C O N T E N T S

(Contd.....2)

I. INTRODUCTION:

The Kerala Agricultural University has started implementing the Scheme "All India Co-ordinated Project on National Demonstration on Major Food Crops" with the main object to demonstrate convincingly to the farmers, the production potentialities of new agricultural technology designed to obtain maximum production from unit area of land in a unit period of time. The Scheme has started with effect from 19th July 1975, with headquarters at Mannuthy and jurisdiction all over Trichur District. The control of the National Demonstration Project is vested with Dr.V.S.S.Potti, Director of Extension Education, Kerala Agricultural University.

1) Sanction of the Scheme.

The Indian Council of Agricultural Research, New Delhi as per F.13-15/74.Extn. dated 24.3.1975 have conveyed their sanction for the continuation of National Demonstration Project on Major Food Crops in 50 Intensive District during the 5th Five Year Plan period beginning from 1974-75. One of these centres was Trichur District of Kerala State and the Kerala Agricultural University was declared as the implementing authority of this project by Indian Council of Agricultural Research. The Council provides 100% assistance for this project subject to terms and conditions governing the grant-in-aid from the Council. The statement of expenditure for Trichur District show a total financial outlay of Rs.3,65,742 for the entire plan period and Rs.77,781 for 1975-76.

To facilitate the implementation of the scheme in the current year 1975-76 the Kerala Agricultural University has accorded administrative sanction for the implementation of "All India Co-ordinated Project on National Demonstration on Major Food Crops" vide GA(8) 6662/75 dated 19.7.1975.

Period covered in this report	19.7.1975 to 30th June 1976
Date of commencement of the project:	19.7.1975
Date of Termination	End of the 5th Five Year Plan 31.3.1979
Name of Institution	Kerala Agricultural University, Mannuthy, Trichur District, Kerala.
Location of work	Trichur District - with Headquarters at Mannuthy.

2) Technical Personnel employed:

Staff Pattern

The following staff were working in this Project from the dates noted against each.

contd...2...

Name of the Post Designation	Name of the incumbent	Period
1. Subject Matter Specialist (Soil Science)	1.Shri.P.K.Gangadhara Menon	19.7.75 to 14.11.75
	2.Smt.N.P.Chinnamma	5.12.75 to till date
2. Subject Matter Specialist (Agro)	Sri.A.I.Thomas	26..7.75 to till date
3. Subject Matter Specialist (Plant Protection)	Sri.K.C.Varghese	24..7.75 to till date
4. 2nd Grade Agrl. Demonstrator	Sri.C.B.Sugathan	1..8.75 to till date
5. Jeep Driver	Sri.T.G.Mohanan	25.10.75 to till date
6. Subject Matter Specialist (Aggl.Engineering and water Management)	Vacant	till.date

The post of the Subject Matter Specialist (SS) was vacant for a period from 15.11.75 to 4.12.75. Besides this the Post of Subject Matter Specialist (Water Management) was vacant.

FINANCIAL STATEMENT

Total outlay for the entire plan period	Rs. 3,65, 742/
Total amount spent in previous year	Nil
Total amount spent under the period of report	Rs. 51,005.57
ICAR sanctioned amount for 1975-76	Rs. 77,781.00

contd..3..

3) Objectives:

The objectives of national demonstration can be summarised as follows:

1) To convincingly demonstrate to farmers the production potentialities of every unit area of land by using high yielding varieties of crops and adopting a multiple cropping programme and package of practices such as balanced use of fertilizers, effective water management techniques plant protection measures and other agronomic practices.

2) To demonstrate (i) Use of improved implements for different operations and (ii) Use of soil testing laboratories for balanced use of fertilizers.

3) To fully exploit these demonstrations for the purpose of training the farmers in improved cultivation practices and to function as recognised and effective audio-visual aids for the flow of latest research techniques and results to the farmers in these areas.

4) To provide the research workers a first hand knowledge of the problem facing in the farmers fields in growing high yielding varieties and in following multiple cropping patterns.and to identify factors limiting crop yields and the factors contributing towards higher yields.

5) To minimise the time lag between the research discoveries and their application to the farmers.

4) Selection of plots

Immediately after obtaining sanction by the Kerala Agricultural University for N.D.P., the Subject Matter Specialists joined duty in July 1975 itself and commenced the work in connection with the selection of demonstration plot sites. To start with, a preliminary selection of 40 plots of extent one acre each was made in such a way that it represented all soil tracts, problem soil areas, converted areas, convensional lands etc. distributed throughout Trichur District. After the preliminary selection final selection of 25 plots, was made, based on the above criteria in such a way that the plots selected represented all the different agro-climatic zones of the district. The final selection was made in consultation with the District Level Authorities of the Agricultural Department.

contd...4..

TABLE NO. I

List of Cultivators selected for conducting National Demonstration In Trichur District during 1975-76

Code Number *	Name and address of the cultivator	Name of N.E.S. Block	Name of I.P.D.Unit or ... tural Service Co-operat...
1	2	3	4
01 001	Porinchu.K.V., Kattookaran House P.O.Manaloor	Anthicad	S.C.S. No.31
01 002	Rajendra Prasad, Karuvath House P.O.Anthicad	"	S.C.S. No.818 Anthicad
01 003	Ramakrishnan, M.K., Advocate, Veliyannur	"	Kanjani Area
02 004	Jose.K.T., Kizhakkoodan House, Pariyaram.P.O., Via Chalakudy	Chalakudy	S.C.S. Pariyaram 593
02 005	Kunju Vareed.K.I., Kavungal House, Pariyaram.P.O. Elanjipra	"	S.C.S. Kodassery
03 006	Babu.A.S. Akkarapatty House, Mission Quarters, Trichur	Cherpu	S.C.S. Nedupuzha (Nedupuzha Kole)
03 007	Govindan.C.S. Chulliparambil House, P.O.Karuvannur	"	Arattupuzha
03 008	Kochunny.P.V. Ponnery House, Nedupuzha.P.O.	"	S.C.S. No. Nedupuzha (Kanirangalam Kole)
03 009	Radhakrishnan.K. Kundur House, P.O.Ooorakam, Via. Cherpu	"	Theverapadam S.C.S. Ooorakam

contd...5..

1	2	3	4
03 010	Ramdas.C. Chulliparambil House, Arattupuzha.P.O., Via. Ooorakam	Cherpu	S.C.S. No. Cherpu (Chenam Padavu)
05 011	Kochunny.C.C. Cheruvathur House Paigamukku	Chowannur	S.C.S.No.161 Paingamukku, Via.Pazhanji, Kunnamkulam
06 012	Kesavan .K.K. Kallada House Karalam	Irinjalakuda (Karalam Kole)	S.C.S. No. 700 Karalam
06 013	Lonappan.A.J. Hindustan Foundry, Trichur-4	Irinjalakuda	S.C.S. . Kattoor
06 014	Ravinamboodiri.M.C. Mazhuvanchery Mana, P.O.Madaikonam, Via.Irinjalakuda	"	S.C.S. . 112 Karuvannur
07 015	Balakrishna Menon.K.K. KurieMyath House Kodakara	Kodakara	S.C.S. . Kodakara
07 016	Rajan.C.U. C/o Unni Master, S.N.U.P.School, Pookkode, P.O.Varakkara, Via.Amballur	" "	Chengallur S.C.S. Pudukad.
07 017	Unni.C.K. Cheenath House, Mannampetta, P.O.Varakkara, Via.Amballur	"	S.C.S. Varakkale Via.Amballur
09 018	Govindan.K. Kalady House, Ashtamichira.P.O.	Mala	S.C.S. Ashtamichira
09 019	James.K.A. Kanichayil House, Annallur.P.O.	"	S.C.S. Mala
12 020	Babu Varappan, Autokkaran House, Peringavu, Trichur	Ollukkara	S.C.S. Viyyoor.

contd...6..

1	2	3	4
12 021	Ramakrishnan.K. Koothottil House, Chembuthara, P.O.Pattikkad	Ollukkara	Thannipuzha S. C.S. Panancherry
12 022	Uthuppu.E.V. Edappara House, Alappara, Kannara, P.O.	"	Panancherry S.C.S.
13 023	Joyikutty, P.J Edakkaiathur House P.O.Mayanmur, Via Ottappalam	Pazhayannur	S.C.S. Pazhayannur
13 024	Samuel Philips. Cheruthuruthy Plantations, P.O.Cheruthuruthy.	"	Cheruthuruthy
14 025	Father Prior, St.Mary's Monastry, Elthuruthu. P.O., Trichur	Puzhakkal	S.C.S. Elthuruthy, Aranattukara.
14. 026	Mathew Iteera Tholath House, Kattukambal	Chowannur	-- Chowannur Village.

* The first three digits represent the number of farmers participated in the demonstration programme and 4th and 5th digits denote the N.E.S. Blocks of Trichur District.

After the selection of plots the concerned cultivators were contacted and their consent in writing was obtained for their participation in the programme. The relevant information required regarding the cultivation practices adopted by them earlier, was also collected.

(A detailed technical programme for the Project was formulated. The same was approved by the Director of Extension Education. The technical programme for the year 1975-76 and 1976-77 are as follows:)

contd....7..

Detailed Technical Programme of the All India Coordinated Project in National Demonstrations Programme on Major Food Crops in Trichur District Kerala State. 1975-76.

Location: The Headquarters of this Project will be at the Office of the Director of Extension Education, Kerala Agricultural University, Mannuthy Trichur.

Demonstration Area: TRICHUR DISTRICT.

Objectives: The main objective of the National Demonstration is to demonstrate convincingly to the farmers, the production potentialities of new Agricultural Technology designed to obtain maximum production from a unit area of land in a unit period of time, These demonstrations function as effective aids for the flow of latest research technology to the farming community. The keynote of these demonstration is multiple cropping and the minimum targetted yields of 2 or 3 crop demonstrations are 9 and 11 tonnes per hectares respectively under irrigated conditions.

In addition, one special demonstration laid out on problem soils will demonstrate the technology of raising crops on such soils.

Yield from the Programme. It is a demonstration project and by extending this programme, several hundred of farmers would derive the benefit of scientific agriculture and which would stimulate them to raise the production. This programme will have an impressive and direct impact on the farmers.

Programmes for 1975-76 (Target) Twenty four demonstrations are to be laid out on cultivators' fields for paddy in two crop seasons (2nd and 3rd crop seasons). One special Demonstration will be conducted on problem soils, having acidity or alkanity or salinity. This demonstration once laid out will be carried out for a minimum of three years so as to finally make the soils suitable for raising the crops. Soil amendments will be made available through the subsidy of Rs.1,000/-.

Selection of Sites. The Subject Matter Specialists will select about 50 sites tentatively. Out of these twenty four demonstrations should be laid out in well distributed representative areas such as Kole lands, irrigated lands, conventional areas and well irrigated areas.

Approval:	The paddy growing areas should be well represented in laying out the demonstrations. Twenty five cultivators will be selected in consultation with the Department of Agriculture.
Consent letters:	The details of selection will be intimated to the cultivators and the consent letters obtained.
Input:	The seeds required for the demonstration will be arranged to be supplied wherever necessary.
Soil test:	Soil samples will be collected and their test values recorded.
Layout of the Demonstrations:	The package of practices as appended will be followed from nursery to the time of harvest.
Supply of Farmers diary:	The cultivators will be provided with a diary to note the day to day activities undertaken by them in conducting the National Demonstration. The advices and other information and inspection notes will be recorded in these diaries by the Inspecting Officers. The cost of all the cultivation practices will be entered in the diary.
One day study Class:	The cultivators selected for conducting the National Demonstration will be provided training at the University on the recommended production practices.
Field days:	Two field days, during each crop season will be conducted at the site of the demonstrations for the benefit of the neighbouring cultivators. The field days will be organised in collaboration with the Department of Agriculture Co-operative Societies and other agencies.
Test harvest:	The test harvests will be conducted from the field and yield estimated.
Harvest:	The harvest will be supervised and the actual yield will be recorded.
Subsidy:	The first subsidy of Rs.200/- will be disbursed to the cultivators after the layout of the 2nd demonstration in the same field. The subsidy of Rs.150/- for the second demonstration will be disbursed after top dressing.

Pocket diaries: The Subject Matter Specialists will record the details in the pocket diaries provided for this purpose. Each Specialist will be in direct charge of eight demonstrations and the Subject Matter Specialist(Soils) will also be in charge of the problem soil demonstration.

Cost accounts: The expenditure incurred by the cultivator for the conduct of the demonstration will be analysed and recorded.

Sign Boards: The Sign boards will be obtained from the Department of Agriculture and repainted and installed at the demonstration site.

Annual Report: The Annual report of the project will be analysed by 30.6.1975.

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KERALA AGRICULTURAL UNIVERSITY

Detailed Technical Programme of the All India Coordinated Project in National Demonstration Programme on Major Food Crops in Trichur District, Kerala State 1976-77.

Location: The Headquarters of this project will be at the Office of the Director of Extension Education, Kerala Agricultural University, Mannuthy, Trichur.

Demonstration Area: TRICHUR DISTRICT.

Objectives: The main objective of the National Demonstration is to demonstrate convincingly to the farmers, the production potentialities of new agricultural technology designed to obtain maximum production from a unit area of land in a short period of time. These demonstrations form effective aids for the flow of latest agricultural technology to the farming community. The keynote of these demonstration is multiple cropping and the minimum targetted yields of 2 or 3 crop demonstrations are 9 and 11 tonnes per hectares respectively under irrigated conditions.

In addition, one special demonstration laid out on problem soils to demonstrate the technology of raising crops on such soils will be continued during this year also.

Yield from the PROGRAMME: It is a demonstration project and by extending this programme, several hundred of farmers would derive the benefit of scientific agriculture and they will quickly realise the 'know-how' which would stimulate them to raise the production. This programme will have an impressive and direct impact on the farmers.

Programmes for 1976-77(Target) Twenty four demonstrations are to be laid out on cultivators' fields as per the approved action programme of the Kerala Agricultural University. One special Demonstration will be continued on problem soils. This demonstration will be carried out for a minimum of three years so as to finally make the soils suitable for raising the crops. Soil amendments will be made available through the subsidy of Rs.1,000/-.

Selection of Sites: The Subject Matter Specialists will select about 50 sites tentatively. Out of these twenty four demonstrations should be laid out in well distributed representative areas such as Kole lands, irrigated lands, conventional areas and well-irrigated areas. The paddy growing areas should be well represented in laying out the demonstrations.

Approval: Twenty four cultivators will be selected in consultation with the Department of Agriculture,. The demonstration in problem soil area will be continued.

Consent letters: The details of selection will be intimated to the cultivators and the consent letters obtained.

Input: The seeds required for the demonstration will be arranged to be supplied wherever necessary.

Soil Test: Soil samples will be collected and their test values recorded.

Layout of the Demonstrations: The package of practices as appended will be followed from nursery to the time of harvest.

Supply of farmers diary: The cultivators will be provided with a diary to note the day to day activities undertaken by them in conducting the National Demonstration. The advices, other information and inspection notes will be recorded in these diaries by the Inspecting Officers. The cost of all the cultivation practices will be entered in the diary.

One day study Class: The cultivators selected for conducting the National Demonstration will be provided training at the University on the recommended production practices.

Field days: Two field days, during each crop season will be conducted at the site of the demonstrations for the benefit of the neighbouring cultivators.

The field days will be organised in collaboration with the Department of Agriculture, Cooperative Societies, Farmers Training Centre near-by schools and other agencies.

Test harvest: The test harvests will be conducted from the field and yield estimated from a random harvest of 25 sq.M. area.

Harvest: The harvest will be supervised and the actual yield will be recorded.

Subsidy: The first cash contribution of Rs.200/- will be distributed to the cultivators after the layout of the 2nd demonstration in the same field. The subsidy of Rs.150/- for the second demonstration will be disbursed after top dressing. The cash contribution of Rs.150/- for the third crop will be disbursed at the layout of the demonstration.

Pocket Diaries: The Subject Matter Specialists will [illegible] the details in the pocket diaries provi[illegible] for this purpose. Each Specialist wil[illegible] in direct charge of eight demonstrations and the Subject Matter Specialist(Soils) will also be in-charge of the problem soil demonstration.

Cost accounts: The expenditure incurred by the cultivator for the conduct of the demonstration will be analysed and recorded.

Sign Boards: The Sign Boards will be repaint[illegible] installed at the demonstration sites.

Annual Report: The annual report of the project [illegible] analysed by 30.9.1977.

The approved action programme for 1976-77 is appended.

DETAILS OF THE AGRICULTURAL DEMONSTRATIONS CROP SEQUENCE, TRICHUR DISTRICT ..13.. ..1..

Sl. No.	1st crop "Viripu" May-September	2nd crop "Munpakam" September-December.	3rd crop "Punja" January-April.	No. of Demonstrations plots.	Remarks.
1.	Paddy	Paddy	Paddy	6	Three crop paddy
2.	Paddy	Paddy	Pulse	4	Three crop + pulse
3.	Paddy	Pulse		2	Upland unirrigated area
4.	Flooded	Paddy	Paddy	3	Kole lands
5.	Paddy	Paddy	Pulse	3	Irrigated Project area
6.	Paddy	Tapioca Pulse.	[illegible]	3	Three crop(inter croped in tapioca)
7.	Tapioca	Pulse crop		1	Uplan tapioca area
8.	Homestead	Homestead	Homestead	1	Homestead
9.	Mixed cropping			1	Mixed
10.	Problem soil Flooded.	Flooded	Paddy + Pulse	1	
		Total		25	

Details / Month	5/76	6/76	7/76	8/76	9/76	10/76	11/76	12/76	1/77	2/77	3/77	Total
1. Preliminary selection of soils for demonstration	10	25										60
2. Approved of the sites by Dept. St ..rr		25										25
3. Collection of soil samples	35	25										60
4. Input seeds paddy supply		500 kg				500 kg						1000 kg
5. Advisory committee Meeting		one				one		one				three
6. Advisory committee Inspection of sites		one				one		one				three
7. Dry sowing & planting paddy		4	10	4	T 18	16				10		44
8. False crop			1			5					8	14
9. Tapioca			1			1						2
10. Field days	15	15	15	15	10	10	10	10				100 crops
11. Test harvest					18		18				24	60
12. Publicity					1		1					2
13. Radio contact					1		1					2
14. News stories		one	one		one		one					four

.. 7 ..

Representative Soil samples were collected from all the plots selected and were analysed before planting the crop, at the Soil Testing Laboratory, Pattambi, for fixing up the schedule of manuring. Suitable to each plot.

Selection of Plot in the Problem Soil area.

As per the scheme, one plot has to be selected in the area where successful crop could not be grown due to soil problems. Accordingly in consultation with the Block Development Officer, Chowannur, one plot of extent 0.4 ha was selected at Kettukambal, where the farmer repeatedly failed to raise a successful crop, during the past many years due to the following reasons.

i) Very low pH ii) Ferrous injury
iii) Salt encrustation iv) Poor drainage

The problem soil plot was selected for the first time for puncha season (Late rabi) 1975-76. This demonstration will be continued for a period of three years.

6) Raising Nursery.

The seed recommended for the demonstration was "Jaya" or "IR.8" for the 2nd crop (Rabi) and Triveni, Annapurna, Jaya and Jyothi for the late rabi seasons. The seed rate recommended was 25 kg of seeds for an area of 0.4 hec. for transplanting. Transplanting was taken as a general pattern for raising the crop in the demonstration areas. As there were difficulties in obtaining good quality Jaya seeds during 2nd crop season, Jaya seeds were arranged from the Agronomic Research Station, Karamana and distributed to the plot owners, who have requested for the same.

Even though the variety Jaya and IR.8 were recommended for the demonstrations for the 2nd crop, one cultivator at "Annallur" had lost the nursery due to floods and so he cultivated Bharathi in the demonstration area, as good quality "Jaya" seed was not available at that last moment.

The varieties sown in different demonstration plots for Rabi Season are as follows:

Sl.No.	Variety Sown	No. of plots.
1.	Jaya	23
2.	IR.8	1
3.	Bharathy	1
		25

contd... ..

The varieties sown in different demonstration plots for the rabi (January - April) were as follows:

Sl.No.	Variety sown	No.of plots.
1.	Triveni	10
2.	Jaya	5
3.	Annapurna	1
4.	Jyothi	3
		19

7) Cancellation of plots.

During the commencement of the 2nd crop season, heavy rains and floods were prevailing in Trichur District. Cultivation practices could not be carried out at the proper time in the proper manner due to the vagaries of weather. In some cases, the cultivators lost their nursery due to flood and stagnant water. In certain other cases, the main field could not be prepared in time with reference to the age of the seedlings, due to flood. The Committee of 'Padavu' in which the demonstration plot was selected decided not to cultivate the entire Padavu due to fear of crop damage and loss in one case.

Because of the above reasons which were beyond the control, the following cultivators expressed their inability to be in the National Demonstration Scheme and requested to exempt them.

Sl.No.	Name of cultivator	Location	Reasons for cancelling the Plot
1.	Sri.C.S.Govindan	Cherpu Block	Lost nursery 3 times. Hence given up cultivation
2.	Sri.P.V.Kochunny	-do-	Main field could not be prepared till the 45th day of the seedling.
3.	Sri.K.Radhakrishnan	-do-	Padavu Committee decided to give up the entire cultivation
4.	Sri.M.C.Revi Namboodiri	Irinjalakuda Block	Lost cultivation in the main field due to flood immediately after transplanting,
5.	Sri.K.K.Kesavan	-do-	Lost nursery 4 times.

contd....

Considering their requests and inability of the above parties to cultivate the field due to reason beyond their control, the above 5 plots were discarded and the fact reported to ICAR. Thus there were 20 plots for the Rabi season. Out of the above 20 plots, only one crop could be taken from the plots at Chengallur and Karanchira, since these plots represented converted uplands and Kolapala area respectively. Therefore, the total number of demonstration plots during the summer season was 19 including the problem demonstration. The name and addresses of the cultivators who have successfully conducted the demonstrations, and the localities of the plots are furnished in Table No.II

TABLE NO. II

Table showing the code No. Name and addresses of the cultivators and the location of the plots.

Sl.No.	Code No.	Name & Address of the Farmer	Location of the plot	Single crop & or 2 crops
1.	01001	K.V. Parinchu, Kathilderan House, Manalur.	Manalur	2 crops
2.	01002	K.V.Rajendra Prasad, Kuruvathur House, Anthikad	Anthicad	–do–
3.	01003	V.K.Balakrishnan, Advocate, Veliyannur	Kanjani	–do–
4.	02004	K.T.Jose, Kizhakkocchan House, Pariyaram	Pariyaram	–do–
5.	02005	K.I.Kunjuvareed, Kavungal House, Elanjipra	Elanjipra	–do–
6.	03006	A.S.Bain, Akkarapattly House, Trichur	Nedumpazha	–do–
7.	03010	C.Pavithran, Chalissarathil House, Arattupuzha	Chenam(Cherpu)	–do–
8.	04011	C.C.Kochunny, Cheruvathur House, Pengamukku	Pengamukku	–do–
9.	06013	A.A.Ouseppan, Hindustan Foundary, Trichur	Karanchira	Single crop

contd... ..

1	2	3	4	5
10.	07015	K.K.Balakrishna Menon, Kurichiyathu House, Kodakara.	Kodakara	2 crops
11.	07016	C.U.Rajan, C/o Unni Master, Varakkara	Chengalur	Single
12.	07017	C.K.Unni, Cheenathu House, Mammaqetta	Mammaqetta	2 crops
13.	09018	K.Govindan, Kalady House, Ashtamichira	Ashtamichira	-do-
14.	09019	K.A.James, Kuichayil House, Annallur	Annallur	-do-
15.	12020	Babu Varappan, Autokaran House, Viyyoor	Viyyoor	- do-
16.	12021	K.Ramakrishnan, Kothottil House, Tanipadam	Tanipadam	-do-
17.	12022	E.V.Uthuppu, Edappara House, Alpara	Panamcherry	-do-
18.	13023	P.J.Joylutty, Edalkalathur House, Mayanmur	Mayanmur	-do-
19.	13024	Samuel Philip, Cheruthuruthy Plantation, Cheruthuruthy.	Cheruthuruthy	-do-
20.	14025	Father Prior, St.Mary's Monastry, Elthuruthy	Elthuruthy	-do-
21.	14026	Iteera Mathew, Tholathu House, Kattakampal	Kattakampal	-do-

The table showing the distribution of national demonstration plots in the different soil tracts in Trichur District is presented below:

TABLE NO.III

Distribution of National Demonstration plots - 1975 - 1976

(Areawise Representation)

Sl.No.	Soil Tract	No.of Demonstrations		Sl.No.	Soil Tract	No.of Demonstrations	
1.	Kole lands	6	Two crops sequence	5.	Sandy area	1	two
2.	Conventional paddy lands	8	-do-	6.	Problem area	1	Single
3.	Irrigated paddy lands	3	-do-	7.	Kolappala lands	1	- -
4.	Converted land	1	Single				

contd.... .

8) Cultivation in the main field - Rabi Season

Great difficulties were experienced during this season to synchronise the date of transplanting and correct age of the seedlings due to continuous rains and floods. Except in very few cases, the main field could not be prepared at the correct time in the proper manner.

Basal application of the required chemical fertilizers was also a problem in many of the fields due to overflowing water. Regular intercultural operations were also rendered difficult due to this. In certain plots, standing water could not be controlled after transplanting and hence tillering was not upto the expectations. Top dressing, liming, plant protection and other operations could not be carried out at the proper time, due to difficulty in controlling water. On the whole, the cultural operations could be done in the fields only when the climatic conditions became favourable.

9) Details of the training, field days and meeting organised.

Before the actual cultivation, a training was organised for the cultivators of the selected National Demonstration plots, at the Kerala Agricultural University headquarters. Details of National Demonstration programme along with cultivation practices to be adopted were discussed in this training. Experts of the Kerala Agricultural University participated in the training camp and led the discussions. 'Farmers' diary's to record the day to day farm operations was also distributed to the cultivators during this training camp.

As a part of the scheme, field days were organised in the National Demonstration plots, to give wide propaganda for the techniques adopted in the National Demonstration plots and to enlighten the cultivators about the new scientific techniques developed in the field of Agriculture. Field visits and field discussions were the major items. Besides, study classes and group discussions were also conducted in these Field Days. Altogether 35 field days were conducted in different National Demonstration plots and 673 farmers participated in the field days. These field days were organised mostly at the time of important crop operations through the concerned service co-operative societies having jurisdiction over the area where the National Demonstration plot is located.

Contd...

10) Advisory Committee

The Advisory Committee as envisaged in the scheme was constituted with the following members.

1.	Director of Extension Education	Chairman
2.	Subject Matter Specialist (SS)	Convenor

MEMBERS.

1. Director of Research, Kerala Agricultural University
2. Dean, College of Horticulture, Mannuthy
3. Dean, College of Agriculture, Vellayani
4. Deputy Director of Agriculture, Trichur
5. Deputy Director of Agriculture, Farmers Training Centre, Trichur
6. Technical Adviser to the Project Officer, SFDA, Trichur
7. The Rice Specialist, Rice Research Station, Pattambi
8. The Assistant Development Commissioner, Trichur
9. Public Relations Officer, Kerala Agricultural University.
10. Farm Radio Officer, All India Radio, Trichur
11. Subject Matter Specialist (Agronomy)
12. Subject Matter Specialist (Plant Protection)

The first advisory committee meeting was held on 11.2.1976, and discussed in detail the work in progress with regard to the National Demonstration Scheme.

II. Summary

The programme of National Demonstration for 1975-76 in Kerala has started with effect from 19th July 1976 with headquarters at Mannuthy and jurisdiction all over Trichur District. The number of demonstrations allotted to this district was 24. In addition to this one problem demonstration was also to be conducted.

A total of 21 demonstrations were conducted, 18 numbers in 2 crop sequence, 2 single crop demonstration and one problem demonstration.

The results obtained are presented in the report.

III. Results.

a. Results of multiple crops demonstration

1. Two crop sequences.

The details of the 18 demonstrations conducted under the two crop sequences with reference to the variety, date of sowing, date of transplanting, date of harvest etc are given in Table No.I V.

contd...

T A B L E No.IV

PLOT WISE YIELD DATA (TWO CROP SEQUENCES)

Sl. No.	Name & Address of the farmer and village.	Seasons	Crop variety	Yield in quintal/ha. Grain	Yield in quintal/ha. Straw	Nutrients applied kg/ha. N	P	K	Total cost of input per hectare	Gross return per hec.	Net return per hectare	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.	K.V.PORINCHU, Kattukkaran House, Manalur	Rabi	Jaya	52.92	60.00	66	51	50	4668.25	7776.00	3107.75	0.7 hectare
		Summer	Annapoorna	44.80	40.00	57	53	42	3592.00	5328.00	1736.00	
2.	K.V. RAJENDRA PRASAD, Karuvath House, Anthicad.	Rabi	Jaya	67.32	50.00	70	45	45	4635.25	9276.00	4941.75	1.4 "
		Summer	Triveni	58.80	56.00	44	45	29	3672.25	7028.00	3355.75	
3.	V.K. RAMAKRISHNAN, Advocate, Veliyannur.	Rabi	Jaya	74.25	50.00	69	45	52	5145.75	10400.00	5258.25	1.3 "
		Summer	Triveni	46.00	44.00	50	37	37	3260.00	5500.00	2240.00	
4.	K.T. JOSE, Kizhakkodan House, Pariyaram	Rabi	Jaya	58.32	54.00	90.	45	45	4872.55	8424.00	3551.45	1.2 "
		Summer	Jyothy	50.40	49.60	64	32	58	3404.80	6040.00	2635.20	
5.	K.I. KUNJUVAREED, Kavungal House, Elanjipra.	Rabi	Jaya	45.00	50.00	76	58	53	4983.75	6600.00	1616.25	0.6 "
		Summer	Jyothy	46.00	44.00	50.	37	25	3408.00	5500.00	2092.00	
6.	A.S. BABU, Akkarapatty House, Trichur	Rabi	Jaya	55.80	60.00	36.5	45	45	4470.00	6738.00	2267.50	0.8 "
		Summer	Triveni	48.40	48.00	44	45	45	3065.50	5804.00	2738.50	
7.	C. RAMADAS, Chulliparambil House, Arattupuzha.	Rabi	Jaya	53.64	47.40	80	50	44	4821.49	7718.80	2897.31	0.6 hectare
		Summer	Triveni	51.20	49.60	64	33	37	4134.80	6128.00	1993.20	
8.	C.C. KOCHUNNY, Cheruvathur House, Paingamukku.	Rabi	Jaya	87.30	120.50	82	58	60	6239.00	12890.00	6651.00	0.8 "
		Summer	Jaya	64.00	50.00	64	53	48	4135.00	7540.00	3405.00	

(Contd.....2)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
9.	K.K. [illegible], Kurichiyathu House, Kodakara.	Rabi	Jaya	36.00	50.00	80	50	50	4152.25	5400.00	1247.75	0.44 hec.
		Summer	Jaya	46.00	46.00	55	53	41	3764.00	5520.00	1756.00	
10.	C.K. UNNI, Cheenathu House, Mannampetta.	Rabi	Jaya	54.00	30.00	76	37	58	4802.90	7800.00	2997.10	0.8 hec.
		Summer	Jaya	48.00	48.00	44	29	29	3800.00	5760.00	1960.00	
11.	K. Govindan, Kelady House, Istrichira[illegible]	Rabi	Jaya	66.00	60.00	103.5	45	60	5117.50	7626.00	2808.50	0.8 hec.
		Summer	Triveni	42.00	40.00	50	13.5	30	3309.00	5020.00	1711.00	
12.	[illegible] JAMES, Kunichayil House, Annallur	Rabi	Bharati	47.88	50.00	72.5	45	50	4373.75	6984.00	2610.25	0.9 hec.
		Summer	Triveni	50.40	49.20	43	27	37	5715.50	6036.00	2320.50	
13.	BABU VARGHESE, Antokkaran House, Viyyoor.	Rabi	Jaya	55.44	40.00	50	12.5	48	4694.00	6498.40	1804.40	1.0 hec.
		Summer	Jaya	49.20	48.00	70	11	42	3911.65	5892.00	1980.35	
14.	K. RAMAKRISHNAN, Kothottil House, Thalipadam.	Rabi	Jaya	48.60	50.00	72	65	55	4619.50	7075.00	2455.50	2.5 hec.
		Summer	Triveni	40.40	49.60	44	45	45	3076.00	6040.00	2964.00	
15.	E.V. Uthuppa, Edappara House, Alppara.	Rabi	Jaya	49.32	34.00	72.5	45		4455.25	6845.00	2389.75	3.2 hec.
		Summer	Triveni	52.80	53.60	54.5	45	37	3366.00	6344.00	2972.00	
16.	P.J. JOSEPHY, Edakkalathur House, Mayannur.	Rabi	Jaya	56.88	60.00	90	48	57	4865.75	8304.00	3438.25	0.43 hec.
		Summer	Jyothy	54.80	52.00	64	53	37	3588.85	6548.00	2959.15	
17.	SAMUEL PHILIP, Cherukkuruthy, Plantations, Cherukkuruthy	Rabi	Jaya	54.00	51.00	86	54	53	4871.90	7812.00	2940.10	1 hec.
		Summer	Triveni	50.00	48.00	55	28	33	3746.50	5980.00	2233.50	
18.	FATHER PIOR, St. Mary's Monastry, Elthuruthu.	Rabi	IR-8	46.08	40.00	67.5	34	35	5147.50	7712.00	2564.50	20 hec.
		Summer	Jaya	50.40	48.48	76.0	48	48	3907.50	6309.20	2401.70	

MALAPPURAM DISTRICT

PALGHAT DISTRICT

MAP SHOWING
NATIONAL DEMONSTRATION
PLOTS- TRICHUR DISTRICT
KERALA STATE
Year - 1975-'76

- ▣ Problem soil area.
- ○ Two crop areas
- ⊗ One crop area (Only Rabi crop)

TRICHUR

1- Kattukampal (Problem soil area)
2- Paingamukku
3- Kanjani
4- Manalur
5- Anthicad
6- Karanchira
7- Astamichira
8- Annallur
9- Elanjipra
10- Pariyaram
11- Urakam
12- Kodakara
13- Chengalur
14- Memempetta
15- Panencherry
16- Tanipadam
17- Mayannur
18- Cherulhūrulhy
19- Viyyur
20- Elthurulhū
21- Nedupuzha

ERNAKULAM DISTRICT.

COIMBATORE DISTRICT

) Analysis of yield data.

1. Presentation of highest, lowest and mean yield data

The highest, lowest and average yield of paddy recorded in these demonstrations were 15.130, 8.2 and 10.643 M. Tons/hectare respectively. The targetted yield of 9 tons/hectare for two crop rotation was exceeded in 17 plots. The most popular varieties included was 'Jaya' for the Rabi season and Triveni for the Summer Season. Comparing the performance of different varieties, Jaya gave the highest yield in the two seasons. Average yield of different varieties in different seasons are furnished in Table V.

2. The Frequency distribution of yield.

The frequency distribution shows that out of the 18 plots, the yield of 8 plots come within the range of 10 to 11 tons per hectare and that of 5 plots within the range of 9 to 10 tons. 4 plots yielded above 11 tons and one below the targetted yield.

3. Analysis of the highest yield obtained.

The highest yield of 8.730 tons/hectare during the Rabi season and 6.500 tons/hectare during the summer season was obtained from the plot of Sri.C.C. Mathunny and this yield stood first among all. The reasons for obtaining the highest yield are as follows.

The plot was well drained and there were facilities for controlled irrigation. Eventhough this plot was situated 2 M below the sea level, facilities were there for the sub soil drainage through deep channels and subsequent pumping out of the water drained. Hence the plot was subjected to optimum conditions for plant growth.

Cultivation of paddy started in this area recently. Timely plant protection measures were taken in the demonstration plot for the control of pests and diseases. Therefore, the crop was almost free from pests and diseases.

On analysis of the yield components the following information have been recorded.

Season	Total number of tillers from 1 sq.m.	Total number of effective tillers from one sq.m.	No.of unproductive tillers	No.of grain per panicle
1st crop	399	330	69	95
2nd crop	345	315	30	81

contd...4.

T A B L E No.V

AVERAGE YIELD OF DIFFERENT VARIETIES IN DIFFERENT SEASONS
(Quintals/hectare)

Sl. No.	Name of cultivator	Rabi seasons			Summer seasons			
		Jaya	IR-8	Bharathy	Triveni	Jyothi	Annapoorna	Jay
1.	K.V. Porinchu	59.92					44.80	
2.	K.V. Rajendra Prasad	70.80			58.80			
3.	V.K. Ramakrishnan	74.25			46.06			
4.	K.T. Jose	58.32				50.40		
5.	K.I. Kunjuvareed	45.00				46.00		
6.	A.S. Babu	55.80			48.40			
7.	C. Ramdas	53.64			51.20			
8.	C.C. Kochunny	87.30					64.00	
9.	K.K. Balakrishna Menon	36.00					46.00	
10.	C.K. Unni	54.00					48.00	
11.	K. Govindan	66.60			42.00			
12.	K.A. James			47.88	50.40			
13.	Babu Varappan	55.44					48.20	
14.	K. Ramakrishnan	48.60			59.40			
15.	E.V. Uthuppu	49.32			52.80			
16.	P.J. Joykutty	56.88				54.80		
17.	Samuel Philip	54.00			50.00			
18.	Father Prior		46.08				50.40	
	Average	57.39	46.08	47.88	50.00	50.40	44.80	51.52

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The average number of effective tillers from one sq.metre, and the number of grains per panicle were maximum in this plot.

4. Analysis of the yields less than the targetted yield.

The yield from only one plot owned by Sri.K.K.Balakrishnan Menon, Kidangara was less than the targetted yield. The yield obtained for the Rabi and Summer Seasons are 3600 kg. and 4600 kg per hectare respectively. The causes of low yield in this plot were as foll ows.

This was a representative area of sandy textural soil tract. There was a layer clay layer having high salt concentration in the soil below 25 cm. The initial growth of the crop during the rabi and summer season was vigorous. But weeks after transplanting the growth of the plants was not satisfactory inspite of the timely agronomic and manurial practices and plant protection measures adopted. There was high iron toxicity in the plot which appeared by way of raddish mass and oily scum and other precipitation in the surface layer. Inspite of the repeated application of lime and surface drainage, iron toxicity existed in the plot..

b) Plant Protection problems;

The principle adopted in the control of pests and diseases was a need based one for the National Demonstrations conducted during the year under report. During Rabi season two or more sprayings have to be done for the control of the same pest which otherwise could have been controlled by a single spraying or dusting, as difficulties were experienced in the field due to continuous heavy downpour in controlling water.

In the case of all demonstrations the seeds sown were treated with Ceresan wet. Two sprayings were done in the nursery – one 10–12 days after sowing and another just two days before transplanting with Dimecron & Dimecron. These two sprayings in the nursery could control the attack of gall fly that otherwise would have appeared as in the case of neighbouring plots.

Leaf roller, jassids and brown plant hopper were the pests appeared in good number in almost all the plots (See Table No.VI). The population counts of each insect were taken from 4 hills each, at 5 random locations in each plot. The maximum attack of brown plant hopper was noticed in the plots located at Elumuthu (120.0) Kattukampal (22.8) and Cherpu (12.5). The population at Elumuthu plot was high because of the presence of 2 mercury vapour lamps near the plot. Application of Carbofuran, and spraying with B.H.C. 50% or Carbaryl were recommended and the pest was brought under control then and there. The rate of population of Green Jassids was 15.0 at Elumuthu, 2.0 at Paingamukku and

contd...

T A B L E No.VI

PEST POPULATION CHART IN NATIONAL DEMONSTRATION PLOTS DURING [illegible] SEASON 1976.

Sl.No.	Name of plot	Average population of different kinds of pests in the plot.										
		Leaf roll-worm	Case worm	Green jassid	White backed jassid.	Horn-ed cater-pillar	Brown hopper	Stem borer	Gall Fly	Cut worm	Rice Bug	Blue beetle
1.	Tanipadam	1.4	0.8	1.2	2.4	0.4	1.0	0.4	..	..	..	..
2.	Vayyur	1.4	0.4	0.8	1.4	0.4	1.0	..	..	..	..	..
3.	Nemmanpetta	0.8	..	1.0	1.4	0.4	2.6	..	0.4	0.2	..	..
4.	Kodakara	0.4	..	..	1.4	0.6	2.8	..	..	..	..	..
5.	Ostanichira	..	0.4	1.6	1.0	0.4	1.2	0.2	..	..	0.4	..
6.	Ethuruth	1.8	..	15.0	15.6	..	120.0	..	..	..	1.2	..
7.	Elanjipra	1.0	..	1.8	2.6	0.6	..	..	..	..	..	..
8.	Paingamukku	0.6	..	2.0	1.8	0.2	1.6	0.2	..	0.2	0.2	..
9.	Panencherry	..	..	0.6	1.0	..	..	..	..	..	..	1.4
10.	Nedupuzha	0.5	..	1.5	1.0	..	..	..	..	..	..	..
11.	Anthicad	..	..	2.0	1.2	..	2.2	..	..	..	..	..
12.	Manalur	..	..	1.6	2.4	0.2	1.6	..	..	..	..	..
13.	Kanjani	..	..	0.6	1.2	..	1.0	..	..	..	..	..
14.	Pariyaram	0.2	..	2.5	4.8	1.00	..	..	..	..	..	..
15.	Mayanmur	..	..	1.5	3.0	..	..	..	..	..	..	1.5
16.	Cherutharuthy	..	..	1.5	2.0	0.5	..	..	..	..	..	..
17.	Anallur	0.5	..	2.0	3.0	..	6.0	..	..	..	..	3.0
18.	Cherpu	1.0	..	2.5	2.0	..	12.5	..	..	..	..	0.5
19.	Kattukambal	0.4	0.6	1.2	1.8	0.2	22.8	0.6	..	..	..	..

Note:- 1. Observation for gall fly and stem borer are taken from 1 sq.m. each from 2 places from each plot, selected at random.

2. For othr pests from 5 places consisting of 4 hills each (20 hills) per plot selected at randam.

Anthicad and 2.5 at Cherpu National Demonstration Plots. The population of white jassids touched the levels of 2.4 at Tanipadam, 15.0 at Elthuruthy, [illegible] at Elanjipra 5.2 at Anthicad and 3.0 each at Mayannur and Annallur plots. The spraying of carbaryl and BHC 50% was found contro-lling these pests. 1.4 each was the leaf roller population at Tanipadam and Viyyoor as against 1.8 at Elthuruthu plot. BHC. 50%, Carbaryl & Metacid were found effective against this pest.

The fungal diseases appeared in the plots were Blast & Sheath blight. These diseases were controlled by the application of Hinosan. Mild attack of bacterial leaf blight was noticed at Kanjoni, Anthicad, Munalur and Mayannur plots and the spread was checked by the spraying with 'Streptocycline' and by the application of Bleaching powder. These appl ications reduced considerably the spread of diseases. In all cases nitrogenous fertilizers were added during very little, care as a precautionary measure to avoid the infection and to prevent the spread of diseases. This gave a healthy comparison of the National Demonstrations with the surrounding plots.

e) Soil fertility problems:

The results of Soil analysis obtained, fertilizers recommended and fertilizers applied are presented in Table No.VII. The level of organic carbon content of the soil was medium or high in all plots except for 2 plots in which organic carbon content was low before planting the Rabi Crop. Available phosphorous content of the soil was high only in 2 plots. In all other plots, available phosphorus content was medium or low. The potash content of the soil was low or medium in all the plots. All the soils are acidic in reaction having a pH below 6.3. Therefore lime application was necessary in all the plots. Application of required quantity of fertilizers and lime during the first crop season was a problem in many fields due to flood of water resulted from continuous rains.

f) Operational problems

The Rabi season was actually not favourable for a successful crop. During the early part of the growth of the crop there was heavy rainfall on almost all days and the sky was cloudy. Heavy rains and flood caused much damage to the nurseries and main fields. Main field could not be prepared in time with reference to the age of the seedlings. Application of fertilizers and plant protection measures could not be adopted at the proper time.

contd. ....

Sl.No.	Location of the plot	Code No.	Organic carbon%	Available P kg/hec.	Available K kg/hec.	pH	T.S.S. m.m.hos/cm
1.	Mamaloor	01001	1.44	2.83	55.37	5.3	0.2
2.	Anthicad	01002	1.26	4.00	126.00	4.9	0.2
3.	Kanjani	01003	2.09	3.38	35.60	6.2	0.2
4.	Pariyaram	02004	0.86	67.00	Trace	5.2	0.1
5.	Elanjipra	02005	1.03	2.30	43.50	6.5	0.0
6.	Nedupuzha	03006	0.80	3.40	197.00	5.5	0.2
7.	Chenam	03015	0.78	4.40	118.00	5.7	0.2
8.	Paigamukku	04011	0.98	2.65	83.05	4.3	0.3
9.	Kodakara	07015	1.35	7.61	23.70	6.3	0.2
10.	Mamamapetta	07017	0.71	16.80	Trace	6.3	0.0
11.	Astamichira	09013	0.46	7.08	47.50	5.5	0.2
12.	Annallur	09019	0.02	Trace	15.80	6.0	0.2
13.	Viyyoor	12020	1.05	46.02	83.00	6.1	0.2
14.	Tamipadam	12021	0.75	1.77	11.90	6.1	0.2
15.	Pannancherry	12022	0.87	5.48	59.50	5.3	0.2
16.	Moyannoor	12023	0.62	7.10	39.00	5.8	0.2
17.	Cheruthuruthy	13024	0.73	4.95	7.90	6.1	0.2
18.	Elthuruthu	14025	1.36	18.70	174.00	5.0	0.1

VII (a) Rabi Season

Sl. No.	Location of the plot	Fertilizers and manures recommended kg/hac.					Fertilizers and manures applied kg/hac.				
		Organic Manure	Lime	N	P_2O_5	K_2O	Organic manure	Lime	N	P_2O_5	K_2O
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Manaloor	5000	700	70	58	53	-	700	66	51	50
2.	Anthicad	5000	750	70	53	42	-	625	70	45	45
3.	Kanjani	3000	300	57	53	53	G.N.C.250	558	69	45	52
4.	Pariyaram	5000	600	82	-	58	5000	600	90	45	45
5.	Elanjipra	5000	600	76	58	53	5000	600	76	58	55
6.	Nedupuzha	5000	600	82	53	32	G.N.C. 250	625	57.5	45	45
7.	Chenam	5000	450	82	53	42	G.N.C. 250	500	80.0	50	44
8.	Paigamukku	5000	950	82	58	48	-	950	82	58	60
9.	Kodakara	5000	300	87	42	53	7500	375	80	50	50
10.	Mannarpetta	5000	300	76	37	58	6000	400	76	37	58
11.	Astamichira	7000	450	75	48	53	7500	225	103.5	45	60
12.	Annallur	5000	450	82	58	58	2500	465	72.5	45	50
13.	Vizyoor	5000	600	76	11	48	5000	425	40	12.5	47.5
14.	Tanipadam	5000	300	87	58	58	5000	300	72	65.0	55.0
15.	Panancherry	5000	600	82	53	53	5000	375	72.5	45.0	56.0
16.	Mayannur	5000	450	87	48	53	5000	500	90.0	48	57.0
17.	Cherutharuthy	5000	300	87	53	58	8500	250	86.0	54	53.0
18.	Ellaruthu	5000	750	75	32	37	6250	750	67.5	34	32.0

T A B L E No.VII (b)

RESULTS OF ANALYSIS OF THE SOIL TEST (Summer SEASON)

Sl. No.	Location of the plot.	Code No.	Organic carbon %	Available P kg/hec.	Available K/kg/hec.	pH	T.S.S. m.m.hos/cm
1.	Manaloor	01001	2.07	4.6	122	5.3	0.2
2.	Anthicad	01002	2.04	Trace	189	5.2	0.2
3.	Kanjani	01003	1.83	9.2	87	5.7	0.2
4.	Pariyaram	02004	1.65	19.4	27	5.3	0.2
5.	Elanjipra	02005	1.51	6.7	221	5.9	0.2
6.	Nadupuzha	03006	1.93	Trace	15	5.3	0.2
7.	Chenam	03016	0.87	13.9	79	5.2	0.2
8.	Paiganuldu	04011	1.72	5.3	114	4.8	0.2
9.	Kodakara	07015	1.49	11.3	71	5.9	0.2
10.	Mannampetta	07017	1.23	14.8	162	5.8	0.2
11.	Astamichira	09018	0.96	30.9	166	5.7	0.2
12.	Annallur	09019	1.95	15.9	137	5.3	0.2
13.	Viyoor	12020	1.21	40.7	126	5.6	0.2
14.	Tanipadam	12021	2.07	Trace	31	5.3	0.2
15.	Pammcherry	12022	1.44	Trace	143	5.7	0.2
16.	Mayannur	13024	1.61	3.9	178	5.3	0.2
17.	Cherutharuthy	13024	1.28	14.1	126	6.2	0.2
18.	Ettharuthu	14025	0.96	12.2	98	5.2	0.2

VII (1) Summer Season

Sl. No.	Location of the plot.	Fertilizers and manures recommended kg/hac.					Fertilizers and manures applied kg/hac.				
		Organic manures	Lime	N	P_2O_5	K_2O	Organic manures	Lime	N	P_2O_5	K_2O
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Manaloor	1200	600	57	53	42	G.N.C. 250	600	57	54	..
2.	Anthicad	3000	600	44	45	29	5000	600	45	45	29
3.	Kanjani	3000	450	50	37	37	250	450	50	37	37
4.	Pariyaram	5000	600	64	32	58	5000	600	64	32	58
5.	Elanjipra	3000	450	50	37	25	G.N.C. 250	450	50	36	25
6.	Nedupuzha	3000	600	44	45	45	3000	600	44	45	45
7.	Cheman	5000	600	64	33	37	5000	600	64	33	38
8.	Paigamukku	3000	750	64	53	48	G.N.C. 250	750	63	52	48
9.	Kodakara	5000	450	55	37	41	G.N.C. 250	450	55	37	40
10.	Mannampetta	3000	450	44	29	29	G.N.C. 300	450	44	29	29
11.	Ashtamichira	3000	450	50	13	29	G.N.C. 250	450	50	13.5	30
12.	Annallur	3000	600	44	29	37	3000	600	43	27	37
13.	Viyyer	5000	450	70	11	42	4500	450	70	11	40
14.	Thanipadam	3000	600	44	45	45	2500	600	44	45	45
15.	Panaucherry	5000	750	55	45	37	5000	350	54.5	45	37
16.	Mayannur	3000	600	64	53	37	2000	600	64.0	53	37
17.	Cherutturuthy	5000	450	55	29	33	4000	450	53	28	33
18.	Ettumanur	5000	600	82	48	48	4000	600	76	40	40

In general, the season prevailing during the 2nd crop period was comparatively favourable for paddy.

e) Economics

The average cost of production, gross return and net profit per hectare comes to Rs.4830/-, Rs.7913/- and Rs.3085/- respectively for the 2nd crop. The corresponding figures for the 3rd crop season are Rs.3654/-, Rs.6017/- and Rs .2413/- respectively. The maximum return over operating cost for the 1st and 2nd crop was obtained from the plot of Sri.C.C.Kochuny. The average return over operating cost for two crop rotation paddy - paddy was Rs.5498/- per hectare. The increased returns obtained have convinced the farmers the profitability of the methods adopted in the National Demonstration programme.

ii. Three Crop demonstrations

Nil

B. Results of individual crops.

Only one crop was taken from two demonstration plots. The reason for taking only one crop was that in one plot (Karanchira) the land represented Kolapala (deep water paddy) area. The yield data relating to individual crop at Karanchira are given in Table No.VIII. The yield obtained from the plot was 5 tons per hectare and the return over operating cost was Rs.2112/- per hectare.

In the other plot (Chengallur) the land represented the true type of converted lateritic uplands. The yield obtained from that plot was 3250 kg of grain per hectare. The return over operating cost was Rs.500/ per hect.

The data obtained on analysis of the soil samples and the fertilizer recommend and applied are given in Table No.IX.

C. Demonstration in rainfed area.

Nil

D. Special demonstrations.

a) Nature of problems:

The problems identified in the area are very low pH, iron toxicity, poor drainage, salt encrustation, low available phosphorus, high concentration of soluble salts, and presence of decayed forest materials, wood etc. There was also an impervious layer of clay, salt and iron at 20 cms below surface.

contd....

TABLE NO.VIII

YIELD DATA RELATING TO DEMONSTRATION

..3'..

S.No.	Name and address	Seasons	Crop variety	Yield in Quintal/ha. Grain	Straw	Nutrients applied kg/ha N	P_2O_5	K_2O	Total cost of input per hectare Rs	Gross return per hec. Rs	Net return per hectare Rs	Remarks
1.	A.A. Lonappan, Hindustan Foundary, Trichur.	Rabi	Jaya	50.00	50.00	82	58	53	5048.00	7160.00	2112.00	1.2 hec.
2.	C.V. Rajan, C/o. Unni Master, Veraldara.	Rabi	Jaya	32.00	32.00	88	32	58	4036.00	4586.00	550.00	1.6 hec.

TABLE NO.IX

RESULTS OF ANALYSIS OF SOIL SAMPLES

Plot	Organic carbon	Available P kg/hec.	Available K kg/hec.	pH
Karanchira	0.85	Trace	51	4.2
Chengalur	0.59	19.7	Trace	5.0

Plot	Fertilizers recommended kg/hec.					Fertilisers applied			
	Organic manure	Lime	N	P_2O_5	K_2O	Organic manure	Lime	N	
Karanchira	5000	1150	82	58	53	6000	1000	82	5
Chengalur	5000	750	87	32	58	3000	750	88	3

Soil samples from the problem soil area were collected fortnightly and analysed for studying the actual problems and finding out ways to solve such problems. The results obtained on analysing 8 soil samples collected at fortnightly intervals are given in Table No.X.

TABLE NO.X.

Results of analysis of the soil collected from the problem demonstration.

Date of collection of soil	Organic Carbon %	Available P kg/hect.	Available K kg/hect.	pH	T.S.S. m.m.hos/cm
1.1.'76	2.73	Trace	269	3.7	0.2
11.1.'76	1.61	Trace	276	5.5	0.4
1.2.'76	2.46	Trace	162	5.2	0.2
20.2.'76	1.81	9.90	47	5.0	1.2
5.3.'76	1.56	0.80	79	4.4	1.4
20.3.'76	1.49	2.60	19	4.0	0.2
5.4.'76	1.74	2.12	39	3.9	0.2
21.4.'76	1.61	1.06	31	3.8	0.2

In addition to this one soil sample has also been forwarded to the Agricultural University, Tamil Nadu for the analysis of the micronutrients and the results obtained are presented below.

Micronutrient content of the Soil taken on 5.3.1976

Zn	Cu	Fe	Mn	pH
3.00 ppm	0.80 ppm	120 ppm	5.00 ppm	4.5

The data indicates that the level of Fe in the soil is high.

The quantity of fertilizers and manures recommended as per the analysis of the soil samples collected before planting and the quantity applied are as follows.

Organic Manure	Fertilizers recommended kg/hect. Lime	N	P_2O_5	K_2O	Organic Manure	Fertilizers applied kg./hect. Lime	N	P_2O_5	K_2O
30.0	950	38	45	21	..	1000	38	45	21

b) Ameliorative measures

The ameliorative measures taken were the following.

The application of lime at the rate of 1 ton per hectare in five split

cont'd..

doses was helpful in raising the pH periodically and also for reducing iron toxicity.

As a trial arecanut husk was applied at the rate of 20 kg in 4 so that some of the organic compounds - like tannin etc. found in the husk might form complex compounds with ferrous iron and help to reduce toxicity. The application of arecanut husk was found to be advantageous increasing the yield as the yield obtained from this plot was 240 kg. i. 6000 kg per hectare, whereas the yield obtained from the field where was applied was 5000 kg per hectare.

Carbon dust (activated carbon dust) was applied as an observati trial for absorbing the obnoxious methane gas found to bubble through soil at the rate of 20 kg in another 400 sq.m. , This also found incr the yield of the trial plot. The yield obtained from this plot was kg/hect. as compared to 5000 kg/hect in the plot in which only lime was

In addition to the above soil amendments, drainage channels were the water was pumped out. Necessary drainage channels were also provide plot as it helps to reduce iron toxicity.

The yield data and the net return obtained from the problem demo is as follows.

TABLE XI

Name and address of the cultivator	Season	Crop/ variety	Yield in qntal/hec.	Nutrient applied N	P_2O_5	K_2O	Total cost of input per hect.
Mathew Iteera, Thelath House, Kattukambal	Summer	Triveni	50.00	58	45	21	4947.25

E. Case history of farmer who obtained highest yield

1) 2 crop sequence

Sri.C.C.Kochunny, a progressive cultivator from the Chowannur bl has recorded the total highest yield of 15.130 tons/hect, in the 2 cro The variety cultivated by him was Jaya in the two seasons. The cultivat keen interest in the cultivation and he adopted all the recommendations

Contd..

package of practices advised by the subject matter specialists. Soil test values obtained for the Rabi and Summer seasons are as follows.

	Organic Carbon	Available P	Available K	pH	T.S.S. m.m.hos/cm
Rabi Season	0.98	2.65	83.05	5.3	0.3
Summer Season	1.72	5.3	11.40	4.8	0.2

Fertilizer and manures recommended and applied for the above two seasons are as follows.

	Fertilizers and manures recommended				Fertilizers and manures applied				
	Organic matter	Lime	N	P_2O_5	K_2O	Organic matter	Lime	N	P_2O_5	K_2O
Rabi Crop	5000	950	82	58	48	..	950	82	58	50
Summer "	3000	750	64	53	48	2000	750	63	52	48

Since this plot is situated 2 M below the sea level, there was sufficient irrigation water. Moreover to facilitate the sub soil drainage, additional deep drains were existed in the area and the seepage water was pumped out as and when required. Hence the plot was subjected to optimum conditions for plant growth. For analysis of the yield components the following information have been recorded.

Season	Total no. of tillers from 1 sq. metre	Effective no. of tillers	No.of unproductive tillers.	No.of grains per panicle
1st crop	399	330	69	95
2nd crop	345	315	30	81

The average number of effective tillers per sq.metre was maximum in this plot when compared to the other demonstration plots.

Plant protection measures were taken in this demonstration plot for the control of pests and diseases in time. Brown hopper found in an epidemic form in the neighbouring plots was not found in this plot. Similarly there was no attack of sheath blight in this plot.

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2) Single crop demonstration

There was only 2 demonstration plots in the one crop demonstration and these two plots represented two different types of cultivation, one area and the other converted uplands. The yields obtained from the above are 5600 kg and 3200 kg/hect respectively.

IV. Reasons for low yield in 2 crop sequence.

The yield from only one plot (plot of Sri.K.K.Balakrishnan Nair) was below the targetted yield. The plot was situated in an area of sandy loam having very poor drainage combined with high iron toxicity. There was an impervious layer of saltish clay at 2? cm below the surface layer. Even in the initial stages the crop growth was luxuriant, at the tillering stage crop suffered a set back due to the above soil factors.

V. Follow up and impact of National Demonstration

In all the centres the local cultivators participated in the field and observed the day to day progress of the demonstrations. The farmers were convinced about the agronomic practices and other plant protection measures to be taken for obtaining high yield.

Farmers' Training Centre, Trichur has joined the National Demonstration Project for the conduct of 2 farmers' training camps. Sri.C.Nandas and Sri Itecra, participant in the National Demonstration were interviewed and the success stories were broadcast in the farm and home programme of All India on 25.6.1976 and 20.8.1976. The following references appeared in newspapers magazines etc. regarding the national demonstrations conducted in Trichur District.

Sl.No.	Name of Newspaper/Magazine	Date on which appeared
1.	Express (Malayalam Daily)	24.3.1976
2.	Express (Malayalam Daily)	28.4.1976
3.	Indian Express (English Daily)	23..5..1976
4.	Kerala Karshakan (Malayalam monthly)	November 75
5.	Kalpadhenu (Malayalam - bimonthly)	March-April 1976
6.	Kurukshethra (English monthly)	16..7..76

In addition to the above, news about the field days, agricultural operations in the National Demonstration plots etc. were appeared under the

cont..

title 'To day's programme' in the dailies.

The advisory committee members visited the various demonstration plots on 19.2.1976. Director of Extension Education inspected almost all the plots during the 2 seasons. Dr.Chinnabasiah, Regional Co-ordinator of the National Demonstation project for the Southern Region has inspected the plots from 22.4.1976 to 27.4.1976. The inspection report is appended.

VI. Cash contribution paid.

A total of ~~Rs.7565.00~~ Rs.7565.00 has been paid as cash contribution and the details of the amount paid are furnished in Table No. XII.

II. Weather data

The weather data for the period from 4/75 to 6/76 are furnished in Table No.XIII.

TABLE No.XII

DETAILS OF CASH CONTRIBUTION PAID

Sl.No.	Name of the cultivator	Cash contribution Rabi Crop. Rs	Cash contribution Summer crop. Rs	Page
1.	K.V. Rajendra Prasad	200.00	150.00	35.
2.	V.K. Ramakrishnan	200.00	150.00	35.
3.	K.V. Parimelu	185.00	138.75	35.
4.	C. Ramdas	200.00	150.00	35.
5.	A.S. Babu	200.00	150.00	35.
6.	K. Govindan	200.00	150.00	35.
7.	K.A. James	200.00	150.00	35.
8.	K.T. Jose	200.00	150.00	35.
9.	K.I. Kunjuvareed	200.00	150.00	35.
10.	K. Ramakrishnan	200.00	150.00	35.
11.	E.V. Uthuppu	200.00	150.00	35.
12.	Father Prior	200.00	150.00	35.
13.	K.K. Balakrishna Menon	200.00	150.00	35.
14.	Babu Varappan	200.00	150.00	35.
15.	Samuel Philip	140.00	101.25	24.
16.	P.J. Joykutty	200.00	150.00	35.
17.	C.C. Kochunny	200.00	150.00	35.
18.	C.K. Unni	200.00	150.00	35.

TABLE NO.XIII

Weather data for the period 4/75 to 6/76

Month	Rainfall received during the month.	No. of rainy days	Absolute maximum temperature	Minimum temperature
April 1975	39.6 mm	4 days	38.1 °c	22.0 °c
May 1975	286.9 mm	15 "	34.1 °c	21.3 °c
June 1975	380.3 mm	20 "	31.3 °c	23.5 °c
July 1975	562.4 mm	31 "	30.6 °c	21.5 °c
August "	760.9 mm	31 "	30.4 °c	21.6 °c
Sept. "	553.4 mm	25 "	32.5 °c	21.5 °c
October "	361.9 mm	24 "	30.9 °c	21.1 °c
November "	245.4 mm	9 "	32.4 °c	21.2 °c
December "	Nil	Nil	32.5 °c	17.5 °c
January 1976	Nil	Nil	36.9 °c	17.5 °c
February "	Nil	Nil	36.0 °c	16.9 °c
March "	Nil	Nil	36.2 °c	22.6 °c
April "	14.4 mm	7 "	35.8 °c	21.1 °c
May "	75.9 mm	6 "	35.4 °c	21.7 °c
June "	62.1 mm	21 "	33.7 °c	21.9 °c

AVERAGE MONTHLY RAINFALL IN MILLIMETERS

Month		State	Trichy
1972	July	697.5	[illegible]
	August	287.1	365.4
	September	193.9	190.4
	October	369.0	346.7
	November	144.3	[illegible]
	December	120.6	[illegible]
1973	January	[illegible]	[illegible]
	February	0.1	1.4
	March	11.5	2.2
	April	117.8	64.2
	May	168.0	132.4
	June	618.7	557.1
1972-73 Total		2789.5	2638.8
1971-72 Total		3045.9	2780.2
1975-76 Total			3459.00

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VIII. LIST OF N.E.S.BLOCKS IN TRICHUR DISTRICTS

Code Number for block	Name of N.E.S. Block
01000	ANTHIKAD
02000	CHALAKUDI
03000	CHERPU
04000	CHOWANNUR
05000	CHOWGHAT
06000	IRINJALAKUDA
07000	KODAKARA
08000	KODUNGALLOOR
09000	MALA
10000	MATHILAKOM
11000	MULLACHERY
12000	OLLUKKARA
13000	PAZHAYANNUR
14000	PUZHAKKAL
15000	TALIKULAM
16000	VELLANGALLOOR
17000	WADAKKANCHERY

IX. Inspection Report of the National Demonstration Plots in ... District under the Kerala Agricultural University by Shri.P. Chennabasaiah, Regional Coordinator, National Demonstration Project, at University of Agricultural Sciences, Bangalore.

As is the leader so are the followers. It is true in our Nation as well as Kerala Agricultural University.

In the conduct of National Demonstrations, the ... suggested by the ICAR is adhered to. In the selection of ... Demonstration farmers and plots all development agencies ... been involved and location specific problems included. ... that retard production potential, in each locality viz: ... of local varieties, over application of urea neglecting ... P and K as per recommendations based on soil analysis ... pH, iron toxicity, lack of adequate to timely control ... and diseases, waterlogging due to clay pan resulting ... cution and failure of paddy crop etc. were identified. ... based technology to solve the problems has been pool ... Farmers were trained prior to conduct of National ... These steps have helped to establish National Demonstr... with their full significance, to treat the rest of the ... few hundreds to few thousand acres in each block, as ... These National Demonstration plots have to be fully ... of as 'class rooms' to train farmers by the Farmers Training Centre at Trichur. Service Cooperatives, Agriculture Department, Small Farmers' Development Agency and all other development agencies concerned were involved at all the possible and required stages, right from the selection of site ... of field day at harvest time. Radio, press, specialists, administrators, and even Advisory Committee members have visited most of the plots and sufficient publicity given. It looks though the farmers as well as public are taken through all the stages of adoption process and have accepted the technology. Now the stage is set for follow up of National Demonstrations.

Who should do it and how?

The service or farming cooperatives are to be ... or strengthened for timely supply of inputs. Agricultural Department has to plan an action programme in these 21 blocks for timely and free flow of technology. It is only then the high yielding paddy varieties, application of P and K with only required amount of N, liming to correct pH and iron toxicity, timely control of pests and diseases by plant protection measures, drainage and reclamation etc. will come to stay and yield more than double the present crop on sustained basis.

Seeing the right direction and spirit in which National Demonstration Scheme are conducted, I am urged to request the Kerala Agricultural University to arrange to send proposals for additional projects. Some of them may be on (1) Eradication of bunchy top disease of banana causing an annual loss of Rs.one crore (2) Reclamation of Problem soil area by drainage and profile mixing (3) Conjunctive use of rain, surface and underground water to grow three crops paddy using short-duration high yielding varieties under 50000 acres of Malampuzha Irrigation Project along with efficient water management techniques, in addition (4) to an Adhoc

cont...

Research Project on Soil and water conservation, run off water harvest, stonge in farm pond for supplemental irrigation to grow two assured crops under dry farming in Chittoor area of Palghat District.

Sd/-
H.S.M.Chennabassaiah
Regional Coordinator
National Demonstration
Project.

26-4-'76.

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X. Copy of letter No.CH(K)-283/76 dated 20.3.1976 from [illegible] Koshy, Professor of Agricultural Chemistry, College of Agriculture, Vellayani addressed to the Director of Extension, Kerala Agricultural University, Mannuthy, Trichur.

.....

Sub:- Decisions of the advisory committee of the N.[illegible] - report on the soil conditions in Kattukampal - submitted.

Ref:- No.Extn.(1)-25197/75 dt.20-2-1976.

I am forwarding herewith my report on the soil conditions in the National Demonstration Plot at Kattukampal.

Yours faithfully,
Sd/-
Professor of A[illegible]

- -

Report on the Soil Conditions at Kattukampal

As per his letter No.Extn.(1)-25197/75 dt.[illegible] of the Director of Extension Education instructed me to visit the pady fieldsat Kattukampal where the cultivation of rice has been a venture with uncertain results in the past owing to unfavourable soil conditions. This year a National Demonstration plot has been laid out in 1.25 acres of paddy land belonging to Sri.Ittyerah Mathew in this region and the Director of Extension wanted me to report on the management practices to be adopted in this plot.

I visited this area in the company of Sri.A.I.Thomas, Agronomist and Sri.K.C.Varghese, Entomologist, on the forenoon of 2.3.1976. The crop in the N.D. plot had come to flowering and the stand of the crop was good. It was reported that the harvest could be taken in this plot during the past four years and that a harvest was possible this year mainly because of the adoption of the management practices recommended by our Subject Matter Specialists. The recommendations given over the above the approved recommendations were the following:-

1. Lime @ 1 T/ha.
2. Arecanut husk - 20 kg in 10 cents
3. Charcoal dust - 20 kg in 10 cents

In addition to the above, soil amendments, drainage channels were cut and the water was pumped out. The water remaining in the bhannels had the characteristic red scum formation on the surface from which it could be inferred that iron toxicity is a major problem in this area.

While the crop in the N.D. plot was uniformly good there were patches of affected plants in the neighbouring plots. The visual symptoms exhibited by the affected plants were very characteristic of iron toxicity, viz., a reddening of the leaves, brown spots and scorching along the edges, followed by the decay of the root system. The existence of iron toxicity was further confirmed by the results of chemical analysis conducted on the soil and plant samples in the

cont...

The management practices recommended by the subject matter specialists were along the right lines. The best methods of combating iron toxicity are the application of lime and the provision of drainage as has already been done. The application of arecanut husk might prove beneficial because some of the organic compounds init may form complex compounds with ferrous iron and help to reduce its toxicity. A liberal use of phosphatic fertilisers may also prove beneficial as they will combine with active iron and form iron phosphates.

For the next year the following practices are suggested.

1. Provision of drainage as was done this year.
2. Application of lime on the basis of the lime requirement. For this a sample of the soil from this field may be sent to me at the time of preparing the land for cultivation.
3. Use of Phosphates: This may be carried out as an observational trial as follows:-

   a) In about one fourth of the area P may be applied in the form of Mussoorie rock phosphate at twice the recommended dose.

   b) In another one fourth of the area the P may be applied at twice the recommended level using a mixture of Mussoorie rock phosphate and super-phosphate in equal proportions.

   c) In a third one fourth of the area the P may be applied in the form of superphosphate mixed with an equal weight of lime.

   d) In the rest of the area the P may be applied a superphosphate at the recommended dose.

College of Agriculture, Vellayani.
29-3-1976.

Sd/-
Professor of Agrl.Chemistry.

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XI. OTHER ITEMS OF WORKS ATTENDED BY THE STAFF OF THE NATIONAL DEMONSTRATION PROJECT DURING THE PERIOD UNDER REPORT.

Apart from the main duty in National Demonstration project, the officers have attended the following items of works also during the period under report.

1) Training Camps for Farmers:-

39 One day training camps for the farmers were organised and conducted in Trichur District by the officers of the project in addition to field days envisaged in the scheme. They have attended 28 experts in other seven agri-cultural Seminars also outside the district.

2) Exhibitions:-

The officers were responsible for organising and maintaining the Kerala Agrl.University Pavilion in Trichur Poorm Exhibition 1976, which won the first prize. Other agricultural exhibitions like exhibitions at Mala etc.:- were also organised and attended to. In this connection the Vice-Chancellor was pleased to award Good service entry to Sri.A.I.Thomas and letter of commendation to Sri.K.C.Varghese

3) Taking courses for students:-

Sri.A.I.Thomas, Subject Matter Specialist(Agro.) has taken one course in Agronomy (3 + 0) for the undergraduat students of the College of Horticulture, Vellanikkara and Sri.K.C Varghese, S.M.S.(PP) has taken one course in Plant Protection (2+1) for the students of the 2year certificate course in Agricultural at the Rural Institute, Tavanur.

4) Classes for Agricultural Demonstrators'

The officers have taken 2 classes each for each batch of trainees during the period under report.

5) Articles for Karshikarangas'

Sri.K.C.Varghese, S.M.S.(PP) was responsible for sending the articles of interest to farmers and public at the rate of 3 articles per week to the dailies, Mathrubhoomi, Malayala Manorama and Veekshanam to be published in their weekly Agricultural columns "The articles appeared regularly under the name of Kerala Agricultural University. This is in addition to contribution of articles to "Special issues" and small press releases of timely importance.

6) Answering the Questions of Farmers through dailies:-

The question answer column of the daily "Deepika" was regularly attended to by the officers, in which answers were given for the question of the farmers, relating to Agriculture, Animal Husbandry and development fields.

7) Attending enquiries from public:

All public enquiries and correspondence of technical nature that comes to the extension wing were attended to by the officers of the National Demonstration Project.

8) Advisory Service:

The Subject Matter Specialists of the National Demonstration Project have visited the fields and gave advice to all those cultivators who have requested for such advises for improving their cultivation or saving their crops.

9) Technical training programmes:

The Officers of National Demonstration Project were responsible for organising and conducting the Minikit training programme for the officers of the Agriculture Department conducted by the Kerala Agricultural University.

10) Preparation of schemes, programmes etc.:-

The officers have attended to the duty of the preparation of technical schemes like Fedent Control, training of amature scientists day farming etc., during the period under report.

11) Personal research projects:-

Personal research projects were also taken up by the officers. Sri.A.I.Thomas, Subject Matter Specialist (Agro.) have taken "Ameliaration of acid soils", and Sri.K.C.Varghese, "Biological control of pests of pulses with special reference to Fea aphids" as their personal research programmes and the work is still continuing.

12) Other General works:

The Subject Matter Specialists of the National Demonstration Project have attended to the works in connection with the collection of data, compilation and consolidation reports etc. for proper presentation. Upkeep and maintenance of the library of the Extension Wing, representing meetings and conference accompanying visitors etc. were also attended to by them in addition to other co-ordination works. Collection of specimens, giving articles for K.A.U. Publications and works in the instructional farms at Mannuthy and Vellanikkara.

IMPLEMENTATION OF THE DECISIONS TAKEN BY THE ADVISORY COMMITTEE HELD ON 11..2..1926

1. To form an expert Committee for deciding the cultural and manurial practices and fertilizer doses. The Committee was formed with 3 subject Matter Specialists at the Chairmanship of the Director of Extension Education for the above matter.

2. To form another expert Committee for studying and solving the problems in the problem soil area. The Committee was formed under the Chairmanship of the Prof. of Chemistry, Agricultural College, Vellayani.

3. Collection of data on yield componants.

This is collected and recorded.

4. Ascertaining the percentage of moisture in the harvest produce utilising moisture testing apparatus.

This could not done, but dried weight was taken.

5. Advisory Committee visits to the plots.

The Advisory committee visited the plots on 19.2.'26.

6. Micronutrient analysis of the soil.

The soil was tested for micronutrients and recorded.

7. To inform the outbreaks of pests and diseases -

Information was given from time to time to the district level in All India Radio and News Papers.

8. To take steps for the comparison of yield of National Demonstration plots with that of the locality.

This is being done.

9. To prepare a display board to show calender of operations.

This is done.

10. To take steps for the correct estimation of yield of National Demonstration plots.

Professor of Statistics, Agrl.College, Vellayani was consulted and followed the outlines given by him for the estimation of yield.

11. To give details of packages of practices followed in National Demonstration Programme to All India Radio.

This was done.

12. To be in touch with F.T.C. in the conduct of field days.

This is being followed.

13. To convene the advisory committee meeting before the commencement of next crop.

This could not be convened.

AREA (in hectares) UNDER CROPS IN KERALA - 30.6.1973.

	State	Trichur
RICE		
I Crop (Viruppu)	3,91,900	34,810
II Crop (Mundakan)	3,82,181	60,871
III Crop Punja	99,623	14,811
Total	8,73,704	1,10,492
Jowar	1,519	-
Ragi	4,994	1,2[illegible]
Other cereals and millets.	5,177	-
Total sereals and millets.	8,85,394	1,11,7[illegible]
Pulses		
Tvr	4,861	-
Other pulses Khariff	12,442	2,328
Rabi	20,254	5,497
Total	32,696	7,82[illegible]
Total food grains	9,22,951	1,19,[illegible]
Sugarcane	7,765	-
Others (Palmyrah)	8,510	1,[illegible]72
Total	16,275	1,[illegible]72
Pepper	1,16,343	745
Chillies	3,205	-
Ginger	11,802	76
Turmeric	4,185	-
Cardamom	47,492	-
Betelnuts	88,633	14,116
Others	10,379	1,836
Total	2,91,039	16,833
Mangoes	57,123	4,839
Citrus	1,959	-
Bananas	[illegible],148	1,07[illegible]
Other Plantains	38,139	4,[illegible]5
Others	68,425	4,639
Total	1,74,794	14,778
Cashewnut	1,01,493	7,[illegible]51
Total Fruits	2,76,287	22,[illegible]29

	State	Trichur
	3,04,828	8,34
Tapioca	5,325	16
Sweet Potato	203	6
Onions	32,988	1,82
Others	3,43,344	10,34
Total	6,19,631	32,374
Total fruits and vegetables.	18,49,896	1,79,06
Total food crops	16,044	-
Groundnut	343	7
Castor	11,780	1,16
Sesamum		
<u>Oilseeds</u>		
Coconut	7,45,429	56,869
Others	8,866	1,584
Total	7,82,462	59,620
Fibre	7,476	-
Tobacco	675	-
Tea	38,877	436
Coffee	34,651	-
Rubber	1,95,603	9,762
Others	1,406	-
Total	2,70,712	10,198
Fodder crops	527	27
Green manure crops	18,689	460
Other nonfood-crops	56,716	3,473
Total non-food crops	11,56,582	73,774
Total area sown under all crops.	29,86,478	2,43,782
Area sown more than once.	7,89,489	1,04,2
Net area sown	21,96,989	1,39,560

PRODUCTION OF IMPORTANT CROPS IN JUNE 1973

Rice	State	Trichur
Ist crop Virippu	5,76,192	37,961
2nd crop Mundakan	6,09,234	92,075
Punja	1,90,941	27,798
Total	13,76,367	1,57,834

Population 2,13,50,000

Average Yield of Rice Kg/ha.

Ist crop	Viripppu	2,347 kg./ha.	2,001 kg/ha.
2nd crop	Mundakan	2,028 kg/ha.	1,587
3rd crop	Punja	2,168 kg/ha.	1,841