in that.
3. Training Officers in Farmers Training Centres must be well qualified preferably a post-graduate.

CHAPTER-3.
SUMMARY AND CONCLUSION.

3.1. Summary of findings.

1. Technical officers who have been trained during 1974-79, the 5th plan period, formed the population for this study, conducted in 1980.
2. Of the 177 officers trained during the reference period, and contacted only 116 have responded, the percentage of response being is 65.5.
3. Delay in collection and analysis of data is a notable limitation of this study.

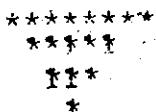
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4. During the reference period, officers have been sent for 50 training courses in total, in area of subject matter, agriculture management and office administration.
5. Majority of the courses conducted and officers trained are in relevant subjects of the former two category.
6. 19% of total technical staff in the department got training during the V plan and majority of trained ones are middle level officers and field officers.
7. Districts of Idukki, Malappuram, Kozhikode and Cannanore have comparatively lesser proportion of trained hands.
8. The highest group of trained officers are below 49 years and have much time in service to utilise their trained talents.
9. Officers trained are having academic qualification in agricultural subjects and majority are graduates in agriculture.
10. 93% of Officers are trained in India.
11. 86% of trained officers have more than 10 years of service in the department and hence know the agricultural climate of Kerala better and can effectively utilise their talents.
12. The rich experiences of trained officers in field work, office work, research work and teaching work reveals them very clear, the real points of utilisation of their capacities.
13. Trained technical personnel are entrusted with the task of teaching farmers in the state all technical aspects of agricultural development.
14. A good number of trained officers have got suitable postings after training, which enabled them to utilise their trained talents better.
15. Some officers show academic interest in their job and take pains to publish research papers, articles, books etc. on crucial topics of agricultural development and planning.
16. Officers are of opinion that better utilisation of their training can be assured if some more attention is paid by the department in giving them suitable postings after training.

(contd...)

3.2. Conclusion:-

The study reveals that trained technical personnel in the department of agriculture is better utilised, though not optimally utilised. A little modification in the existing pattern or arrangement in training and placement of trained ones can ensure their optimal utilisation. Posting of trained officers should be of direct association with the fields in which they are trained. The proportion of trained ones to the total number of technical staff should be reviewed and those districts with a low proportion may be given priority in future training programmes. Instead of sending the same officers for different types of training, more technical officers should be given the chance to get training in one or other specific fields. More research facilities, including incentives, should be given to trained technical personnel to ensure their sincere involvement in the programme of agricultural development in the state.



APPENDIX - I

DIRECTORATE OF AGRICULTURE - MANPOWER UNIT

STUDY ON "UTILISATION OF TRAINED TECHNICAL PERSONNEL IN THE DEPARTMENT OF AGRICULTURE, KERALA".

P R O F O R M A

1. Name.
2. Designation and office address.
3. Date of birth.
4. Sex. Male/ Female.
5. Marital Status. Married Unmarried
6. Whether you belong to Sch.Caste/Sch.tribe/Backward class.
7. Home/State.
8. Mother tongue.
9. Languages which you can read, write and speak.
10. Educational qualifications.

Course of study.	Subject	Name of college/ Insti-	Name of University.	Year of pass-	Class/ division.
------------------	---------	-------------------------	---------------------	---------------	------------------

1. Intermediate/
Pre-degree.
2. B.A.
3. B.S.C.
4. B.Sc.(Agri.)
5. M.Sc.(Agri.)
6. Ph.D.

11. Additional qualifications if any:

If under going any study at present please furnish details such as name of course, name of institution, duration of training, probable date of completion of training etc.

12. Employment. Designation, Name of office. Period.
- Present job Since 19
- previous job from 19 to 19
- Other job. from 19.

(Contd...)

4. Present scale of pay. Rs.
5. Present monthly salary Pay Rs.
D. A. Rs.
H.R.A.Rs.

Other allowances
if any.

Total.

16. Total length of service in the department.

17. Experience. Type of job. No.of years.

- i. Field work.
- ii. Office work.
- iii. Research work.
- iv. Teaching.

18. Training.

i. No. of training courses within/Within Other
undergone since April 1974. Kerala states Foreign.
in
India

ii. Details of training courses undergone: (give information relating to each course separately).

Sl. No.	Course of study.	Subject	Duration of training.	Name of institutions.	Year of training.	Diploma or certificate received if any.
---------	------------------	---------	-----------------------	-----------------------	-------------------	---

- 1.
- 2.
- 3.
- 4.

19. After training did you get a posting where you can utilise the specialisation obtained from training.

20. If not, state the names of suitable posts be fitting your qualification and training.

21. Publication.

(Give the title of each publication)

- i. Research papers published.
- ii. Reports/articles "
- iii. Books.

Signature:

TRAINING PROGRAMME OF DEPARTMENT OF AGRICULTURE (1974-1979)

APPENDIX II

S.I. No.	Name of Training Course	Place	Duration	No. trained
1	2	3	4	5
I. Training in Kerala				
1.	Refresher Training for Junior Agricultural Officers	College of Agriculture, Vellayani	1 Month/ 14 Days	9
2.	Rice Minikit Training	Vellayani/Mannuthy/ Pattambi	4 days	11
3.	Inservice Training	College of Agriculture Vellayani.	3 months/ 1½ months/ 1 month/ 24 days	21
4.	Office Administration Training	KIPA/TMC/ TVM/Ekm.	1 month	21
5.	Project Formulation/Implementation/ Monitoring and Evaluation	KIPA	4 weeks	18
6.	Pest & Disease Surveillance	RRI, Moncomby/Pattambi	1 week	9
7.	Seed Testing & Seed Certification	Pattambi	16 days	3
8.	Bacteriological Technology	College of Agriculture Vellayani.	1 month	1
9.	Subject Matter Refresher Training	-do-	45 days / 1 month / 3 weeks	3
10.	Community Development Programme	E.T.C. Kottarakkara	1 month	1
11.	Agricultural Planning & Development Programme	State Planning Board, Trivandrum.	8	2
12.	Training Course on Cocoa	KAU, Mannuthy.	3 days	3

		1	2	3	4	5
13.	Training in AGMARK Grading of Vegetable Oils.	Regional AGMARK Laboratory, Cochin.	1 month	1 month	1 month	4
14.	Post Graduate Training	College of Agriculture, Vellayani	2 years	1		
15.	Advance Training in Plant Protection/Short Training Course in Plant Protection	1 month / 3 weeks -do-	2 month/1 month/ 3 weeks/6 days	13		
16.	Training in Plantation Crops	CPCRI, Kasaragode.	8 days	21		
17.	Orientation Courses	Vellanikkara	14 days/5 days		2	
18.	Training in Rice Production	College of Agriculture, Vellayani	4 days		1	
19.	Training Course on Pulses	-do-	3 months		2	
20.	Post Graduate Diploma in Plant Protection	KAU.	2 years / 10 months		2	
21.	Performance Budgetting	IMG Trivandrum	7 days		1	
22.	seed Farm Training	C.R.R.I., Pattambi	6 months		1	
23.	Short specialised training in Tapioca Production Technology.	Central Tuber Crops Research Institute, Sreekariyam, Trivandrum	5 days		2	
24.	Agricultural Marketing	Agriculture Directorate, Trivandrum	5 days		1	
25.	Short training Course on Agriculture	Agriculture College, Vellayani	12 days		2	
		Sub-Total.I				160

III. Outside Kerala

1. Rice production technology AICRIP, Hyderabad.
2. Short training course in IARI, New Delhi.
3. Soil testing C.P.P.T.I., Hyderabad.
4. Training in Plant protection Allahabad/EET, Rajendra Nagar.
5. Specialised Workshop in E.E.I., Rajendra Nagar.
6. Production of Audio-visual aids in Agricultural Information material for staff in ETC / FTC etc. N.S.C. New Delhi.
7. Seed Improvement Training Course Pant Nagar University, Food Production, New Delhi.
8. Seed Farm Management Course College of Agriculture, Bombay / R.B.I., Poona.
9. Training in Agricultural Credit Management. CRRI, Cuttack / EET Rajendranagar.
10. Soil and water management Agricultural Extension Institute, Hyderabad.
11. Marketing Secretary Tamil Nadu.
12. Materialological Training Indian Wateriological Department, Poona.
13. Training on Soil Conservation. Ballary.
14. Short Term Orientation EEI, Rajendra Nagar.
15. Training on Planning & Management.

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1	2	3	4	5
15. Seed Testing Training	N.S.C., New Delhi / Agricultural University, Tamil Nadu.	1 month / 7 days	2	
16. Production of Rhizobium Culture and its quality control.	N.I.R.D., Rajendra Nagar	14 days	1	
17. Training in Identification & Development of Entrepreneurs in Rural Area.	Agricultural College, Karnataka Bangalore / Tamil Nadu	3 months	1	
18. Training Course on pulses	I.A.R.I., New Delhi	2 weeks	2	
19. Management Training	N.I.R.D., Rajendra Nagar	7 days	2	
20. Agricultural Development Administration	N.I.R.D., Rajendra Nagar	7 days	2	
21. Training in Agricultural Labour			2	
	Sub Total - II			
III. Foreign training	International Rice Research Institute, Manila, Philippines	6 Months	1	
1. International Rice Research Training	Thailand	43 days	2	
2. Training on Agricultural Extension and Communication.	Reading University, U.K.	3 months	2	
3. Plant protection, Tropichal Weeds Control Training.			1	
4. Management on Agriculture	Assistant Pacific Development Adm'l - Intitiatrion Centre, Kollalampure (conducted at Philippines)	26 days	7	
	Sub Total - III.			
				-:-:-

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