SUMMARY REPORT 1982-83 (1-4-1982 to 31-12-1982)



KERALA AGRICULTURAL UNIVERSITY VELLANIKKARA-680 654 TRICHUR, KERALA Processing & Compilation by Monitoring & Evaluation Cell DIRECTORATE OF RESEARCH

CONTENTS

		pages
1.	. General administration	1-7
2.	. Education	8-40
	College of Vety. & Animal Sciences	12-16
	Co ll ege of Horticulture, Vellanikkara	17-24
	College of Agriculture, Vellayani	25-35
	Institute of Agrl. Technology, Tavanur	35-40
3.	Vacancies of academic & non-academic positions	41-46
4.	Participation of scientific personnel in Seminars/Symposia/Workshops	47 - 54
5.	Research	55-81
	Research - General	55-67
	Research Highlights - Faculty of Agri.	68-77
	Faculty of Vety. & Animal Sciences	78-80
	Faculty of Fisheries	81
6.	Distinguished visitors	82-83
7.	Services to farmers	84
8.	Extension Division	85-102
9.	Engineering Wing	103-110
10.	KAU Estato	111-112
11.	Finance	112-114

KERALA AGRICULTURAL UNIVERSITY SUMMARY REPORT FOR 1982-83 (1.4.1982 to 31.12.1982)

Mr N Kaleeswaran, IAS continued as the Vice Chancellor till 5.6.'82. Mr Kaleeswaran was on leave from 6.3.'82 to 5.6.'82. Dr N Sadanandan, Dean, Faculty of Agriculture held charge of the Vice Chancellor during this period.

Mr T Madhava Menon, IAS took over as Vice Chancellor on 7.6. 82.

Mr E Damodara Marar continued as the Registrar. Mr NM Abdul Kadir continued as the Comptroller. He held charge of the Registrar from Nov., 15-Dec., 16, 1982, during the period when Mr E Damodara Marar entered on leave.

Mr KR Krishna Pillai continued as the Director of Physical Plant.

Dr PC Sivaraman Nair continued as the Director of Research and Dr VSS Potti continued as the Director of Extension.

Dr N Sadanandan, Dr MJ Sebastian and Dr M Krishnan Nair continued as the Deans Faculty of Agri., Faculty of Fisheries and the Dean. Faculty of Vety. & Animal Sciences respectively.

Dr PK Gopalakrishnan took charge as Assoc.Dean on \$.3.82 and was holding full additional charge of the post until then.

The post of Librarian remained vacant during the year.

Mr OK Paul, Junior Asst.Professor in Physical Education held additional charge of the post of Deputy Director, Student Welfare w.e.f. 1.6.'82.

ADMINISTRATIVE MATTERS

General Council

The General Council met four times on 29-30/3 '82, 15.5.'82, 31.7.'82 and 15.11.'82. Of these, the meeting on 15.5.'82 was a special one in order to nominate a representative of the General Council to serve on the Committee for nominating a new Vice-Chancellor for the University.

In the XXVII meeting of the General Council held on 15.11.'82 it was decided to honour Mr N Kaleeswaran, IAS former Vice Chancellor of the KAU by awarding him a Doctorate honoris causa, as a recognition of his varied contributions for the development of Agriculture in the State and also his services in developing the University to its present status.

Under 'Elected Members(1)-Members of the Legislative Assembly', in the places of M/s Cyriac John, PK Gopalakrishnan and MK Kannan, the following MLAs have been elected with effect from 1.11.'82.

> Sri VV Joseph, MLA Valiakandathil, Mutholapuram, Elanji, Ernakulam.

Sri G Karthikeyan, MLA, Umavihar, Kawdiar, Trivandrum.

Sri C Vasudeva Menon, MLA, Pallamkulam, Kollengode, Palghat Dt. Under 'elected members (2)', representatives of PG students, instead of S/Sri Abdul Azeez M and Markose VC, the following students have been elected with effect from 28.5.'82.

Madhu P, M Sc Ag Student, Department of Plant Breeding, College of Horticulture, Vellanikkara.

Abdul Kareem K,
M Sc Ag Student,
Department of Agri. Extension,
College of Agriculture,
Vellayani.

ACADEMIC COUNCIL

The Academic Council met four / on 29.5.'82, 3.7.'82, 21.8.'82 and 1.11.'82. Nomination of the Chancellor to the Academic Council reconstituted as per University notification No.GC/37004/81 dated 6.11.'81 have been received from the Chancellor. The following are the persons nominated by the Chancellor upto 5.11.'84.

Members nominated from among the Heads of Departments of Faculties

Dr M Aravindakshan, Professor of Pomology & Floriculture, College of Horticulture, Vellanikkara.

Dr N Mohandas, Professor of Ag Entomology, College of Agri., Vellayani.

Dr M Subrahmaniam, Professor of Dairy Science, College of Vety. & Animal Sciences, Mannuthy.

•••4

Dr G Mukundan, Professor of Animal Breeding & Genetics, College of Vety. & Animal Sciences, Mannuthy.

Dr PK Abdulla, Professor of Microbiology, College of Vety. & Animal Sciences, Mannuthy.

Members nominated by the Chancellor from among the staff of the Research Stations of the University

Dr L Rema Devi, Associate Professor, Rice Research Station, Moncompu.

Dr MN Chandrasekharan Nair, Associate Professor, Cashew Research Station, Anakkayam.

Members nominated from among those connected with services in Forestry, Fisheries, Dairy development, Co-operation & Community Development

Mr Joseph Alappatt, Thoppil Kattoor.

Dr MN Menon, Anuradha, Trivandrum.

Mr P Suseelan, Additional Director of Agriculture, Trivandrum.

Dr PM Ganapathi, Director, Kerala Forest Research Institute, Peechi.

Members nominated from among Scientists from ICAR and from other Universities or from among well-known Scientists in India

Dr VK Vamadevan, Scientist, CWRDM, Kunnamangalam, Kozhikode.

Dr KK Krishnamoorthi, Director of Research, UAS, Hebbal, Bangalore.

Dr SN Rao, Head, Department of Horticulture, Andhra Pradesh Agricultural University, Tirupathi.

Dr EG Silas, Director, Central Marine Fisheries Research Institute, Cochin.

Dr A Sreerangaswami, Director, School of Genetics, Tamil Nadu Agricultural University, Coimbatore-3.

The Executive Committee met 14 times on 13.4.82, 20.4.82, 28.5.82, 14.6.82, 1.7.82, 19.7.82, 20.7.82, 6.8.82, 16.8.82, 16.9.82, 14.10.82, 2.11.82, 29.11.82 and 27.12.82.

Among the decisions taken by the Executive Committee, sanctioning of an ex-gratia payment of $8\frac{1}{3}\%$ of the salary of each individual to the KAU Estate employees, sanctioning of compensatory leave without limit to all employees except Heads of Offices, sanction of HRA to all employees in the Vellayani, Karamana, Mannuthy, Vellanikkara campuses at rates applicable to Govt. employees, are of importance.

PG Committee

The PG Committee met twice on 26.7. 82 and 8.9. 82.

ASSURANCE COMMITTEE

The Assurance Committee met 4 times on 17.6. 82, 13.9. 82, 5.11. 82 and 16.12. 82.

OFFICER'S MEETING

The Officers of the University met 7 times during the period on 3.5. 82, 11.5. 82, 8.9. 82, 9.10. 82, 25.11. 82, 26.11. 82 and 23.12. 82.

STATUTE AMENDMENTS AND ISSUE OF FIRST STATUTE

Eight first statutes and six amendments to the existip statutes were issued during the period.

First statutes

- Statute No.GO(MS)34/82/AD dt. 15.1.82 for the post of Labour Officer, Conductor, Driver and Duplicator Operator.
- 2. Statute SRO No.517/82 College Librarian
- 3. Statute SRO No.593/82 Fieldman(Fisheries)
- 4. Statute SRO No.975/82 Jr. Asst. Professor (Mathematics)
- 5. Statute SRO No.976/82 Trade Assistants in Carpentry, Smithy, Fittings etc. and Tractor Mechanic
- 6. Statute SRO No.1342/82 Asst.Engineer (Electronics)
- 7. Statute SRO No.1486/82 Boat Driver
- 8. Statute SRO No.1479/82 Assistants/Typists

Amendments to statutes

- 1. Amendment to Statute SRO No.222/78(GA/22531/A3/dt. 30.1.82
- 2. -do- to Statute SRO No.293/72 (Notification No.GA/3957/A3/82 dt.7.4.32)
- 3. -do- to Statute SRO No.537/75 (Notification No.GA/31463/A3/81 dt. 12.4. 82)
- 4. -do- to SRO No.81/76 (Notification No.GA/ 22527/A3/80 dt. 21.8. 82)
- 5. -do- to SRO No.1060/76 (Notification No.GA/22534/.43/80 dt. 18.9.'82)
- 6. -do to SRO No.1112/79 (Notification No. GA/32132/A3/81 dt. 29.12. 81)

Teaching posts created during 1.4. 82 to 31.12. 82

During the period, the following teaching posts were additionally created:

Scheme/Campus/ Institution	Position created	No.of posts
College of Fisheries ICAR Scheme for Socio- economic uplift of SC/	Jr. Asst. Professor Assoc. Professor	1
OBC IC.R Scheme for the estt. of KVK at Pattambi	Jr.Asst.Professor Professor Assoc.Professor	1. 4
Estt. of KVK at	Asst.Professor	5 1
	Jr. Asst. Professor	3

. 8

EDUCATION

During the academic year 1982-'83 admissions to UG Programmes were made on the basis of the marks secured in the common entrance examination conducted for the MBBS, BDS, BSC (Ag), BVSC, BFSC, etc. The entrance examination was conducted by the Institute of Management in Govt. Admission to the UG courses (BSC (Ag), BVSC & AH, BFSC and BSC (C&B) were made in Jan., 1983.

It was decided earlier that a PG Programme in Food Science and Nutrition may be started this year, but for want of applicants, admissions could not be made for this course.

The details of student admissions for the Diploma in Agri Science and Diploma in Agri and Rural Engg are as follows:

Student strength

As on 31.12.182, there were a total of 1332 students on rolls of the University as detailed in the Table.

	of	Of	College of Vety & AS	of	Tavanur
UG Courses 1 BSc (Ag)	224	166	e e	**************************************	• • •
2 BSc (Hort)	••	68	• •	• •	
3 BVSc & AH 4 BFSc	• •	• •	2 7 8	86	• •
5 BSc (C&B) Diploma in	• •	52	••	• •	••
Agrl.Science	• •	• •	• •	• •	272

• • • • 9

PG Programmes				
MSc (Ag)	61	45		
MSc (Hort)	• •	28	p • •	••
MVSc	• •	• •	17	••
MSc (Stat)	• •	••	• •,	••
Ph D Agri.	17	• •	• •	• • • •
" Vety.	• •	• •	4	••
" Hort.	• •	9	• •	••
PG diploma in Natural Rubber Production	• •	5	• • •	••
PG Diploma in		i al		
Land Water Resources and Management	• •	•	• •	· •• · · · · · · · · · · · · · · · · ·
	302	373	299	86 272

Details of admissions to the DASc and DARD courses at LAT

	DASC.	DARE
No. of valid applications	839	257
Students admitted	50	27
Nominees	• •	

enderly construction of the second construction of

Marks secured by the last candidate in each category are as follows:

		quota		351	r F	320
	SEBC			317		310
	SEBC			265		249
	SEBC			220		218
	SEBO			304		277
4.0.1	SEBC	V		337		284
vii)				323		241
viii)	ST			226		Nil

337	309
336	316
258	0.0
	•••
	269
	336

PG Programmes

There were a total of 74 admissions for the post-graduate programmes during the year. The details of admissions are as follows:

•	•:	9 9 17	w?	No.of	applica	tions	No.	ed
1	MSc	(Ag)			110		47	Actions
2	MSc	(Hort)			3.3		12	
3	PhD	(.\gri)			13		8	
4	PhD	(Hort)			4		Nil	
5.	MVSc				10		5	
6	PhD	Vety &	ЛH		4		2	
				Total			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
					1 4 T		/4 ====	

During the period 152 students took their first, second and third degrees and 69 students took the PG diplomas as per the following details:

Degrees awarded

-	CONTRACTOR SOL	The second second second second second							
	BSc					:		85	
		(Hort)						32	
		H. 3						4	
	MVSc							1	
	MSc	(Ag)				7.6		17	
		(Hort)				,		3	
		(Agri)						4	
	MSc	(.1g Engg)				4		2	
	MSc	(. g Stat)						7	
					š .		•		
				Total		_		-	
				10041			F	52	
						-	-		

: 11 :

A total of 69 students completed the diploma	COLLIGIO
as shown.	courses
PG diploma in Soil Science	• 7
PG diploma in Plant Protection	: 3
PG diploma in Veterinary	: 13
PG diploma in NRP	: 3
Diploma in Ag Science	: 43
Diploma in Rural Engg	: Nil
	draft fried and seried cord
Diplomas awarded	69

COLLEGE OF VETERINARY & ANIMAL SCIENCES

Dr M Krishnan Nair continued as the Dean, Faculty of Veterinary & Animal Sciences.

Academic programme

A total of 278 students were on rolls of the College on 31.12. 82 out of which 76 were from other states of the country and six from other countries. The details are as follows:

No. of students in rolls as on 31.12. 82.

				1	√en	_		V	Von	ner	Ţ		3	ot	al	
I	Year				52	2			3	30				8	32	
II	Year								•						•	
III	Year				57	7			1	.5					72	
IV	Year				51				1	4				6	5	
V	Year				49)			1	.0				-	9	
			Ein	turet		red .	-	POLE			r	era		•••	****	
					209	,			6	9				27	8	
			=	=	==	=	=	=	=	=	==	==	=	=	=	

Among these students 76 were from other States.

			Men		Women		Total
I	Year		13		• •		13
II	Year		• •		• •		• •
III	Year		24		• •		24
IV	Year		19		2		21
, V	Year		16		2		18
		tred Name	72	83448	A		76
		===	/ Z ====	===	<u> </u>	====	, , o

There were a total of six students from foreign countries.

No. of foreign students

				<u>Men</u>				Women							Tota			
I	Year		(;	1 (Sudanese)					1 (Zimbawe)								2	
II	Year	N .		• •	•					į	• •							
III	Year		(:	(Zimbave) 1					(Malayasia) 1						2			
IV	Year			• •					1 (Tanzania))			1	
V	Year		(1	1 Vig	er	ia	a)				• •						1	
				3	ma	F.::8		bred	* 20 0		3.	A.a	1.34	•••	Aveg .	scate.		~
	,	=		=	=	=	=	=	=	=	⇒ =	=	=	==	=	=	=	=

During the period four students took their BVSc and AH degree and another four took the MVSc degree. Thirteen persons had completed the PG diploma in Veterinary Science.

For the PG courses there were 29 students on rolls, 17 for the MVSc course, 8 for MSc Ag Stat and 4 for the PhD programme. Of these 3 students were from outside Kerala.

Scholarships/awards to students

A total of 163 students were recepients of various scholarships/awards as follows:

KAW Merit scholarship	:	16(4	sanctioned)
KAU Fellowship (Jr)	:		sanctioned already)
ICAR Junior Fellowship	0	3,	
ICAR Senior Fellowship	3	1	

ICAR Scholarship	:	11
KPCR Fee concession	:	54
X'ian Convert/Kudumbies	:	3
SC/ST Concession	•	30
Labour Welfare Scholarship	:	2.
Backward classes A.p.	:	1
Lakshadweep Students	:	17
Scholarship from Commonwealth Sectt.		2
National Merit Scholarship		10
National Loan Scholarship	:	5
	Na to	
Total	1	63
	==	

SEMINARS/WORKSHOPS ORGANISED

A state level workshop on parasitic diseases in animals and birds was conducted. Another state level training on infertility in cross bred cattle was conducted under the joint auspices of the College and the Department of nimal Husbandry and MILMA.

TRAINING PROGRAMMES

A training programme in techniques in electron microscopy was held. Mr Leif Karlson, Sweedish expert was in charge of the training.

For dairy farming, another training programme was conducted for the benefit of pre-release defence personnel.

NSS

Under the NSS, blood grouping of 96 students was carried out and recorded for arranging blood donation in case of emergencies to needy patients.

An animal health camp was organised at Mullakkara on 10-11 Sept., '82 under the NSS. A 5-day special camp was organised at Nadathara Harijan Colony.

DETAILS OF SEMINARS/WORKSHOPS ATTENDED BY THE FACULTY MEMBERS

Dr CKSV Raja, Professor of Animal Reproduction attended Seminar on Buffalo Reproduction and Meat Production at Tanuko, Vijayawada. Dr A Ramakrishnan, Scientist, AICRP on Poultry attended the 7th Workshop on Poultry Breeding at Bangalore. Dr M Subrahmanyam, Professor of Dairy Science participated in the International Food Conference at Bangalore. Dr A Ramakrishnan and Dr AKK Unni of Department of Poultry Science attended the All India Poultry Science symposium at Tirupati. Sri N Narayanan Nair, Assoc. Professor, Dairy Management attended the Indian Dairy Association Seminar, South Zone held at Madurai. Dr A Rajan, Professor of Pathology and Dr KM Ramachandran attended the National Comparative Oncology Seminar at Madras. Dr A Rajan chaired the session on Cancer Diagnosis.

COLLEGE LIBRARY

There were 15,691 books as on 1.4.'82. Upto 31.12.'82,121 titles were added on to the Library. STUDENT UNION ACTIVITIES

A special lecture on training of dogs was arranged on 8.6.'82. An interclass quiz competition was held on 22.7.'82. On 22nd and 23rd July, 1982, an interclass dramatics competition was also held. A musical evening was organised on 31st July, '82.

The College team participated in the Inter-Collegiate Quiz organised by Priya Vijnana

Parishat at Trichur on 21.9. 82 and was awarded the Priyarema shield for the second position. A

Book Exhibition was held from 19.12. 82 to 21.12.82.

STUDY TOURS

During the period the All India Tour for IV BVSc and AH students, South Indian Tour for III BVSc and AH batch and the Kerala State Tour for the II BVSc and AH students were conducted.

COLLEGE OF HORTICULTURE, VELLANIKKARA

Dr PK Gopalakrishnan continued as the Associate Dean.

Mr S Balakrishnan took over as Professor of Horticulture (Plantation Crops) on 15.4.182.

Dr KV Peter, Professor of Horticulture
Olericulture continued upto 8.8. 82 and thereafter
left on deputation to the USDA on a study programme.
Dr S Ramachandran Nair took charge as Professor
of Hort., Olericulture on 26.8. 82.

During the interim period Dr PK Gopalakrishnan, Assoc.Dean held charge as Head of the Olericulture Department also.

Dr KM Rajan, Professor of Plant Pathology, Coconut Root wilt Disease Project was shifted to the post of Professor of Plant Pathology, College of Horticulture.

Mr K Kuttappan Nair, Administrative Officer continued upto 30.11.'82. He had retired on superannuation from the KAU service w.e.f. 31.11.'82. Mr PK Ramachandran Nair took charge as Administrative Officer on 7.12.'82 and continued for the rest of the report period.

New Departments/Sections were not started during the year. New posts were not sanctioned.

The post of Professor (Project Co-ordinator), Soils was shifted to the College of Horticulture (30346/1/82(i) dated 21.7. 82.)

TRAINING PROGRAMMES CONDUCTED

Under the Coconut Root (wilt) Disease Project a training programme was conducted on the method for indexing wilt affected palms.

DEPUTATION OF ACADEMIC STAFF FOR PARTICIPATION IN SUMMER INSTITUTE/SYMPOSIA/SEMINARS

Dr AI Jose, Dr R Vikraman Nair, Dr K Kumaran, Smt PK Sushama and Sri CS Gopi attended the 5th National Symposium on Plantation crops at CPCRI Kasaragod.

Dr VK Venugopal, Assoc.Professor attended short term training/safety aspects on the use of ionising radiation at BARC, Trombay.

Dr Abi Cheeran, Sri S Balakrishnan and Dr KM Narayanan Namboodiri attended the symposium in connection with the Silver Jubilee Celebrations of Arecanut Research at CPCRI, Vittal.

Dr Abi Cheeran, Professor of Pathology and Smt Sheela T Paul, Asst.Professor, attended the National Seminar on Seed Pathology at Tamil Nadu Agrl.University, Coimbatore.

Smt V Indira, Jr. Asst. Professor attended an Orientation Course in Nutrition held at the National Institute of Nutrition, Hyderabad.

Dr R Vikraman Nair, Professor of Agronomy,
Dr TV Viswamathan, Assoc.Professor (Botany) and
Sri.Luckins C Babu, Assoc.Professor (Botany) attended
the Tree Phys Ind Symposium held at Rubber Board,
Kottayam.

FACULTY IMPROVEMENT PROGRAMME

Mr Luckins C Babu, Associate Professor

(Ag Bot) was deputed to undergo the PhD course in
Physiology at IARI, New Delhi. Smt VK Mallika,
Assoc.Professor (Botany) and Mr PK Asokan, Asst.

Professor (Agron) were granted study leave for
undergoing the PhD course leave for study purpose
was granted to Sri Abdul Salam, Asst.Professor

(Agron) and Sri BR Reghunath, Asst. Professor (Hort)
to undergo PhD Courses at the TNAU, Coimbatore and
the College of Horticulture, Vellanikkara respectively.

Mr T Vilasachandran, Asst.Professor (Hort), Smt Sosamma Jacob, Asst.Professor (Ento), Smt KC Marykutty, Asst.Professor (SS&AC) and Mr Joseph Philip, Asst.Professor (Hort) have joined the departments after completing/partially completing their PhD programmes.

ACADEMIC PROGRAMME

There were 234 students as rolls for the BSc (Ag) (166) and for the BSc (Hort) (68) programmes as per the following details.

BSc (Ag) Degree Programme

Year of admission	Men Women Total
the full tell told can feel took tills had trail can tell took too	NCS ACE NCS STOR EACH NAME NCS AND BONS COST NCS AND SHARE
II year (1981 admn)	52 28 80
III year (1980 admn)	21 18 39
IV year (1979 admn)	28 29 57
Mat a l	101 75 166
Total	101 /5 100

No. of BSc (Ag) students from other Indian States/ Union territories

even hade that most brook store	949 Eas test Las	Cod Word era	4 tem	BSc	(.	g)	wag kung p	icas tent o	
State	yea	-4	I ear	ye II		<u></u>	IV year	P=	Total
Pondicherry		7:	4	4	1	3	2		21
Lakshadweep		3	1	1	-	1	3.		9
Nepal	8	-	2	-	•	-	-		2
Meghalaya		1			-	_	-		1
Tripura		10		-	-	4	-		14
Tamil Nadu		-	-	-		1	***		1
Manipur			-		-	4	6		10
*	·	21	7	5 = =	1 ==	 13 =	 11 = =	 = =	58 =====

There were 7 foreign students undergoing the BSc (Ag) course. Of these six were from Sudan and 1 was from Keniya.

Hort		,		
BSc (Ag) DEGR	EE PROGR. MME			
I year (19	82 admn)	• •	• •	• •
II year (19	81 admn)		• •	
III year (19	80 admn)	8	25	33
IV year (19	79 admn)	17	18	35
		ens to a ma	an earl may tran can may emp and	trace case that was kind prog.
		25	43	68

No. OF BSc (Hort) STUDENTS FROM OTHER STATES

				44.70	0.00	-	\$1.20	*****	***			£7.00 A	=4 +	-	***	t/216 64				-	acre.		-	-
	State	:							II	I M	У	ear W	2			VI M	λέ		C		T	ote	al	
948 Big 64	d to to	*** *	-	Ed	total	ate	No.		*.00						A r∌	P440 M.		٠.			Nue .		- .	-
Pondi Manip Tri pu Sikki	ur ra	Y								1 -		3.				1 1 4 1		•				2 4 4 1		
							**	• •	-	•.4	***		*10	****	44.00	-	P14	es:a	Pos	0-10		-	100	
										1		3				7	•	•				11		
							=	: :	= :	=	=	=	=	=	=	===	=	=	=	==	==	=	=	

For the BSc (Hort) programme there were no students from foreign countries.

BSc (C&B) DEGREE PROGR.MME

The Four Year degree programme in Co-operation and Banking was started during the academic year 1981-82.

			Mer	1	Women	Total	
year year			32	2	20	52	
OF STO	OHW	OBT.IN	ED TH	EIR	DEGREES	DURING	
(Mort)		1	*	1°		32 38	
	 21		=	38	3 32	70	

PG Courses

STRENGTH OF STUDENTS IN E.CH COURSE

a) MSc	(Hort)	96.0	Men	Women	Total
I 7	year		6	8	14
II 7	year		7	7	14
			13	15	28
b) MSc ((Ag)				
I y	rear		20	4.	24
II y	rear		10	11	21.
			30	15	45
				Anny them, much doubt being proch golgs goods grown from I	

c) PhD (Hort)				
I year	2	1	3	
II year	6		6	
	8	1	9	
Post-graduate Diploma in Land water resources and Management	NIL			
Post-graduate diploma in natural rubber production	5	-	5	
	5	was sed not was held sed and	5	
GRAND TOTAL	56	31	8 7	3
No. OF STUDENTS FROM OTHER	STATES	33:		
MSc (Hort) : I year	2	Manage of	2	
II year	_	-	-	
entification in the second of	2	100 000 000 000 000 000 000 000 000	2	S N ^S and is
No. OF STUDENTS WHO SECURED	DEGREES	DUR ING	THE	PERIOD
MSc (Hort)	4.	5	9	
MSc (Ag)	7	6	13	
Total	11	11	22	
and the second s				

STUDY TOURS

The second year BSc (Ag) students were taken on a study tour to the various Agri. Research Stations in the State. The third BSc (Ag) students were taken on an All India Study Tour.

NAME OF SCHOLARSHIPS, AWARDS AND AIDS TO STUDENTS

Name of scholarships/award/aid	No.of recipients
National Merit Scholarship	36
National Loan Scholarship	12
KAU Merit Scholarship	28
ICAR Merit-cum-Means scholarship	23
ICAR Junior Fellowship	27
ICAR Serior Fellowship	4
KAU Fellowship	53
Stipend to Nominees of Tripura/ Pondicherry/Manipur/Nepal/ Lakshadweep	34
Education concession SC/ST	31
KPCR	3 8
Christain converts	8
Total.	314

HOSTEL

There were 220 men and 131 lady student inmates in the College Hostels. Dr TV Viswanathan, Assoc. Professor continued as Asst. Warden up to 15.10.182.

Dr S Ramachandran Nair took over on 16.10.'82 and continued as the Asst.Warden for the rest of the period. Smt Achamma Oommen, Asst.Professor continued as Asst.Warden in Men's Hostel up to 15.10.'82 and thereafter Smt KC Marykutty took over and continued for the rest of the period.

COLLEGE LIBRARY

The number of books in the library as on 1.4.82 was 16199 nos and up to 31.12.82 a total of 15 books were purchased, bringing the no. of titles as on 31.12.82 at 17199 nos.

The Library continued to receive 166 journals out of which 45 were journals published from foreign countries. None of the journals was additionally subscribed during the period.

WISITORS

The visitors to the College during the report period included Dr AR Seshadri, Dean and Joint Director, IARI; Dr CN Sethi, Head of the Department of Nematology, IARI; Dr Gopala swaroop, Senior Nematologist, IARI, New Delhi, Dr VN Madhava Rao, TNAU, Coimbatore; Dr Ahmed Bavappa, Director, CPCRI, Kasaragod, Dr Fernado Cassieiro, Brazil; Dr Van Den Graff, Plant Pathologist, FAO; Dr Putter, Plant Pathologist, University of Natal; and the Hon. Minister for Agriculture Mr Cyriac John.

EXTRA CURRICULAR ACTIVITIES

The students of the College actively participated in activities connected with sports and games, arts club, social service league etc., under the auspices of the Student Union. In addition they participated in the National Service Scheme, Village Adoption Programmes, Lab-to-land programmes and other extension programmes organised by the University.

COLLEGE OF AGRICULTURE, VELLAYANI

Dr N Sadanandan, continued as the Dean of the Faculty.

Dr V Gopinathan Nair, Professor, Department of Plant Breeding was put in additional charge of the Department of Agriculture Botany. During the period no new Departments/Sections were started. No new academic posts were sanctioned during the period.

Dr VS Balakrishnan and Mr SP Suresan Nair joined the Department of Animal Husbandry as Assistant Professor. Smt G Sobhana, Jr.Asst. Professor, Department of Entomology was transferred to the Department of Extension. Smt.Suman George, Jr.Asst.Professor, Department of Soil Science & Agrl.Chemistry was transferred to the RRS Kayamkulam. Shri Syam S Kurup, Jr.Asst.Professor joined the Department of Horticulture on transfer. Smt M Meerabai, Jr.Asst.Professor, joined duty in the AICRP on Forage Crops, Department of Agronomy. Dr(Mrs)Susamma Philip joined the Department of Plant Pathology as Associate Professor, on transfer.

Sri V Muraleedharan Nair, Assoc.Professor of Agronomy joined duty in the Department of Agronomy. Sri B Balakrishnan was appointed as Asst. Professor in the Department of Plant Pathology. Dr GT Nair, Assoc.Professor, Department of Agrl. Extension was transferred to the KVK Pattambi.

FACULTY IMPROVEMENT PROGRAMME

Smt P Saraswathi, Assoc.Professor joined duty in the Department of Agrl.Statistics on completion of the Ph.D course at the IARI New Delhi.

Dr D Dale Assoc.Professor(Ag.Ent.) was deputed to IRRI Manila for a post doctoral study programme. Dr Sasikumaran Nair, Assoc.Professor of Microbiology, Dept.of Plant Pathology was relieved to undergo a post-doctoral study programme in France. Dr(Mrs) ST Mercy was deputed to IRRI Manila for further studies.

M/s.Abdul Wahab, R Muralcedhara Prasad, Mr Siva Prasad, Mr PG Baby, Smt V Usha and Sri G Sreekantan Nair continued on study leave for undergoing the Ph.D course.

DETAILS OF SEMINARS/SYMPOSIA/WORKSHOPS/TRAININGS CONDUCTED

The Regional Conference on Epidemiology and control of rice diseases was held from 17-18 Dec.1982 in the College. Delegates from all over the country participated.

A Seminar was organised in the College to commemorate the centenary of the discovery of Bordeaux mixture and Tuberele bacterium on 24.9. 82.

The training programmes conducted in the College include the 2 days programme on 'Educational utilisation of Indian standards in Agriculture and food products' (20,21 July,1982)

and the

conducted training programme for the Agri. Demonstrators (T&V) on 30.4.1982.

Monthly workshop meetings of the T & V personnel were regularly held.

PARTICIPATION OF ACADEMIC STAFF IN SYMPOSIA/ SEMINARS/WORKSHOPS ETC

Dr L Prema, Associate Professor (Nutrition) attended an International workshop on Nutrition and Agriculture at the College of Home Science, Haryana Agrl. University, Hissar.

The Regional workshop on Curriculam Development in higher Agrl. Education was held at G.B. Pant University, Pantnagar from 26 to 30 Oct., 1982. Dr M Chandrasekharan Nair, Prof. Plant Pathology, Dr S Balakrishnan, Associate Professor, Plant Path. and Dr N Sadanandan, Dean, College of Agriculture had attended the Workshop.

The Seed Pathology Seminar was held at TNAU, Coimbatore on 30 & 31st December, 1982 and Dr MC Nair, Prof. of Plant Path. and Dr Susamma Philip, Assoc. Professor attended this seminar and had presented papers.

Smt KJ Alice, Asst.Professor (Plant Pathology) attended the Symposium on Arecanut Research held at CPCRI Vittal during 12-14 Dec.1982.

Dr(Mrs)Susamma Philip attended the Scientific session organised in connection with the Conference of the Association of Microbiologists

of India on 24.10.1982.

ACADEMIC PROGRAM E

UG PROGRAMMES

NO.OF STUDENTS IN ROLLS AS ON 31.12.1982 UNDER B.Sc.(Ag) PROGRAMME

	Men	Women	Total
I Year	40	51	91
II Year			• •
III Year	35	44	79
IV Year	20	34	54
V Year			
(Daylor 7	Bedding the same		
Total	95	129	224
	Condense Lyling		CONTRACTOR MELLINGS TO SERVICE OF THE SERVICE

NO.OF STUDENTS FROM OTHER INDIAN STATES FURNISH DETAILS COURSE-WAR

Mcn.	Women	Total
11	••	11

There were no students from foreign Countries.

NO.OF STUDENTS WHO OBTAINED THEIR DEGREE DURING THE YEAR

	Men	Women	Total
No.of students	26	21	47
PG PROGRAMMES			
No.of students in	rolls		
M.Sc.(Ag) Ph.D Total	Men 36 11	Women 29 6	Total 61 17
10001			72

Men	Women	Total
3	1	4
14		

There were no foreign students for the PG programmes.

SCHOLARSHIPS/OTHER AWARDS

A total of 199 students were the recipients of various fellowships. The details of the fellowships awarded are as follows:

National Merit Scholarship	41
National Loan Scholarship	10
KAU Merit-Scholarship	24
ICAR Merit-cum-means acholarship	9
ICAR Jr.fellowship	9.
" Sr.fellowship	12
KAU feloowships (Junior)	27
" (Senior)	2
Stipend to students from Tripura	
State	10
SC/ST concessions	36
Educational concessions under KPCR	
	14
Stipend to Lakshadweep students	2
Temple entry Proclamation	
scholarship	1
Educational concessions to OEC students	1
Gandhi centenary Merit Scholarship	1
Total	199

COLLEGE LIBRARY

The number of books as on 1.4.1982 was 19,721 and upto 31.12.1982 46 titles were added bringing the total number to 19,727. The number of journals subscribed during the period was 88, out of which 22 were newly subscribed during the year.

The visitors to the College included
Dr M Rethinam, Professor of Forestry, Tamil Nadu
Agricultural University; Dr AR Seshadri, Dean &
Joint Director, IARI; Dr GL Sethi, Head, Division
of Nematology and Dr Gopalswarup, Senior
Nematologist, IARI; Hon.Minister for Agriculture
Mr Cyriac John; Dr AH Singh, Dean, Agri.University
Kanpur; Dr NM Nayar, Director CTCRI and
Dr M Mahadevappa, Professor of Seed Technology,
University of Agriculture Science, Bangalore.

UNIVERSITY YOUTH FESTIVAL

The fifth KAU Youth Festival was conducted in the College during 12-14 Aug.1982.

Interclass Athletic meet was held on 7th and 8th July,1982.

GAMES & ATHLETICS

Interclass athletic meet was held on 7-8 July,1982. The College teams participated in the Inter Collegiate tournaments in Volleyball and basketball, held at Vellayani during 25-28, March,1982. The teams have also participated in

the Inter-Collegiate tournaments in shuttle and table tennis held at Mannuthy on 17-18 July, 82 and Cricket match held on 5 & 6 Aug.1982. The students have actively participated in the Inter-collegiate athletic meet held at 7-8 Aug. 1982, at Vellayani.

NATIONAL SERVICE SCHEME

The NSS Unit of the college continued to run two common centres at Kakkamoola/at Muttacaud with facilities for reading newspapers and periodicals and for indoor games.

A blood grouping campaign was conducted with the halp of Sree Chithra Medical Centre, Trivandrum and a list of 160 blood donors was prepared. Blood donations were made as and when required.

The NSS Volunteers conducted a survey at Kalliyoor and selected 25 houses for raising vegetable garden. Vegetable seeds and fertilisers were distributed to them.

An all Kerala Inter Collegiate debating competition was conducted on 17.7.1982 at the College. The subject of the debate was "Will India face famine by 2000 AD.". Five Colleges had participated in the competition and the Government Training College, Trivandrum, won the trophy for the best team. The NSS Unit of the College celebrated the Vanamahotsava on 14th July 1982. The Hon. Minister for Agriculture Mr.Cyriac John inaugurated tree planting.

COLLEGE OF FISHERIES, COCHIN

Dr MJ Sebastian continued as the Dean, during the period.

There were no changes of the Heads of various College departments. Mr PS Mrithunjayan joined duty as Assistant Professor(Chemical Hydrography) on 20.11.1982. Mr MG Jayaram who was on deputation to Canada had resigned with effect from 20.7.1982.

FACULTY IMPROVEMENT

Mr PM Sherief, Assistant Professor (Bio Chemistry) was granted deputation for 10 months to undergo a study programme in Denmark.

SEMINARS CONDUCTED

A Seminar on Fisheries Education and Research was conducted under the auspices of the Fisheries Faculty Teacher's Association, on 13.10.1982.

ACADEMIC PROGRAMME

U.G.Course: Bachelor of Fishery Science

No.of students in rolls as on 31.12.1982

	Men	Women	Total
I Year (1981-82 batch)	21	13	34
II Year	• •	••	Nil
III Year (1980-81 batch)	16	9	25
IV Year (1979-80 batch)	19	8	27
Total:	majahra aktigan santu o	iki in dika 1080 kamuasiki na iki mahakahonga labakan muni na dikases	86

No. of Students from other States

	Men	Women	Total
I Year 81-82 batch	1.	• •	1 (one)
II Year	• •		Nil
III Year 80-81 batch	2		2
IV Year 79-80 barch	2		2

No.of foreign students

		Men	Women	Total
Sri	Lanka Ist year			
	(1981-82 batc	h) 1	Nil	1

No.of students who	obtained thei	r degree	
during the year	Men.	Women	Total
	Nil	Nil	Nil

SCHOLARSHIPS/AWARDS TO STUDENTS

The receipients of the various fellowships were 17. The details of the fellowships are as follows:

Educational concession to SC/ST	-6.
Fisheries Scholarship	5
National Merit Scholarship	2 .
Educational concession to Lakshadweep students	3
Educational concession from Manipur Government	1
Total	17

HOSTELS

There were 41 men and 20 women students residing in the College Hostels.

COLLEGE LIBRARY

As on 1.4.1982 there were 4814 books. During the period from 1.4.1982 to 31.12.1982, 243 titles were additionally purchased bringing the total number of accessions to 5057.

STUDENT UNION ACTIVITIES

The Student Union was inaugurated by Mr.Kumara Das, Director of Fisheries.GOK, on 11.5.1982. Interclass arts and literary competition were held in June 1982. A Quiz competition was conducted in July 1982. A Malayalam debate competition was arranged on 23.8.1982.

NATIONAL SERVICE SCHEME

The NSS Unit assisted the Shertalai Centre of the National Institute of Communicable Diseases

in conducting a sample survey of the residents of the Panangad Village.

A free Dental check up camp was organised in the College campus on 31.10.1982. The Cochin branch of the Indian Dental Association provided the medical personnel for the camp.

OTHER ITEMS

The students boycotted the classes from 12.7.1982 alleging that the facilities available in the new Hostel are unsatisfactory. The classes were resumed on 17.8.1982.

INSTITUTE OF AGRICULTURAL TECHNOLOGY, TAVANUR

Sri K Karunakaran, Associate Professor continued as the Directof of the Institute from 1.4.1982 to 31.10.1982. Sri MK Mammen took charge as Director on 24.11.1982. During the intervening period, that is, from 1.11.1982 to 23.11.1982, Sri.CP Muhammed, Assoc. Professor (Ag. Engg) held charge of the post of Director.

A sub-centre of the NARP was started at the IAT Tavanur during May,1982.

No new posts were sanctioned or any of the existing posts shifted/abolished during the period under report.

The following persons were transferred from this station on the dates noted against their names.

Sri P Ahammed, JAP

23.11.1982

Sri AV Mathew, JAP

21.7.1982

The services of Sri Abril Salem, Draughtsman was terminated w.e.f. 1.10.1982. Sri N Ravikumar, Asst.Engg. resigned on 13.8.1982.

The following persons joined duty at this Station during the period under report.

Sri MA Peter, JAP

18.7.1982

Sri Mathew John, JAP

17.11.1982

Sri VK Raju, JAP

28.7.1982

Sri V Krishnakumar, JAP 24.7.1982

Sri TJ Radhmath Niza, JAP 21.7.1982

None was deputed for higher studies or granted study leave or leave for study purpose during the year.

SYMPOSIA/SEMINARS/EXTENSION/LECTURES

A symposium on "Rabies" was conducted at this Institute on 29.10.1982. Experts from the KAU Health and Animal Husbandry departments participated in this symposium.

EXTENSION ACTIVITIES

Fifty farm families from Pothanur Village have been selected as beneficiaries of the Lab to Land Phase II Programme for the period 1982 to 84. Bench mark survey in respect of these selected

families has been conducted and production plan for their development was prepared.

Fifty farmers selected from each family attended the inaugural function of lab to land programme phase II held at RARS Pattambi on 2nd Oct.'82. Fifteen farmers were sent to Vellanikkara on 29th December,1982 to attend the Krishi Maha Mela organised by the Extension Division of the KAU.

ACADEMIC PROGRAMME

UG COURSE

Number of students on rolls as on 31.12.1982

		Men	Women	Total
DASC				-
V DASO	*	44	1.	45
VI		49	• •	49
VII "		47		47
VIII	* * 8	53	• •	53
DARE	*			,
I DARE		27		27
II "	*	24	• • • • •	24
III "		27	••	27.
Total		271	1	272

During the period, 45 students have obtained their diplomas.

STUDY TOUR

The DASc students visited the RARS Pattambi, HRS, Ambalavayal, RARS Pilicode, CPCRI Kasaragod, College of Horticulture, Vellanikkara, College of Agriculture, Vellayani and the CTCRI Sreekaryam.

The DARE students visited the Boat building Yard, Bepoor, Soil Conservation Units of Agali and Attappadi, KERI Peechi and the Malampuzha Dam.

SCHOLARSHIPS

There were 94 receipients of the various scholarships as follows:

Name of Scholarship	VI	No. DASC VII	of re	DA	RE	III	Total
KAU Merit	5 29	5 21	• •	3	3	• •	16 50
Harijan Welfare concession to SC/ST/OEC	6	5	6	2	4	5	28
Total	40	31	6	5	7	5.	94

HOSTEL

There were 165 men and 6 women inmates in the hostels during the period!

LIBRARY

A total of 78 titles were purchased during the year, bringing the total number of accession to 14,468 as on 31.12.1982. Twenty eight journals are under subscription.

EXTRA CURRICULAR & CO-CURRICULAR ACTIVITIES

The IAT teams have participated in all the intercollegiate tournaments of KAU. In the Inter Collegiate atlletic meet held at Vellayani during 5-8 Aug.1982, the IAT won the third overall position.

Two members of the foot ball team for the KAU team formed for the Inter University foot ball tournament held at Mannuthy during October, 1982.

STUDENT UNION ACTIVITIES

The IAT ${f S}$ tudent Union was inaugurated on 23.4.1982 by Mr Premji, Cine artist.

An Art festival was held on 24.4.1982.

A debate on trimester system of education was held on the literacy day.

VETERINARY HOSPITAL

A total of 1695 cases of animals were treated for various ailments. The number of artificial inseminations carried out during the period was 210. A total of 650 birds were

vaccinated during the period.

INSTRUCTIONAL FARM

A quantity of 25,490 kg of paddy and 20,550 kg of straw were produced during the period. An area of about 1 ha was put under vegetables. The vegetable sees sold during the period was 10.640 kg. Planting materials such as coconut seedlings (162 nos) Nendran suckers (2207 nos) were also distributed from the farm.

VACANCIES OF ACADEMIC & NON-ACADEMIC POSITIONS IN THE UNIVERSITY

A. ACADEMIC

Institution/Post Scheme	No.of	vaca	nt	Remarks
College of Agriculture, Vellayani.				
Prof.Ag.Extn.		1		
Assoc.Prof.(Ag.Che	m)	1		
Asst.Prof(Eg.Engg.)	1.	,	
Asst.Prof.(Ag.Econ)	1		
NARP				*
Assoc.Prof(Ag.Stat)	1		
Asst.Prof.(SS&AC)		1		
Kottarakkara Sub Centre				
Asst.Prof.(SS&AC)		1		(v)
Asst.Prof.(Agron.)		1		
Asst.Prof.(Pl.Path	.)	1		
Asst.Prof.(Ag.Econ	.)	1	3	
			×.	
College of Veterinary & Animal Sciences, Mannuthy	•			
Asst.Prof.(Nutrition	on)	2		
Asst.Prof.(Nutrition	on)	2		
Asst.Prof.(Therape	itics)	1 .		· · · · · · · · · · · · · · · · · · ·
Asst.Prof.(Patholog	3Y)	1		
Prof.of Animal Production Econo	omics	1		

/College of Horticulture/ Assoc.Prof.(Agron) 1 Assoc.Prof.(Pl.Path) Assoc. Prof. (Nematology)1 College of Fisheries/ Professor (Fish.Res.) Assoc.Prof.(Ag.Eng.) Assoc. Prof. (Aquaculture)1 Assoc.Prof.(Fish Tech.)1 /I.A.T.Tavanur/ Prof. of Ag. Engg. 1 Asst.Prof.(Ag.Engg) 1 Asst.Prof(Ag.Chem) 1 NARP Asst.Prof(Pl.Breed) Asst.Prof.(Irrigation) 1 /Directorate of Extension/ FAS As: t. Prof. (Aquaculture)1 Prof. of Pl. Protection NDS Assoc.Prof.(Agron.) 1 NARP South Zone College of Agriculture, Vellayani Assoc.Prof.(Ag.Stat) 1 Asst.Prof.(SS&AC) Kottarakkara Sub Centre Assoc.Prof.(Soil Sci) 1 Assoc.Prof.(Hort.) 1 Asst.Prof.(Agr.) 1 Asst.Prof.(Pl.Path.) 1 Asst.Prof. (Ag. Econ.) 1

/RARS Pattambi/

Assc.Prore(Pr.Path)	1
Asst.Prof.(Agr.)	1
NARP Central Region	*
Assoc.Prof.(Ag.Econ)	1
Assoc.Frof.(Ag.Eng.)	1
Asst.Prof(Soil Sci)	2
Asst.Prof.(Ag.Econ.)	1
Asst.Prof.(Biochem)	1
Asst.Prof.(Ag.Engg.)	1
Asst.Prof.(Hort.)	1
Eruthiampathi Sub Centro	3
Assoc.Prof.(Agro.)	1
Asst.Prof.(Pl.Breeding)	1
KVK Pattambi	
Assoc.Prof.(Agro.)	1
Assoc.Prof.(Hort.)	1
Assoc.Prof.(AH)	1
Assoc.Prof.(Home Science)1
Asst.Prof.(Agro.)	1
Asst.Prof.(Hort.)	1
Asst.Prof.(AH)	1
Asst.Prof. (Home Science)	1

/RARS, Kumarakom/

NARP

Assoc.Prof.(Fisheries) 1
Asst.Prof.(Pl.Breeding) 1
Asst.Prof.(Entomology) 1
Asst.Prof.(Biochem.) 1

	Asst.Prof.(Fisheries)	1
	Asst.Prof.(Ag.Engg.)	2
	Asst.Prof.(Hort.)	1
Ro	oot Wilt	
	Asst.Prof.(Ag.Bot.)	. 1
/RRS Mo	oncompu/	
NA	ARP	
	Asst.Prof(SS&AC)	1
	Asst.Prof.(Pl.Path)	1
	Asst.Prof.(Physiology)	1,
/RARS	Pilicode/	
	Assoc.Prof.(Agron)	1
	Assoc.Prof.(Bot.)	1
		.
\overline{V}	IARP	
	Prof.of Agron.	1
	Assoc.Prof.(Ag.Econ.)	1
	Asst.Prof.(Agron.)	1
/ARS,C	halakkudy/	
	Assoc.Prof.(Ag.Engg.)	1
		1
/Aroma	tic & Medic i nal Plants Resea	
Zincome		
•	Asst.Prof.(Ag.Chem)	1
/Carda	room Dogonach Charlet	Marchine Commission Co
Carua	mom Research Station, Pampadu	¥
	Assoc.Prof.(Ent.)	1
	Asst.Prof.(Ent.)	1
	Asst.Prof.(Ag.Chem.) Asst.Prof.(PP)	1
	,	ale:

/Hort.Res.Station, Ambalavayal/

Assoc	.Prof.(Hort.)	1
Asst.	Prof (Bot)	1

Pepper Pas Station, Panniyoor/

Asst.Prof.(Agr.)

1.

/AICRP on Agri.Drainage, Karumadi/

Assoc.Prof.(Ag.Eng.)	1
Asst.Prof.(Ag.Engg.)	1

/Positions of Junior Asst.Professors/

As on 31.12.1982 there were 127 positions of Junior Asst.Professors vacant in the various campuses as per the following break-up:

Research	n St	tations & Farms	:	71
College	of	Agriculture	•	13
College	of	Horticulture	°	21
College	of	Vet & Animal Sciences	°	18
College	ο£	Fisheries	0	4
				127

B. NON ACADEMIC POSITIONS

A total of 24 positions of Typists were vacant in Pannioor(1), Ambalavayal (1), Pilicode(2), Nilambur (1), College of Horticulture (3), Tavanur (1) HQRS (2), Sugarcane Scheme(1), Basic Science Faculty(1),

Forestry(1), Development of Library(1), Kannara (1), Pattambi (3), CRS Mađakkathara (1), Goats(1), Poultry(1), Pampadumpara (1) and at Kumarakom (1).

There were 17 positions of Driver(LV) Grade II, 29 positions of Lab Asst. Grade III also vacant in the University. other positions vacant include Duplicating Operator (1), Sr. Technician (1), Sr. Draftsman (1), Technician Grade II fitting(1), Cleaner-cum-attender (1), Driver Grade II(HV)(1), Tractor Driver(6), Sweeper-cum-scavanger (14), Cook-cumcaretaker (1), Peon (4), Watchman (8), Permanent servant (2), Gardener (2), Dairyman (1), Electrician helper (1), Boat helper (1), Pig attendent (1), Farm Assistant(Agri) 6, Farm Assistant (Vety.)-3, Photographer (4), Farm Supervisor Agri(2), Asst.Librarian (4), College Librarian (2), Instt. Librarian (1), Lab Asst. Grade II (6), Copy Holder (1), Overseer Civil (4), Overseer(Electrical)(1),

PARTICIPATION OF ACADEMIC STAFF IN SEMINARS/SYMPOSIA/WORKSHOPS

The Academic staff of the University have been deputed to attend the various National/
International Workshops/Seminars/Symposia etc as per the following details:

Details of Seminar/ Symposia (1)	Place & Date (2)	Name of participants (3)
International Rice Research Conference, 1982		. Mr KI James, *ACP,RARS,Pattambi
International Conference of Food Scientists & Technologists	Bangalore 26th to 28th Aug.'82	Dr M Subrahmaniam Professor, College of Vety & Animal Sciences, Mannuthy.
International Symposium on Tree Physiology	RRII, Kottayam 26th to 28th Aug.'82	Dr GSLHV Prasad Rao ACP,RARS,Pilicode Dr S Seshadrinath, ACP,NARP,Pilicode Mr Luckins C Babu ACP,NARP, RS&IF,Mannuthy Dr Vikraman Nair
* ACP - Associate P		Prof.of Hort. KADP, Vellanikkara Sri AT Abraham ACP, College of Agri- culture, Vellayani.

^{*} ACP - Associate Professor

AP - Assistant Professor

JAP - Junior Assistant Professor

International Symposium on Problems of Deve- 2nd to 8th lopment of under privileged communities in the third World countries

Vigyan Bhavan Dr RS Aiver New Delhi Oct.,1982

Prof. Soil Science & Agrl.Chemistry

International Symposium on Hydrological aspects of Mountaneous Watersheds

University of Dr PS Sreenivasan Roorkea Consultant in-4-6 Nov. 82 Agro. Met

National Workshop HAU, Hissar, on Nutrition in Agriculture

13-30th April, 82 Smt NK Vimalakumari College of Agri. Dr L Prema, ACP, College of Agri.

National Rice Res.Workshop'82

Calcutta, 12th to 14th April, 82

Dr K Karunakaran ACP, RARS, Pattambi Sri N Rajappan Nair ACP, RRS Moncompu

Sri MRC Pillai ACP, RARS, Pattambi

Dr MJ Thomas, ACP, RRS Moncompu

Dr L Natarajan, ACP, RARS Pattambi

Dr L Remadevi, ACP RRS Moncompu

Sri VP Sukumara Dev ACP RARS, Pattambi

Training course in IVRI, Hebbal Dr V Jayaprakash, Cell culture in Campus, AP Suspension FMD Bangalore College ov Vety & vaccine production 12-28th Animal Sciences, Technology May,1982 Mannuthy. Combined Annual IARI Sri TP George, Workshop of ICAR New Delhi Prof.Ag.Engg. Coordination pro- 22-24th College of jects on Wells April'82 Horticulture, and Pumps and Vellanikkara Agrl. Drainage Mini Workshop on IARI Dr K John Kurian, AICRP on Mematode New Delhi pests/Crops and 27th to 27th to Co. lege of Agricultheir control 28th time, Vellayani. April,1982 Special programme 1-10th June Dr CA Jose, for the University 1982, ACP leaders in Vaikunth-Cooperation & Cooperation Mehtha Banking National Institute, Pune Annual Kharif 7-11th May, Smt S San thakumari Oil Seeds 1982 ACP, RRS, Kayamkulam Morkshop Bangalore 9th Annual Tirupathi Dr A Ramakrishnan Conference 10-12, May Professor, Symposium of the 1982 Veterinary College, All India Mannuthy. Poultry Science Association Dr AKK Unni, . Sr. Scientist, National Seminar Avikanagar, Dr T Sreekumaran on Sheep and GoatJaipur, AP Diseases May, 1982

GAU, Surat,

1-5 June

1982

DR GR Pillai,

ARS, Chalakkudy

Smt G Santhakumary

AP, ARS Chalakkudy

Professor,

Ninth combined

Water Manage-

ment and Soil

workshop of

Salinity

* * *		
Workshop on Soil & Water conservation problems in Southern Hilly Regions of India	Udhogamanda- lam, 14- 2 1st June,1982	Sri TP George Prof. College of Horticulture
Two day Seminar- cum-workshop on Loss of applied Nitrogen	UAS Banga- lore 27-28th May,1982	Prof.PN Pisharody, Assoc.Director of Research(AR&T)
Sixth workshop in tuber crops	Bihar, 15-17th June,1982	Sri PK Ashokan, AP
Training courses in Zoonoses	UAS Ban- galore 12-17th July, '82	Dr M Soman, Professor, College of Vety & Animal Sciences
Workshop on Child Nutrition	JNKVV Jabalpur 21st to 24th June'82	Dr L Prema, ACP,College of Agriculture, Vellayani
Two weeks training on safety aspects of the use of ionising radiation	BARC Bombay 14-30th June'82	Dr VK Venugopal, ACP College of Horticulture
Seminar on Agro- Industries for Rural Development	Coimbatore 30-31st July, 82	Sri TP George, Prof College of Horti- culture.
Coordination Commuttee meeting of the ICAR Scheme on Farm implements and Machinery	Thopal 6th & 7th July'82	Sri M Sivaswami, JAP College of Horti- culture
National workshop on fodder seed production	Hessarghatta Bangalore, 8th to 10th July,1982	Professor of Agro- nomy, College of Horticulture.

Regional Coordination Committee meeting for Forage production

Avadi Dr C Sreedharan, 21-8-82 Prof

National Seminar on Radio isotopes

Coimbator Dr RS Aiyer, Prof. Sept. 82 College of Agriculture

X Workshop on AICRP on Sugarcane

Agricultu- Sri PK Chellappan Nair ral College ACP Pune 26-30 SRS, Tiruvalla

Sept.1982 Sri S Sukumaran Nair

Group discussion on Annual Spices

Johner, Udaipur 5-7th

EV Nybe, AP, College of Horticulture.

ACP, SRS Tiruvalla

Oct. 82

Rabi & Pulses Workshop

IARI New Delhi Smt J Sreekumari-Amma, AP, RARS, Pattambi

Smt P Sreedevi, AP, RARS Pattambi

Short course in Remote Sensing and its application

Dehradun from 3rd Nov. 82

11

Dr GSLHV Prasad Rao, ACP, RARS Pilicode

V Annual symposium on Plantation crops

CPCRI 15-18th Dec. '82

Sri K Kannan, Kasargode Assoc.Director, RARS Pilicode

> Sri CA Joseph, Prof: RARS Pilicode

National Seminar on Agrl.Entomology

Annamalai Dr L Nadarajan, University ACP, RARS Pattambi 7th &8th Oct.1982

Animal genetics and HAU Hissar, Dr G Mukundan, Breeding Conference 22-24th Prof-College of Vety Oct. 82 and Symposium & Animal Sciences, Mannuthy. Dr E Sivaraman, Nutritional Research Tirupathi Prof. workers Conference 29th Nov. College of Vety to 3rd & Animal Sciences, Dec.1982 Mannuthy. 11 Dr CR Ananthasubramaniam, Prof. (PC) Cattle & Buffaloes Dr KM Ramachandran 11 ACP College of Vety & Animal Sciences, Mannuthy. Bhubaneswar Dr PO George, Sixth Symposium Prof. of the Indian 4-to6th College of Vety Nov.1982 Society for & Animal Sciences Vety.Surgery Dr K Rajarkutty, JAP, College of Vety & Animal Sciences, Mannuthy. Dr A Rajar, Madras Seminar on compa-Prof. rative oncology Vety. College College of Voty & Animal Sciences, 11-13th Oct. 82 Mannuthy. Dr KM Ramachandran, ACP, College of Vety & Animal Sciences Dr T Sreekumaran, 11 AP,

College of Vety & Animal Sciences

	-:53:-	
National seminar on Seed Pathology	Coimbatore 2nd week of Dece.'82	Dr M Chandrasekha- ran Nair, Professor, College of Agri- culture, Vellayani
Workshop on On co pathology	ial Centre, Bombay	Dr KM Ramachandran ACP Dept.of Pathology, College of Vety & Animal Sciences, Mannuthy.
Symposium on Are- canut Research. SIJAR 82	CPCRI, Vittal 12-14th Dec. 82	Sri S Balakrishnan Prof. College of Horti- culture
		Dr KMN Namboodiri Prof. College of Hort.
	u.	Dr.Abicheeran Prof. College of Hort.
	tt.	Dr AI Jose, Prof. College of Hort.
	11	Dr V Gopinathan Nair Prof. College of Agri.
	₹ * * * * * * * * * * * * * * * * * * *	Dr V Gopalaswamy, Emeritus Scientist College of Agri.
	n ,	Sri M Subramonia Iyer, Sr.Research Fellow College of Agri.
5th Annual Sym- posium on Plan- tation Crops	CPCRI Kasargode 15-18th Dec.	Dr K Kumaran, Frof.(Coca) College of Horti.

Dr R Vikraman Nair Prof. College of Horti.

Dr AI Jose, Prof. College of Hort.

Sri S Balakrishnan, Prof. College of Hort.

4th International Community Educat- 29-30 ion Conference

Ahmedbad Nov. 82

Dr C Bhaskaran, AP, Coomunication Centre, Mannuthy.

All India Workshop on Agri.& Development Communication

Nov.23-26 1982

Dr C Bhaskaran, AP, Communication Centre, Mannuthy.

National Workshop on Child Nutrition in tribal area

JNKV, Jabalpur Dr L Prema ACP, College of Agriculture Vellayani.

RESEARCH

Dr PC Sivaraman Nair continued as the Director of Research.

Dr R Kalyanasundaram, Prof PN Pisharody,
Dr CC Abraham and Dr N Mohanakumaran continued as
Associate Directors of Research for Veterinary &
Animal Sciences, Adaptive Research and Training,
Monitoring & Evaluation and Planning respectively.

The Director of Research conducted routine annual inspection in the RARS, Pilicode, PRS, Panniyur (May '82); BRS, Kannara and RRS, Kayamkulam (June 82); Livestock Research Station, Thiruvizhamkunnu (June '82); RARS, Kumarakom (July '82); CRS, Anakkayam (July '82); MARS, Karamana (Oct., '82); HRS, Ambalavayal (Oct., '82); RRS, Moncompu (Nov.,82) and CRS, Pampadumpara (Dec., '82).

Dr PC Sivaraman Nair attended a seminar on Agriculture organised by the Rajaji International Institute of Public Administration held at the TNAU, Coimbatore on 21.6.'82. He has attended the International Symposium on Tree Physiology held at the Rubber Research Institute, Kottayam on 24-26 Aug., '82 and the Workshop on Technical Programme formulation for the Regional research stations under NARP, held at NARM, Syderabad during 5-9 Sept., '82.

He has also attended the annual meeting of the Association of the Agricultural Universities, held at TNAU, Coimbatore during 20-22 Sept., 1982.

Dr PCS Nair also served as a member of several outside committees such as Management Committee of CMFRI & CFTRI, Scientific panell for Fruits, Spices &

Medicinal plants of ICAR, Central & State Seed Committees, High level Committee in the Planning Board, Trivandrum and IDSP(Inter Disciplinary Scientific Panel) of NARP of ICAR and the Medicinal Plant Committee of Govt.of Kerala, etc.

Dr CC Abraham, Assoc.Director of Research (M&E) served in the Selection Committees of the ASRB, Coffee Board and as external examiner for post-graduate programmes of the TNAU and UAS. He has been nominated as a member of the Technical Sub Committee of the Kerala State Board for control of Pollution. He continued as a member of the State Level Committee for the T & V Programme.

Dr N Mohanakumaran, Assoc.Director cf
Research(Plg) has served as a member of the ICAR
Appraisal Committee for the sub-projects cf NARP
Projects for the Tamil Nadu Agricultural University.
He has served as an external examiner for the PG
programmes of the TNAU & UAS.

Dr R Kalyana Sundaram, Assoc.Director of Research (Vety. & Animal Sciences) served an external examiner for the M.V.Sc. & Ph.D programmes in Animal Parasitology of several Indian Universities. One of his research publication was adjudged by the Indian Veterinary Association as the best research article for the year 1981 and was awarded the coveted KS Menon prize in a special function held at Gauhati.

Prof PN Pisharody continued as a member in the State Level Technical Committee of the T & V Programme and as a member of the Scientific consortium for the ORP on Integrated Pest Management for Kuttanad.

Faculty Research Committee

The Faculty Research Committee of the Agri. Faculty met twice during the period. In the 19th meeting which was held on 26-27 April,1982, a total of 130 projects were approved for implementation. The number of projects cleared in the 20th meeting held on 18.9.182 was 57.

The FRC of Veterinary & Animal Sciences Faculty met once on 17.3.1982 and cleared 10 projects for implementation.

The FRC of the Fisheries Faculty did not meet during the period.

Project Co-ordination Groups

The groups on Cropping Patterns & Farming Systems met in April, '82. The Spices group met on 19.7.'82. The groups on Rice and also that of Soils & Agronomy met on 2.4.'82. The Vegetables & Tuber Cropsgroup met on 19.4.'82. The Animal Diseases group met on 17.7.'82 at Calicut and at Kalpetta on 30.10.'82.

Discipline-wise meetings

The system of conducting discipline-wise meetings of academic staff in the constituent was faculties/finalised. This was planned to promote interaction among Scientists working in particular Entomology disciplines. The / discipline staff met at Vellayani on 21.6.'82. The Soil Science & Agri Chemistry (26.7.'82), Plant Pathology (23.9.'82), Horticulture (27.8.'82), Agri Engg., Agri Statistics (13.8.'82), Ag Bot & Plant Breeding (27th-28th August '82) disciplines also met during the report period. The Agronomy Discipline meeting was held at Vellanikkara on 26.8.'82 and the Extn Discipline meeting was held at Vellanikkara on 11-12 Aug., '82).

Radio Tracer Laboratory

The Radio tracer laboratory under the KADP was inaugurated by Mr N Kaleeswaran IAS on 2.6.'82. The laboratory with liquid scintillation system,

multichannel gamma spectrometer, Radio autogram scanner, GM counter, Co gamma irradiation chamber, Nutrio-moisture probe and other sophisticated equipment, is now well set for studies involving radiation/radio isotopes.

Control of Azhukal disease of Cardamom

The Azhukal disease of cardamom characterised by the rotting of capsules and shoot is a major problem confronting the planters in the Idukki District. A meeting of Scientists, planters and representatives of pesticide manufacturers, dealers was held at Kumili on 5.4.82 to review the research work so far done on the disease and to formulate an appropriate strategy for containing the disease.

Affter appraisal of the current position regarding the aetology and control of the disease, it was decided to conduct a series of adaptive trials in the Idukki area. The Package of Practices to be followed in such trial plots have been formulated. The trials are progressing in Vellimala, Vandanmedu, Pampadumpara and Vattappara.

NARP

The sub projects for the southern region with Vellayani as Headquarters, for the problem areas with Kumarakom as Headquarters and for the central region with Headquarters at Pattambi/continued to Northern be in operation. The research projects for the region central and southern regions were formulated based on felt problems in the respective areas.

The ICAR appraisal to m for the water management sub-project proposed at Chalakidy had visited the project locations and completed the appraisal work. Council's sanction for this sub project is now awaited.

The sub project proposals for the coconut based mixed farming at Thiruvazhamkunnu and for the high range regions and another sub project on post-harvest technology have been fromulated and forwarded to the Council for appraisal and clearance.

The IDA Supervision Mission visited the NARP project centres and the KAU Headquarters during 11-13 Oct., '82 to evaluate the progress of implementation of the work carried out in the NARP, sub projects. The team members have expressed their appreciation of the progress of implementation of the projects.

Basic data on demographic, agro-climatic aspects in the NARP project areas was completed and the status papers for the constituent sub projects were finalised and brought out during the year.

The regional workshops for the central zone was conducted at the RARS, Pattambi on 4.5.'82. The workshop for the problem areas was held at Kottayam on 7.5.'82. In the northern zone the workshop was held at Pilicode on 25.5.'82.

Western Ghat Coordinated Research Project

Eighteen multidisciplinary projects for operation in the Western Ghats of the State under the proposed co-ordinated project was formulated after discussing the dimensions of the problems to be solved in this region. The Director of Research had attended a meeting of the Vice Chancellors of Universities comprising the southern region representing the zone from Mangalore down to Kerala, which was held at the Calicut University Headquarters on 17.5.182. The Director of Research has also attended another meeting of the Vice Chancellors which was at New Delhi on 4.12. 82. The project proposals for the KAU were discussed in these meetings. The nodal agency for coordinating this important project is the Department of Environment, Govt. of India.

Coconut Root (wilt) Disease Project

All the 17 phase I projects under the Coconut Root (wilt) Disease Project are in progress at Kumarakom, Vyttila, Kayamkulam and at the College of Horticulture, Vellanikkara.

A meeting of the Scientists working in the Coconut Root (wilt) Disease Project was convened at the RARS, Kumarakom on 16.7.'82 to review the progress of the 17 phase I projects under CRWDP. The modifications in the technical programme as well as the future action plans for the various projects were discussed and finalised in this meeting.

-:62:Survey on Root (wilt) Disease

A survey on the occurrence of Root (wilt) disease in Trichur, Malappuram, Palghat and Kozhikode districts was carried out in collaboration with the Department of Agriculture and the CPCRI. The survey confirmed the earlier reports on the scattered and random occurrence of the disease in these areas. Out of 8844833 palms surveyed in 250 villages in these districts, 203 palms in 27 villages were found to be diseased. There were 60362 uneconomic palms producing less than 10 nuts/year. A rapid survey in Quilandy and Badagara taluks revealed that 63 palms in 9 villages were affected by the disease. In general, the incidence of the disease in the new foci was confined to young palms in the pre-bearing stage.

Varietal Evaluation Committee

The University Varietal Evaluation Committee met on 28.6.'82 and recommended the promising cultures of rice (culture 23-33-3-1, M-1537-2, ARC 11775), cowpea (culture 18) and bittergourd (MC-23) for release.

The State Seeds Committee met on 25.1C.'82 at Trivandrum and approved all the above except culture M-1537-2 for release in the State pending clearance by Central Varietal Release Committee.

RESEARCH PROJECTS FOR TRIBAL UPLIFTMENT

In order to formulate integrated research projects involving Agriculture, Animal Husbandry, Fisheries faculties in the tribal areas of the State

a joint meeting of the KAU Scientists and persons concerned with tribal welfare activities and representatives from the Kerala Institute for Research, Training & Development of SC & ST, Kozhikode were held at the Headquarters on 2.8.'82. The projects for implementation in the Wynad, Idukki and Neyyar reservoir areas (Amboori) were identified to be taken up under the NARP. The project proposal for Amboori reservoir area has been formulated.

After appraisal of the situation in the tribal pocket of Champakkad a tree planting programme was formulated for the rea covered mostly by scrub jungles.

Mini workshop on Package of Practices

A Mini workshop on Package of Practices was held at the KAU Headquarters on 4.10.'82 in which the new recommendations for inclusion in the Package of Practices for 1982 were discussed with reference to data generated in the University. New recommendations were finalised for inclusion in the Agenda of the State Level Workshop.

Research Journals of the University & Research Publications

of Vet Sciences continued publication on a half-yearly basis. Dr AI Jose, Professor of Soil Scien. A Agri Chemistry, was nominated as Managing Editor of the Agri Res. J. Kerala and he took charge on 1.12. 82.

LA Mini Condultes on Fook. Co. Li Articlione son meli al Che RAO serviți che sud sec. Liot tex de la ligi on Přiv recommendo desiri desiria politica de li librario de

Parader of Penedeces and April 1997 April 19

recommendation to the district for and long in a

when which were stated to the security and

From the recommentations for including in the comment of the comme

The Research Report 1980-81 was compiled and edited during the year. The printing work commenced viring septer. 82 and was in progress. In order to consolidate the research results generated in the KAU on different crops/animals it has been decided that a series of rechnical Bulletin will be published in a phased manner. Work on the bulletins on pepper, coconut, banana and pineapple are already in progress.

A Mini workshop on Prokung of TOSTORCHORASAR

The ICAR sanction for the World Bank aided Multi State Cashew Project was received during the period for implementation in the University for four years from 1982-83. This project which has a research-cum-training-cum-demonstration function involving a financial outlay of ks.9,74,360/- has commenced operation with Madakkathara as the project Headquarters.

held at the MAU Hendoustraffers (110, 182 is witch

The ICAR sanction for the implementation of a coordinated project for the rapid improvement of Agri technology directed at socio-economic upliftment of SC & OBC was received during the period. This project has been launched with the formal inauguration of the project by the Hon'ble Chief Minister of Kerala on 7.11.'82 at the Jawahar Colony, Nilambur.

New ad-hoc schemes formulated

During the report period the following ad hoc schemes were forwarded for approval of the Council.

t kasaan 1991 - Lan Lanko an Langar ay kata da kata da

when the Most we was taken a gradient and edition.

anna jamija ja ja Gala (m.) - pala an

- 1. Survey, assessment of losses and control of grassy shoot and ration stunting disease in sugarcane (Rs 5,20,000/-)
- 2. Studies on cytogenetic hazards of agricultural/ industrial/lab chemicals (Rs 4,28,000/-)
- 3. Cyst nematodes <u>Heterodera orvzicola</u> infesting rice in Kerala (Rs 7,24,100)
- 4. Development of improved varieties of sesamum and groundnut suited to rice fallows in the Onattukara region (Rs 2,77,550)
- 5. Karyological studies in cattle of Kerala State with special reference to infertility and sterility (R 3,15,000)
- 6. Progeny testing in the field conditions (Rs 6.5 lakhs)
- 7. Breeding rabbits for meat production (Rs 2,94,225)
- 8. Nutritional requirement of caged layers (% 3,91,200)
- 9. ORP on Pathology of aflatoxicosis in farm animals of four selected villages of Calicut (Rs 7.78,894)
- 10. Study of economic consequences of diseases among bovines (% 2,27,270)

Approval of ICAR ad hoc projects

(6.8 instead

(E. 7,78,600)

During the report period ICAR has sanctioned the following ad hoc projects for implementation in the University.

a) Post harvest technology of perishable foods (Rs 39,200). (PI - Dr (Mrs) L Prema)

As Beyonding manales for most promisely to system in

8. Nutriblional requirement like he are bayers

o. orb of faurilly or est to continue in the

io. , shipiy of a series of the series of citizens.

angunale of them whether exiting by the lower

7. Breching rabbits for most production (# 2,94,225)

8. Nutricional requirement of object levers: of (# 2,94,225)

(# 2,94,269)t and nation standing disease

9. ORP SHOPEOUT OF APINESCESS IN FIRM

(127,76,894)

To be implemented from 1.4. 83 at the College of Agriculture, Vellayani.

b) Karyological studies in cattle of Kerala

"State with special reference to infertility and sterility out of the state of the special reference of the special reference of the state of the special reference of the state of the special sta

the following ad hod projects for implementation

Leary loaded by the projects for implementation in coircle and bound by the projects for insertile and special reference to insertile 81.241 mort a) Fortlesy of perishable foods

The ICAR has donveyed continuance sanction for the following All India Coordinated Projects for the 6th plan period to be implemented in the KAU.

- 1. ORP on Integrated control of rice pests at Kuttanad.
- 2. All India Coordinated Pulses Improvement
 Projects (RARS Pattambi)
- 3. Coordinated Project for Research and Development of farm implements and machinery and prototype manufacturing workshop and implements testing unitsfor improved implements under actual farming conditions (College of Hort., Vellanikkara)
- 4. AIC Floriculture Improvement Project Vellanikkara.
- 6. AICRIP Double cropping main centre, Pattambi, Double cropping sub centre, Mannuthy, special diseases and post research centre, Moncompu and AICRIP Moncompu.

n - Sair mar die de Angeleine de Angeleine ann an Angeleine ann an Angeleine ann an Angeleine ann an Angeleine

- 7. AICRP nematode pests, Vellayani.
 AICRP Sugarcane, Thiruvalla.
- 8. All India Coordinated Coconut & Arecanut Improvement Projects Nileswar.
- 9. AICARP Headquarters Unit, ECF units at Vyttila and Nileswar and MAE Karamana.
- 10. AICRP Forage crops Vellayani centre.

Continuance sanction for the following projects are awaited.

- 1. AIC Fruit Improvement Project, Kannara and HRS, Ambalavyal.
- 2. AICRP on Poultry for eggs, Mannuthy.
- 3. AICRP on Agrl By products, Mannuthy.
- 4. AIC Tuber Crops Improvement Project (other than sweet potato) Vellanikkara.

University Project on Aerial Spraying against Tea Mosquito

A new research project for evaluating the relative efficiency of aerial sprays of (ULV) of insecticides against the tea mosquito bug, was formulated and implemented during the period. The experiment was conducted in collaboration with M/s Plantation Corporation of Kerala in their estate at Chimeny. Three rounds of sprayings were given on 19.11.'82, 21.12.'82 and in Jan., '83.

RESEARCH HIGHLIGHTS

FACULTY OF AGRICULTURE

/ RICE /

1. The improved variety Pavizhom / Culture M-23-33-3-17 a derivative from IR 8 x Karivennel with a duration of 115-118 days was released for cultivation during the year. This variety with a yield potential of 5-6 t/ha is tolerant to BPH, BLB and Sheath blight.
/ RRS, Moncomp /

The improved variety Suvarna modan /Culture ARC 11775/ suitable for cultivation in the modan (dry) land situations has also released for cultivation during the period.

ZRARS, Pattambi

- 3. Carboxin (Vitavax 50% WP) at 500 g/ha was found to be the most effective treatment to control the Sheath Blight disease.

 Department of Plant Pathology, College of Agriculture
- 4. In a field experiment with the Rice Var. Triveni grown under semi dry conditions, it was found that the period 21-40 DAS was the most critical period for crop-weed competition. This study shows that weeding during this critical period will be of value in augmenting rice production.

Department of Agron., College of Agriculture, Vellayani/

5. The fungal pathogen Syncephalastrum racemosum gave substantial control of BPH at a concentration of 20×10^6 spores/ml.

Department of Ent., College of Agriculture

6. Among the 39 rice varieties screened for acid tolerance in a highly acidic soil (pH 3.5), the variety Jaya performed best among the medium duration varieties and Jyothi among the short duration varieties

Dept.of Soil Science & Agrl.Chemistry, College of Agriculture/

7. Synergism between the Nuclear Polyhedrosis virus preparations and the insecticides Quinalphos, Fenthion and Endosulfan was detected in terms of the bio-efficiency of the mixture against the army worm Spodoptera mauritia infesting rice. This indicates the scope of using the two candidates in conjunction and of reducing the dose of the insecticide.

Dept. of Ent., College of Agriculture

8. Two cold tolerant rice cultures (Cultures 745 and 796) were identified as promising for cultivation in the Wynad area. The former is a derivative from Jaya x CH 1039 while the latter is from IR8 x CH 1039

[RARS, Pattambi]

9. The culture 1907, a white kernelled medium tall and short duration rice culture from Bhavani x Triveni has been found to be highly resistant to the Blast disease. This culture has performed consistently better for direct seeded rainfed cultivation in the uplands.

[RARS, Pattambi]

10. The culture 25100 - a photosensitive tall red kernelled pre-release variety which is an induced mutant in crpandy has been found to be as resistant to BPH as the well known PTB 33 variety.

/RARS, Pattambi/

11. There was no difference in grain yield due to increased application of Nitrogen from 50^{to}70 kg/ha for the transplanted crop of Mashoori.

RARS, Pattambi7

12. Dipping rice seedlings in 0.02% solution of Chloropyriphos was found to be more effective in controlling gall fly incidence than application of the insecticides in the granular form or as foliar spray 15 DAT.

/RARS, Pattambi/

13. Germination and plant density in rice were increased when seeds coated with Calcium Peroxide were used for sowing in water logged situations.

RRS, Moncompu7

14. The culture 4-4 which is a derivative from Pokkali x T(N) 1 with plant features similar to Vyttila-1, was found yield 20% higher than Vyttila-1.

RRS, Vyttila/

/COCONUT ARECANUT/

15. In studies conducted in coconut palms infested with the Root(wilt) disease at varying intensities, it was found that the fungi Allescheriella, Cephalosporium, Diplodia, Mammaria, Sepadonium and Candida spp occurred in the rhizosphere of infested palms.

CRWDP, College of Horticulture, Vellanikkara/

16. Two species of <u>Cephalosporium</u> were isolated from spindle leaves of palms infested with leaf rot disease.

ZCRWDP, College of Horticulture, Vellanikkara7

17. In soils and roots of coconut palms infested by Root(wilt) disease, the nematodes of the genera Helicotylenchus and Tylenchorbynchus were quite common

∠CRWDP, College of Horticulture,

Vellanikkara

✓

18. In a study on the nutrient status of Root(wilt) affected palms, it was found that on all the experimental palms, the disease intensity dropped sharply in 4-5 months, but there was later a gradual increase in disease intensity. The palms were still better than in the pre-treatment status of the disease.

[RARS, Kumarakom]

19. Partially dehusked seednuts sown in poly bags produced vigorous seedlings. By following this method the nursery period can be reduced to six months.

/RARS, Pilicode/

20. For foliar diagnosis of nutritional status of coconut palms, the NK analysis of the 2nd frond was found to be the best index. P content of the leaf was not correlated with nut yield. The optimum levels of N, P, K in the frond No.2 for maximum yield were found to be 3.31, 0.15 and 2.17.

(Department of SoilScience & Agrl.Chemistry, College of Horticulture)

In a

- 22. In the CYT of cashew types, BLA 139-1 among the seedlings, NDA-21 among the layers and the tree No 661 (ALGD- 1-1 x BLA 139-D, 681 (ALGD-1-1 x H-3-3) among hybrids showed consistently superior performance with nut yields above 15 kg/tree/year.

 ZCRC, Madakkathara and CRS, Anakkayam7
- 23. A method to preserve cashew scion material for up to 10 days and then using these for soft wood frafting was standardised.

KADP, College of Horticulture

FRUITS & FLORICULTURE/

- 24. Study of the performance of clonal progenies from different yield groups of Nendran banana, it was found that the fruit yield was not affected by the size of suckers. It was further revealed that the bunch size of parent plants have no effect on the bunch size of clonal progenies.

 Department of Pomology, College of Horticulture?
 - 25. Application of Ethephon at 200 ppm induced heavy flowering in Banganappalli and Neelam varieties. In Mundappa, the effective dose of Ethephon required to induce flowering was 100 ppm only.

 \[
 \sum_{Department} \text{Department} \text{ of Pomology, College of Herticulture} \]

VEGETABLES & TUBER CROPS

26. The bittergourd variety Priya (MC-23) with on yield potential of 50 t/ha was released for cultivation.

Department of Oleri, College of Horticulture 7

- 27. While screening chilli varieties against leaf curl complex, the cultivar CA-10 was found to be completely free from the disease.

 \[
 \tilde{D}\text{epartment of Plant Breeding,} \\
 \tilde{College of Agriculture} \end{7}
- 28. The culture H 2743 was found to be quite promising in multilocational trial involving sweet potato varieties.

 \[\overline{\text{Department of Plant Breeding,}} \]

 College of Agriculture \[\overline{\text{Varieties}} \]
- 29. For table purposes, the varieties Velangi and H 2304 (Sree Sahya) can be harvested even at 6 months after planting.

 Department of Agron. College of Horticulture
- 30. A sand culture experiment showd that the period upto 4½ months in the growth of cassava plant was the most critical in respect of K nutrition.

 Department of Soil Science & Agrl.Chemistry, College of Horticulture

/PULSES & OIL SEEDS/

- 31. The PTB-2 variety (Krishnamony) with short duration (50-60 days) and yield potential of 600 kg/ha was released for cultivation during the period. This is a derivative from P-118 x Kolinjipayar and is more suited as grains rather than as vegetables.

 \[\text{RARS}, Pattambi 7 \]
- 32. The cowpen varieties V-26, HG-22, C-152 appeared to be promising for cultivation during the kharif season in coconut plantations.

Department Pl.Breeding, College of Agricultury

33. The promising KAU isolates of Rhizobium (Cultures 11 & 12) were supplied to the Department of Agriculture, Kerala for mass production in their Microbiology Laboratory at Pattanbi.

Department of Pl.Pathology,

College of Agriculture

- 34. Rhizobial strains for black gram (KAU No.5), groundnut (KAU No.6) and greengram (KAU No.13) were also identified to be promising.

 \[
 \begin{align*}
 \text{Department of Pl.Pathology,} \\
 \text{College of Agriculture}
 \end{align*}
- 35. Direct admixture of cowpea seeds in the activated charcoal powder at 1.5% (W/W) gave protection to the seeds against infestation by the pulse beetle, instorage.

Department of Ent., College of Horticulture

- 36. The highest grain yield of 528 kg/ha and the maximum protein content of 24.2% in cowpea was obtained with an application of 20 kg N/ha as basal followed by foliar application of 10 kg N/ha given at the mid-pod-fill stage.

 \[
 \tilde{D}\text{epartment of Agron., College of Agriculture}\]
- 37. C-152 variety of cowpea was found to be quite suitable for monoculture during the khariff season

RARS, Pattambi7

38. The ground-nut variety JL_24 was found to be highly promising for cultivation in the command areas of Peechi and Malampuzha.

CARC, Vellanikkara7

/SUGARCANE, JUTE/

- 39. In the zonal varietal trial, Co 62175 continued to perform better.
- 40. Among the early duration varieties screened, CoC 771 recorded the highest yield of 120.4 t/ha.
- 41. The seed material collected from higher elevations in the Idukki Dist and planted in the PRF area in Thiruvalla gave higher yields.
- 42. Early planting was found to be better for the midlate variety Co 62175 which gave the highest yield for planting on 15th November.

ZRS, Thiruvalla7

/ESSENTIAL OILS & MEDICINAL PLANTS/

43. The maximum grass and oil yields were recorded from the lemongrass crop fertilised with NPK at 150:75:100 kg/ha.

ZAMPRS, Odakkali7

- 44. In bulk yield trials with the promising lemongrass varieties OD-408 out yielded OD-440 and OD-19.

 [AMPRS, Odakkali]
- 45. In studies on the variation in the quantity and quality of oil from different parts of Pałmarosa in different seasons, it was found that the maximum recovery of oil was from the flower crop.

 AMPRS, Odakkali

/SPICES, COCOA/

46. A study of the relationship between soil nutrient status and foliar analysis in cocoa plants indicated that the NP and K in the Leaves tend to and increase/the Ca and Mg tend to decrease with the age of the plant.

/Dept.of SS & AS, College of Agriculture/

- 47. The petiole of leaf was found to be the best tissue for diagnosis of nutritional status of the plants.

 \[
 \sum_{\text{Department}} \text{Observed} \text{College of Agriculture} \]

 College of Agriculture.
- 48. Detailed studies on the actiology and ecology of the fungal pollu disease were completed. Spraying 1% Bordeaux Mixture was found to be the most effective measure to contain the disease.

 Department of Pl.Pathology, College of Agriculture.
- 49. A key for the identification of pepper varieties has been developed on the basis of 9 morphological characters.

 Department of Agrl. Bot., College of Horticulture.
- 50. Three series of fertiliser trials conducted at Panniyoor showed that the present recommendation of 100 g N/plant/year can be reduced to 50 g N/plant

FODDER CROPS/

51. In a trial with different fodder cowpea varieties the highest green matter yield of 35.6 t/ha was given by the variety C 152.

Department of Agron., College of Agriculture

/SOILS & AGRONOMY/

52. The best ameliorants for the conthalpadom soils of Chittoor area were found to be sulphur (250 kg/ha) and 1500 kg/ha of gypsum

Department of SS & AC., College of Agriculture

PLANT PROTECTION/

- 53. The nuclear polyhedrosis virus of the coconut black headed caterpillar was found to be highly pathogenic and host specific
- 54. In a survey it was found that the rice root nematode Hirschmanniella oryzae occurred widely in the State.

 Department of Ent., College of Agriculture

POST HARVEST TECHNOLOGY/

55. Techniques for climinating the characteristic soya flavour to soybean products have been standardised and recipes from soybean developed.

Department of Processing Technology,

College of Horticulture

/CROPPING PATTERNS & FARMING SYSTEMS/

56. Studies with five cropping systems and three water management levels, indicated that growing of an intercrop of cowpea, greengram, blackgram and groundnut will not adversely affect the yield of tapioca. The water requirement of tapioca grown alone or intercropped with groundnut, cowpea, blackgram or greengram did not vary significantly and a level of irrigation scheduled at 0.3 IW/CPE ratio is found to be adequate.

ARS , Chalakkudy7

/SOIL CONSERVATION, FARMS MECHANISATION/

57. The IRRI winnower has been fabricated based on original prototype designs and tested for its suitability and utility with certain modifications, the winnover could be used to clean reasonably large quantities of the produce.

FACULTY OF VETERINARY & ANIMAL SCIENCES

- 1. Instudies on the chemical constituents affecting osmotality of milk in cross brod cattle, is was found that lactose and potassium contents increased in early lactation and slightly decreased at the later stages.r. ...

 \[
 \tilde{\text{Department of Dairy Science, College of Vety. & Animal Sciences}\]

GOAT

3. The first 15 days of age appeared to be the critical period in the life span of goats, the average mortality during this period being 30.55%

AICRP on Goats/

PIGS AND OTHER ANIMALS/

4. A higher dressing percentage in pigs was obtained for animals slaughtered at 90 kg body weight than those slaughtered at 50 kg body weight. The cost of production per kg live weight was less than those maintained in rations with 75% TDN and 20% protein.

Department of Animal Nutrition, College of Veterinary & Animal Sciences/

5. Tapioca chips can replace cereal grains up to a level of 40% in swine ration with equal feed efficiency and with no deleterious effects. The inclusion of chips can reduce cost of production of pork.

Department of Animal Nutrition, College of Veterinary & Animal Sciences

/POULTRY/

6. Desi ducks matured earlier than khaki campbells but the latter appeared much superior in intensity and persistency of egg production.

\[
\tag{\text{Department of Poultry Science, College of Veterinary & Ani.Sciences}}
\]

ANIMAL REPRODUCTION & ARTIFICIAL INSEMINATION

7. Tris yolk diluent was found to be very suitable to preserve buck semen. Tris yolk diluent with a molarity of 0.2 M of Tris buffer having a pH of 7 and containing 50% egg yolk was superior for the preservation at 3-5°C. For preservation at high temperatures 6-8°C level of egg yolk (20-25%) would be desirable.

Department of Animal Reproduction, College of Veterinary & Animal Sciences

ANIMAL DISEASES

- 8. Atropine sulphate at 8.165 mg/kg body weight was found to be effective in the treatment of Carbofuran toxicity in ducks.
- 9. The mortality in cattle in Palghat and Kottayam districts was found to be caused by ingestion of the weed plant Mimosa invisa. The plant induced nephro-toxcism in animals.

- 10. In a study on the incidence and pathology of hepatic disorders in cattle, Hepatic Schistosomiasis was recorded for the first time.
- 11. The occurrence of infectious Bovine Rhino tracteitis in Kerala was established by conducting a serological survey. Iso antibodies to bevine spermatozea could be one of the reasons for non-specific infertility in cows.

Department of Microbiology, College of Vety. & Animal Sciences/

12. In studies on the role of free flying birds in the epizoetelogy of Necastle Disease virus, antigenic variations in the virus were detected. The strains isolated from a Mymah was less virulent and possessed high immunogenicity. It was indicated that Mymah possessed attributes of a good vaccine strain.

Department of Microbiology, College of Vety. & Animal Sciences/

MISCELLANEOUS

- 13. While screening of canine pets for helminthic infection of zonetic importance, the highest rate of infection was with ancylostomes (33.87%).
- 14. Actic acid and Sodium chloride at 5 and 10% were found suitable for preservation of meat during transportation for serological examination.

 \[\bar{D}\text{epartment} \text{ of Veterinary Public Health,} \\ \text{College of Veterinary & Animal Sciences} \bar{7} \]

FACULTY OF FISHERIES

1. Successful breeding of carps Cyprinus mrigala and Laboo rohita was induced and 25000 seeds were obtained from three Mrigal breeders.

AICRP on BF Fish Farming, Vyttila

2. Survey of frogs conducted in the Kumarakom tractled to the new records of Rana cyanophlyctis and R. limnocaris.

[RARS, Kumarakom]

DISTINGUISHED VISITORS

Dr AR Seshadri, Dean and Joint Director, IARI, New Delhi visited the College of Horticulture and College of Agriculture, during 14-19 May,1982 to discuss the ongoing nematological studies in the CRWDP and other crops.

The mid-term Appraisal Committee for evaluation of the AICRP on Agricultural By-Products.visited KAU Centre during 13-15 May,1982. Dr ML Punj, Dr Arora and Dr Pradhan were the team members.

The Quinquennial Review team for the AICRP on Fruit Improvement consisting of Dr N Gopalakrishnan Former Vice-Chancellor, Dr SN Rao, Director of Research APAU, Dr PN Bajpai and Dr SS Teotia visited the BRS Kannara and KAU Hqrs 18-20 July, 1982.

Dr B Misra, Vice-Chancellor, Crissa University of Agriculture and Technology visited the KAU Hgrs and the Research Stations in September, 1982.

Dr Fernando Albuquerque, Plant Pathologist from the Humid Tropical Agricultural Research Centre, Brazil visited the PRS Pannioor and PRC Vellanikkara in September, 1982.

Dr C Memaril, Coordinator, INSTER visited the Regional Agricultural Research Station, Pattambi in September, 1982 to evaluate INSTER programmes. The ICAR Appraisal team consisting of Dr RK Rajput, Dr SS Varade and Dr A Balasubramaniam (convenor) visited the KAU during 25-27 August,1982 for the appraisal of the sub-project proposal on water management.

Dr Putter, Epidemiologist, Natal University and Dr Van-der-Graff, Plant Pathologist, FAO Rome visited the PRS Pannioor and locations in Idukki District in connection with the establishment of international net work on Phytophthora disease of pepper as per requests from the Pepper Community of Asia.

The IDA Supervision Mission with Dr RV Ramakrishna Dr A Appa Rao and Dr Haward visited the NARP Centres at Pilicode and Pattambi. The Mission held discussions with the Vice-Chancellor on 15-10-1982.

Hon'ble Chief Minister of Kerala, Mr K Karunakaran inaugurated the implementation of the ICAR Co-ordinated Project for rapid technology directed at Socio-economic upliftment of SC & OBC at Jawahar Nagar Nilambur on 7.11.1982.

Hon'ble Minister for Agriculture Mr Cyriac John inaugurated the KVKs at the RARS Pattambi on 23.10.1982 and at Ambalavayal on 31.10.1982 respectively.

SERVICES RENDERED TO FARMERS

Following kinds and quantities/numbers of seeds and planting materials of promising types were distributed during the period from the University Farms.

Paddy : 34157 kg

Coconut seedlings: 10228 nos

Fruit plants &

spices : 4180 nos Cashew seeds : 1168 kg

Cashew seedlings : 552 nos

Cashew air layers,

grafts etc : 2555 nos
Ornamentals : 4798 nos
Vegetable seeds : 149.410 kg

Pulses seeds : 188 kg

Sugarcane setts : 1,26,790 nos

Pepper:

Pannioor 1 : 32,681 nos

rooted cuttings :

Banana rhizomes : 675 nos

Very large number of animals were treated in the University Hospitals at Kokkalai and Mannuthy. Diagnostic pathology work such as autopsy, biopsy, histo pathological studies etc. were carried out whenever these studies were warranted. R & D and A & R vaccinations were conducted during the period. Artificial insemination of Cattle & goats were also done. Eggs for breeding purposes were distributed.

EXTENSION DIVISION

Dr VSS Potti continued as the Director of Extension. The various programmes of the Division are being implemented through the Communication Centre, Farm Advisory and Training services.

The Communication Centre comprises of four units, namely, the Information Unit, Publication Unit, Exhibition and graphic Unit and the Press.

DETAILS OF STAFF AS ON 31-12-1982

Name of Po	st	No.of sanct- ioned post	Staff in posi-tion	No.of vacant posts	Name of Officers
Extension	Divisi	on			
Associate Director	(Extn) 1	1	nil	Dr.GR Nair
Publication	on Unit				
Associate	Profes	sor 1	1 -	11	Mr KC Varghese
Asst. Pro	fessor (Agri) 1	1	fî	Kum S Shilaja
Asst.Profe	essor (AH)	1	1	it	Dr OJ George
Information	on Unit				
Associate	Profes (Extn)		1	16	O Abdul Rahiman Kunju
			i i		(Transferred to Agrl.College, Vellayani on 7-12-82)
2 o	× .				1-12-02/

Assistant Professor(AH)	1	1	nil	DrlA Jalaludeen
Assistant Professor (Extn)	1	1	6.4	P Ahamed
Jr. Asst. Professor	2		2	, - 1
Strengthening of Communication Centre				
Asst. Professor	2	2	-	Dr C Bhaskaran
				Sri Joy Mathew
Exhibition & Graphics				
Asst.Professor (Extn)	1	1		Kum NP Sushama
	1	,		nam ivi babilama
Jr.Asst.Professor	1	_	1	- Oddiana
	1870	_	1	- Odbilana
Jr.Asst.Professor	1870	1	1	Dr E Tajuddin
Jr.Asst.Professor Farm Advisory Service	1	1	1 - 1	•
Jr.Asst.Professor Farm Advisory Service Professor (Agro)	1	1	-	•
Jr.Asst.Professor Farm Advisory Service Professor (Agro) Assoc.Professor(Agro)	1 1 1	1 - 1	<u>-</u> 1	•
Jr.Asst.Professor Farm Advisory Service Professor (Agro) Assoc.Professor(Agro) Assoc.Professor(Hort)	1 1 1 1	1 - 1	<u>-</u> 1	Dr E Tajuddin
Jr.Asst.Professor Farm Advisory Service Professor (Agro) Assoc.Professor(Agro) Assoc.Professor(Hort) Assoc.Professor(AH) Assoc.Professor	1 1 1 1	•	<u>-</u> 1	Dr E Tajuddin - Dr PS Pushkaran

PUBLICATIONS

The following Publications were brought out during the period:

Poster on root (wilt) survey (Mal)
Leaflet on Lemongrass (Eng)
Booklet on Indian Dishes with Cassava (Eng)
Book on Indian Dishes with Cassava (Mal)

Booklet on Poultry Production (Mal)

Booklet on Poshakathottam (Mal)

Leaflet on Lab to Land Programme (Mal)

Leaflet on Calf rearing (Mal)

Booklet on Manninte Valakkuru Paripalikkuka (Mal)

The following materials are under various stages of printing:

Book on Disease of crop plants of Kerala and their control (Eng.)

Booklet on Tapioca (Mal)

Booklet on Banana (Mal)

Booklet on Pulses (Mal)

Booklet on Practical Manual on Plant Breeding (Eng)

Leaflet on Calender for cashew cultivation

Booklet on "Kozhivalarthal Oru Ethinottam" (Mal)

Booklet on Pepper (Mal)

The Agres News publication was continued during the period.

Eighty eight items of science news were broadcasted through the Trichur and Calicut stations of the AIR. These items highlighted the findings from the University Research programmes.

Timely ps were regularly broadcasted on all fridays for the benefit of farmers and extension workers.

During the period seven issues of farm News were released. This publication contains significant research findings in the Farm sector.

Radio talks, interviews and discussions were given by the Scientists through AIR Stations in the State.

All India Coordinated Research Project for the rapid socio-economic upliftment of SC and OBC

Sanction for implementation of this Project in the University for 3 years from 1983 was received from the ICAR. The financial outlay of this project is Rs.6.15 lakhs.

This scheme was inaugurated at Nilambur on 6-11-82 by the Hon Chief Minister of Kerala.

Mr P Rajendran, Asst. Professor has been put in charge of the scheme. The positions of specialists in Small Scale/Village Industries (1), Home Economist (1), Animal Production/fisheries(1), Technical Assistants in Animal Science(1), Industries (1) and Home economics: are lying vacant.

TRAINING

Agriculture:

State Level Training in Rice Production Technology Rabi 1981

Rice Research Station, Moncompu 15-6-1982 to 18-6-82 Rice Research Station, Pattambi 23-6-82 to 26-6-82 Rice Research Station, Kayamkulam 6-7-82 to 9-7-82

A total of 74 officers were trained during these training sessions.

Inservice Training to Agricultural Demonstrators

One batch of trainees from the Department of Agriculture attended the training in Meterological data collection conducted in the College of Horticulture, Vellanikkara on 13-9-82.

Training course for Pre-release Defence personnel

One batch of 10 trainees was given training in the College of Veterinary & Animal Sciences on dairying.

Training in diagnostic techniques of infertility

A batch of 3 trainees attended this programme which was held at the College of Veterinary & Animal Sciences for a duration of 3 weeks.

Training in lab techniques to livestock Assistants.

A six month training was organised at the College of Veterinary & Animal Sciences from 25-3-82 for a period of 6 months. Five Livestock Assistants participated in this. Another batch of training had commenced on 25-9-82 and is in progress.

FARM ADVISORY SERVICE

This was started in 1979 to provide an opportunity to the farmers to discuss their field problems and to advise on the solutions. This was also planned to obtain feed back information from the farmers in order to orient the research efforts or to start investigations to solve the new problems.

District Agricultural and Animal Husbandry Seminars were conducted in 24 locations as follows: A total of 2718 farmers were trained in these seminars

DETAILS OF THE SEMINARS CONDUCTED

Date	Place I		No.of parti- cipants
17-4-1982	Pulamanthc.1.	Palghat	102
17-7-1982	Neyyattinkara	Trivandrum	105
24-7-1982	Anad	Trivandrum	86
?1-7-1 982	Alwaye	Ernakulam	87
2-8-1982	Velangannoor	Trichur -	
3-8-1982	Velangannoor	Trichur	87
4-8-1982	Velangannoor	Trichur	
8-8-1982	Central Co-operative Bank	Cannanore	208
	. ¥ .		100
21-8-1982	Karayamuttom	Trichur	100
23-8-1982	Chemmanda	Trichur	101
26-8-1982	Kanjirappally	Kottayam	96
11-9-1982	Ayroppara	Trivandrum	74
25-9-1982	Kollokadu	Ernakulam	84
29-9-1982	Pathanathitta	Quilon	73
23-10-1982	RARS Pattambi	Palghat	200
31-10-1982	HRS Ambalavaya	al Wynad	400
1-11-1982	Pulpally	Wynad	107
19-11-1982			
20-11-1982	Gurukulam HS	Quilon	164
27-11-1982	Ambalapuram	Palghat	102
6-12-1982	Kanjagad	Cannanore	132
11-12-1982	Puranattukara	Trichur	135

13-12-1982	Kanjagadu SC	Cannanore	138
18-12-1982	Mayil	Cannanore	137
29-12-1982 to			win V
31-12-1982	Vellanikkara Main Campus	Trichur	

EXHIBITION AND GRAPHIC SERVICES

During the period exhibitions were held in 6 locations as follows:

	Particulars	Loca	ntions	Date
tra	MAN SHAR SCORE PLATE RANG MODE RANG MAN SAME SAME SCORE SCORE	ta ca	Brist Bright Book Marks (204 625 C19 1219 C19 644 644 Fing
	Trichur Pooram Exhibitio	on	Trichur	From 28.4. 182 onwards
	Mini Exhibition conducted at Thiroor Service Co-or erative Bank		Thircor	27-10-1982 to 31-10-1982
	Mini exhibition at CMS High School, Trichur in connection with Dist.Science Fiar		Trichur	8-11-1982 to 12-11-1982
	Mini Exhibition at Muthalamada High School		Palghat	24-11-1982
	Exhibition at Municipal Station, Palghat		Palghat	24-12-1982 to 15-1-1983
	Exhibition at College of Horticulture, Vellanikkar in connection with Krish Maha Mela	ca.	Trichur	29-12-1982 to 1-1-1983

In the Trichur Pooram Exhibition 1982, the University Pavillion bagged the "Best Stall" Award.

The proposal for the supply of 12000 colour slides was approved and the work was started. Processing of a total of 800 colour slides and 375 exposures of B & W were completed during this period in the colour lab. A total of 370 B & W half size prints were also taken during this period. In all, 120 graphs and charts, 26 cover designs, 43 ncs of diagrams and illustrations were prepared by the Exhibition & Graphic Service Unit.

UNIVERSITY PRESS

periodical
The publications brought out during the period under report were a cllows:

Kalpadhenu, Kerala Journal Vety Science,
Agricultural Research Journal of Kerala,
Anivet Abstracts, KAU News Letter and the
Agres news supplements.

The other publications published during the period were:

Booklet on 'Thengukrishi', Booklet on Indian Dishes with Cassava(Eng&Mal), Booklet on Poultry Production, Package of Practices(AH), Booklet on 'Foshakathottam', Audit Report (Reprint) 1974-75, KAU Statutes and Ordinance, KAU 2000 AD and the Horticulture Magazine (1979-80 & 1980-81).

Besides, all the printed forms, Registers (143 items) required by the University were printed in the press during this period.

LAB TO LAND PROGRAMME

Under the Lab to Land Programme of the Kerala Agricultural University for the development of the weaker sections of the farming community. One thousand families have been adopted under, Phase II of the programme during 1982-83 in 25 centres. This includes 298 Scheduled Castes, 106 Scheduled Tribes, 245 Backward communities and 351 others. Of these, 666 families, were landless labourers, 300 were marginal farmers and 34 were small farmers.

Inputs such as Planting materials, Plants fertilizers, goats, poultry feeds, seedlings, medicines and fingerlings costing Rs. One lakh were distributed during the period under report.

VILLAGE ADOPTION PROGRAMME

The Village adoption programme was introduced in the Kerala Agrl. University to provide technical assistance and advice to farmers in the adopted villages for integrated agricultural development and to build up field experience for Scientists and establish close contact between Scientists and farmers.

To begin with, the Kerala Agricultural University adopted seven villages under the

-:94:-

programme during 1976 and by 1982 the total villages adopted was 21 thereby covering almost all districts..

DETAILS OF THE VILLAGES ADOPTED BY THE UNIVERSITY ARE AS FOLLOWS

Name of sponsoring No.of adopted Name of villages Institutions Villages

•		ne 103 1030 1040 1044	2003 Surgi Name 6076 A075 Stole 0708 Stole MANS
	Regional Agrl.Res. Station, Pilicode	2	Nileswar & Pilicode
	Livestock Res. Station, Thiruvazhamkunnu	1	Kottopadam
	Agronomic Res.St- ation, Chalakudy	1	Kodassery
	Rice Res.Station, Vyttilä	1	Punithura
	Regional Agrl.Res. Station, Kumarakom	1	Kumarakom
	Cardamom Res.Station, Pampadumpara	1	Pampadumpara
	Rice Res.Station, Kayamkulam	1	Pathiyoor
	Sugarcane Res.Station, Thiruvalla	1	Eravattinkara
	College of Agriculture Vellayani	2	Muttakad, Kalliyoor
	College of Vety. & Animal Sciences, Mannuthy-	2	Kozhukully, Ollukkara
	College of Horticulture Vellanikkara	' 2	Madakkathara Pananchery
	Regional Agrl.Res.Sta- tion,Pattambi	2.	Trithala, Keezhayoor
	Institute of Agrl. Tech- nology, Tavanur	1	Tavanur

An amount of Rs.21,000/- @ Rs.1000/- per v.llage was allotted for the 21 adopted villages. Funds were utilised only for conducting trials and demonstrations in Farmers Fields and for organising seminars, group discussions for farmers. Training classes, Karshaka Melas and Agrl.

Seminars were conducted for the benefit of farmers of the adopted villages.

NATIONAL DEMONSTRATION SCHEME

According to the approved technical programme 25 demonstrations have to be laid-out in farmers field during the year 1982-83.

First crop seasons:-

During the first crop season of 1982-83, 21 demonstrations have been laid out successfully in Trichur District, the details of which are as follows:

Paddy 12
Groundnut/Tapioca 4
Farming systems 5
Total 21

In the paddy demonstrations, the varacties used were Jaya, Bharathi, Jyothi, Triveni and IR-8. A maximum yield of 5800 kg of paddy was recorded from the plot of Sri.George Syriac of Pattikad in Panancherry Village. The variety used was Jaya. In groundnut-tapioca demonstration, the variety TMV-2 was used and the yield ranged from 1100 kg to 1300 kg per hectare.

Second Crop seasons:

The demonstration programmes conducted during the Ist crop season was continued for this season also. In addition, one demonstration on problem soil of the kole area was also conducted. The harvest of these demonstration were almost over.

The tapioca demonstrations were continued during the season. The critical inputs to the five entire farming system demonstrations were supplied during the period under report.

KVK AMBALAVAYAL

The KVK at Ambalavayal was inaugurated by the Hon'ble Minister for Agriculture on 31.10.1982. This KVK has the objective functions of developing skills of the practicing and prospective farmers, tribes, agricultural labourers and farm youth. The following members of staff have been positioned in the KVK.

Name of the post No.of Staff in No.of Name of sanct-position vacant Officers ioned post

med med dett had 412 find 800 610 find 863	1	e	6.00	42.20	-	E.170	-	Gard Asset	ETCD ECTD from group formy book from
Training Associ-	1				-		, Vo	***	VB Padmanabhan
ato	_								Asst.Prof.(Extn)
Assoc.Prof.(Extn)									posted against
									the post of
Jr.Asst.Prof.			4						Assoc.Prof.
(Animal Husbandry)	1				1			tou.	Dr (Sint) A Radha-
Jr.Asst.Prof.(Agro)	1							1	mma_Pillai
Jr.Asst.Prof.(Pl.P)	1				-			1	***
Farm Assistant Gr. II(Agri)	1	*			1				NR Rajan
come series series series series series series series series series	-	-	-	E/120	-	-	-	85.0 E.28	song miles exte exte exte agent

Three training programmes on vegetable cultivation were conducted in the tribal colonies (Kavamkolli, Muttupara) and 10 tribals were trained in each batch.

KVK PATTAMBI

The KVK at Pattambi was formally inaugurated by the Hon'ble Minister of Agriculture on 2.10.'82. This is a fully financed ICAR Project. The function include planning and conducting survey of the operational area in order to prepare the resource inventory, and to identify the training needs. Based on this, production oriented, need based short and long duration courses will be conducted on the campus and also off the campus.

The following courses were held during the period.

-	to them tone from their words title title plus title attent word title over the title title.	MICH ACOS SHOW KIND SCOT SCOT SCOT STORE STORE
-	Name of training Durat	ion No.of trainees
	Training in scientific 2 methods of vegetable growing	20
	Training in identification of pests & disease of rice for farmer 4	24
	Scientific method of poultry rearing	
	Ist batch 11 to 12th Oct	. 14
	2nd batch 14 to 15th Oct	• 15

A field training for 12 days for the final B.Sc.(Hort) students of the College of Horticulture Vellanikkara was concucted from 17th to 28th August,1982.

The details of staff positions created for the KVK are given in Table.

KVK Pattambi - Sanctioned staff

PCS New Allow PCS length along length peak lating length	Ecile Nove most	ear to seq	tus em	6 6 6 6 B	4 678 6038 944 9
Name of post	No.of Sanct- ioned post	in posi-	va	cant Offi	
Professor(Agrl. Extn (Training Officer)	1	1	_	Dr GT Nai posted ag the post Professor	ainst of
Assoc.Professor (Training assoc- iates) Agronomy	1	# *	1		
Horticulture	1 .	-	1		
Animal Science (P.Science)	1	***	1		
Home Science	1	P-34	1		
Assistant Professor (Training Assistance					
Agronomy	1	ROM	-		
Horticulture	1	E-4	-		
Animal Science (Poultry Science)	1	-	7.		Sec.
Fisheries	1	_	-		
Home Science	. 1	140	-		
been state that they they been been the been to					

MONTHLY WORKSHOP UNDER T & V SYSTEM

The monthly workshops were conducted at the College of Agriculture for Trivandrum and Quilon Districts and at the Rice Research Stations at Moncompu for the Alleppey and Kottayam Districts. Scientists of KAU and Officers of the Department of Agriculture have participated in the workshops.

EXTENSION EDUCATION CENTRE KAYAMKULAM

The objectives of this ICAR scheme are: to impart the oretical and practical training on latest production technology of pulses and oil seeds and nutritional aspects of pulses and oil—seeds cultivated and consumed in Kerala to Agrl. Officers of the Department of Agriculture and to farmers.

It is also the aim to demonstrate the potentialities of balanced fertilisation for gingelly, cultivation of short duration bunch type groundnut in rice fallows, cultivation of pulses such as cowpea, blackgram and greengram in summer rice fallows.

Training on production technology and nutritive aspects of pulses and oilseeds to Jr.Agrl.Officers and District Officers of Department of Agriculture.

Three batches of 51 Jr.Agrl.Officers from the Department of Agriculture attended the 3 days training programme organised at RARS Kumarakom and at RRS, Kayamkulam.

One day off campus training to farmers on production technology and nutritive aspects of were pulses and oilseeds conducted.

Details of training are as follows:

tions divide took trust trust trust trust	took took took took took took took took	era con con tea to con	era cra ca emp
Venue	No.of class	No.of farme attended	rs
Great Riche Atrial Gross Erroll Gross Broad Gross	to era to troi to to to	NAME NOTE NOTE ACCUSE OF THE SECOND	12 FM 123 FM
Alleppey	4	106	
Quilon	12	620	
Kottayam	8	447	
Total	24	1173	*
= = = = = = = = =		======	====

Five demonstrations of growing groundnut as an intercrop in coconut garden were conducted during the Khariff season,

Five demonstrations of growing horsegram as an intercrop in coconut gardens were conducted in Edappen area in Alleppey district.

Ten demonstrations of growing cowpea (var-5.488) as an intercrop with sugarcane were conducted in Tiruvalla and Konny area.

NATIONAL SERVICE SCHEMES

College of Agriculture, Vellayani

The student strength during the year was 250. Dr Skariah Oommen and Mr PA Rajan Asari continued to le the programme officers in the College. Details of activities are furnished under the 'Education'.

Cablege of Fisheries

Mr TM Sankaran, Assoc.Professor continued as the programme Officer. The activities are furnished unde 'Education'

4 f Worticulture

Dr P Balakrishna Pillai and Mr KPR Nair continued as the Programme Officers. Mr KPR Nair Asst.Professor was deputed for an orientation training from 5-12 Aug. 1982 at Rajagiri College, Kalamassery.

The Programme Officers took classes on agricultural topics at SH College Alleppey, LF College, Guruvayoor, Arts College, Alathur, St.Mary's College, Trichur and Vimala College, Trichur.

A special NSS Camp for rural reconstruction was conducted at Mullakkara Harijan colony during 20-24 Oct.1982.

Distribution of seedlings, cleaning of premises of the community centre, field visits and volunteer service, blood grouping and donation etc were some of the important activities.

College of say, Abstral Sciences

The student strength during the period was 250.

Dr G Mukundan and Dr MK Rajagopalan continued as the Programme Officer.

The blood grouping of the student members

were typed to facilitate blood donation to needy persons and seventy three persons have donated blood on 14.6.1982. The volunteers participated in the cleaning and beautification of Thekkinkadu Maidan.

An animal infertility camp was organised at the Harijan Colony, Mullakkara on 10-11 Sept.'82. A total of 164 animals were innoculated against Haemorhagic septicaemia.

A five day special camp was held at Nadathara from 29-12-1982.

INFORMATION CENTRE

An information centre cum sales counter of the University was inaugurated at the main gate, by Mr KK Surendran, President, Madakkathara Panchayat.

PACKAGE OF PRACTICES WORKSHOPS

This workshop was held on 3-4 Dec.1982. The representatives from the Department of Agriculture, ICAR Stations, GOI bodies, Input dealers and the KAU Scientists participated. The new recommendations were finalised

WORKSHOP ON PREPARATION OF PROGRAMMED LEARNING MATERIALS

The KAU in collaboration with KANFED organised a workshop on the preparation of programmed Instructional materials for farmers during 6-8 Cct. 82 at the College of Agri., Vellayani.

ENGINEERING WING/

Mr KR Krishna Pillai continued as the Director of Physical Plant. Smt.Elizabeth Thomas joined as Personal Assistant to Director of Physical Plant during the period. The post of Architect and Jr.Architect continued to remain vacant.

The Engineering wing consists of the Directorate of Physical Plant with 2: £1 visions and 7 Sub divisions. During the year, a new Division with headquarters at Pilicode was formed and Mr PO Thomas promoted and posted as Executive Engineer.

The budget provision for the year for 'Works' is Rs.180 lakhs including provision for constructions and purchases under Miscellaneous heads of accounts such as NARP, KADP etc. The expenditure upto 31.12.1982 was 61 lakhs.

At IAT Tavanur, improvements to Hostel and Irrigation facilities are completed.

At CRS Pampadumpara, work on water supply arrangements is nearing completion.

At College of Agriculture, Vellayani, construction of compound wall was completed.

At Vellanikkara construction or Radio Isotope Lab, Ladies Hostel, GL Tank and Pipe lines near Type II quarters have been completed. The type IV, V, VI quarters are nearing completion. The work of additional 10 nos of Type II quarters is in progress. At Mannuthy remaining work of Dairy Technology building, Layer houses, Breeder house and a building for 100 experimental animals are in progress.

Two blocks of semi permenant sheds for Fisheries College were completed. The third block and the Dormitory building are in progress.

At Pilicode construction of Type II, IV and V quarters and Trainees Hostel are in progress.

At Thiruvazhamkurnu, construction of Type IV quarters is nearing completion.

The posts of Architect and Jr.Architect remained vacant.

The other vacant positions include 2 posts of Tracers.

ITEMS OF WORK INITIATED/COMPLETED/IN PROGRESS

s]	a lang book floor floor book tota sook sook lang lang book t	NG 636 NG 1	M 654 MG 653 6-3 653 652 616 806 806
	. Items of work	Estima cost i	n work/
_(1) (2)	lakhs _(3)_	Remarks (4)
I.	MAIN CAMPUS		
1.	A. ROAD Formation of C Road soling metalling, construction of a culvert etc.	1.92	Work in progress
^	D		
4.	Formation of C road along Ladies Hostel	2.56	
	and Radio Isotope Lab.		arranged
	from A Road		
	B.ELECTRICITY		
	Providing street light in the Main Campus, Vellanikkara.	7.00	Work arranged
	C.WATER SUPPLY		74
	Construction of GL Tank and Pump house for Duplex Quarters (25	1.40	Work completed
	blocks) at Main Campus, Vellanikkara.		
*	" for Hostel		
	Blocks	1.40	Work completed
II.	COLLEGE & LAB BUILDINGS		
	Construction of Dairy Technology Building at Mannuthy	6.50	Contractor not resumed the work. Balance works arranged departmentally and is in progress
			,

60-49 B219	CM COS SMI DESCRIPT FOR BOST CES SENS SENS CES SMI	2208 4209 6 24 8 E	and then seem stay them been seems
(1)	(2)	(3)	(4)
# <u>*</u>	ANNEL BOOM 6:00 PANNE BOOM MICH SCITZ CITY CITY STORE SCITY SLIPE SCITY SLIPE	30.00	Work not resumed by the cc tractor and c ne for arbiratic. Steps are being taken to uncel the product contract and rearrang the work through the
			agencies
	FISHERIES COLLEGE	1	
	Construction of Semi- permanent sheds I & II Blocks	5.60	Work completed
	-do- IIIrd block	2.60	Work in progress
	Construction of build- ing 100 experimental	3.25	Work in progress
	animals for Veterinary College, Mannuthy		
	Construction of build- ing for Meat Techno- logy at Mannuthy	9.00 .	completed. Water supply electrification
			to be comple ted. Tenders invited
	Soil processing-cum- diagestion room, Vellayani	1.145	Work arranged
III	·INSTRUCTIONAL FARM		
	Construction of Layer House for Ducks at Mannuthy	1.94	Work in progress
	Construction of Rear- ing house at Mannuthy	1.40	-do-
. ;	Construction of Bree- der House	2.20	n.co (] () etm
	Providing irrigation facilities to Instructional Farm, Main Campus	1.05	-dc-

(1) (2) (3) (4)

Fencing in the Pepper 2.6 Estimate sanctnursery balance ioned
portion

IV. WORKSHOP/GLASS HOUSE

Construction of Glass 3.9 Work arranged House - Instructional Farm, Vellanikkara.

-do- Net house 2.65 Work arranged

V. SPORTS, GAMES & STUDENTS AMENITIES

Construction of a 0.93 Earth work for stadium and playground levelling the at Main Campus, Vella- stadium area is in progress.

-do- an auditorium .. Estimate under at Vellayani Campus scrutiny

Construction of a Weight training hall, Vellayani Campus

Improvements of sports facilities, IAT Tavanur

0.53 Work arranged

0.59 Work arranged

VI. STAFF QUARTERS

Construction of quarters for Asst.Prof. (3 nos) Type IV and Assoc.Professors(4 Nos) Type V at Vellanikkara.

Construction of Type II quarters (Duplex type) 5 Nos at Vellanikkara

Construction of Type VI quarters for Professors(6 Nos) at Vellanikkara 7.56 Building works
almost completed.
Water supply and
sanitary and
electric works in
progress and
nearing completion.

4.35 Work in progress

8.51 Building works in progress and nearing completion. Water supply and sanitary installation works also in progress

(1) (2) (3) (4)Construction of Type 3.28 Work completed VI Quarters for Assoc. Dean (1 no) and 2 nos Assoc.Professors Construction of Type IV 3.44 Work in progress Quarters Asst.Professors and nearing com-(Duplex at Thiruvazham- pletion kunnu) Construction of Type 2.85 Work started IV Quarters for Asst. Professors (4 nos)i.e. 2 nos Duplex type at IAT Tavanur -do- Type V Quarters 1.23 Work started 1 no. Construction of Type IV Quarters 4 nos (2 nos duplex) at PRS Panniyoor 5.28 Selection notice issued 0.61 Work in progress Construction of quarters for Demonstrators and Watchman at PRS Panniyoor VII.STUDENTS HOSTEL Construction of Ladies 21.00 Work in progress Hostel at Vellanikkara and nearing completion. Construction of Ladies 42.00 Work tendered at Vellanikkara VIII.REGIONAL RESEARCH STATION Construction of Cow 3.80 Work arranged barns for 100 milking

cows at LRS Triruva-

zhamkunnu

(2) (3)

permanent sheds for Fisheries College at Panangad

Construction of semi- 4.55 Work arranged and started and in good progress

IX.WORKS FOR PROVIDING BASIC FACILITIES

Providing irrigation 1.52 Work nearing complefacilities at CRS tion Pampadumpara

Construction of Margi- 1.56 Work to be completed nal drains, culvert, wire fencing, Type II quarters Vellanikkara.

х. NARP PILICODE

Construction of quar- §9.50 Work in good progress ters Type V- 5 nos for Assoc.Professors at CRS Pilicode

-do-Type IV single unit 0.94 Work in progress for Asst. Professors

-do-Type II-2 Nos(Duplex1.96 Work in progress

Construction of Trainees Hostel at CRS Pilicode 6.20 Work arranged

Construction of Admini- 22.00 Work tendered strative building & Lab building CRS Pilicode

XI.KADP

Construction of Radio 8.00 Work completed Isotope Laboratory building at Vellanikkara.

Ground water Department bored few wells out of which 3 were successful in the Vellanikkara Campus. Pumps for 2 bore wells have been erected. Electric connection was received for one pump. In the Mannuthy Campus also, 2 bore wells were successful - Arrangements are made for erection of pumps.

• • • • • • •

DAY PLANT BEET WAY

KAU ESTATE

Mr TM Ibrahimkutty continued as the Estate Officer.

The total area of the Estate is 391,4368 ha as shown:

	· · · · · · · · · · · · · · · · · · ·					
Acquired by GOK and handed	Hectares					
over on 1.5.1973	379.5615					
Additional acquisitions:						
Pocket D on 8-1-1977	2.709					
В 11-12-1979	1.5056					
" A 11-3-1981	3.8536					
" C 11-3-1981	3.8070					
Grand Total	391.4368 ha					

Out of the total area, 149.3 ha has been set apart for Cashew, Pineapple, Pepper, Floriculture & IF & RS. An area of 12 ha has been alloted to NBPGR Centre. The area alloted to KADP farm is 14 ha.

For the botanical garden 60, ha has been set apart.

The area used for putting up buildings and roads is 20 ha.

The tapping trees are available only in 135 ha.

The total area under tapping as in Dec.'82 is 338 acres, the number of trees available being 49,442. During the period

35,508.390 kg of rubber was produced, out of which 28000 kg were sold during the period.

The receipt on account of sale of rubber amounted to Rs.4,87,420.00 and on account of rubber trees for timber was Rs.2,55,830.75. Including the above items and the miscellaneous items of Rs.13,302.01 the gross receipt was 7,56,552.76.

FINANCE/

There was no change in the general organisational set up of the Finance wing.

The ICAR has released only R.58.35 lakhs this year till 31.12.1982. As against the anticipated grant of ks.590 lakhs(Rs.340 lakhs under Non-Plan and Rs.250 lakhs under Plan) from State Government, only Rs.367.5 lakhshave been released upto 31.12.1982. Expenditure upto 31.12.1982 is as given below:

ICAR Rs.61 lakhs
State Govt.
Plan Rs.173 lakhs
Non-Plan Rs.266 lakhs
Total Rs.500 lakhs

The following post budget commitment were taken up.

1.	Addl.commitment on account of DA revisions from 1.8. 81 to 1.4.1982	Ž Ž	s.in lakhs 44.92	
2.	DA revisions to pensioners		1.90	
3.	Enhancement of Festival allowance	ğ ğ	0.63	
4.	Creation of essential additional posts	Ř Ř	2.00	
5.	Addl.commitments on account of accepting demands of employees(Annual commitment would be around Rs.9 lakhs)	Ž Ž Ž	3.00	
6.	Expenditure on conduct of B.Sc.(Ag), B.V.Sc., B.F.Sc.etc	ğ ğ	3.00	
7.	Amount deposited in sub- court Irinjalakuda in LA case against Government	Q Q Q	0.73	
	Total	-	56.18 lakhs	;

Audit certificate for 79-80 onwards are due to ICAR/other Agencies. Out of the Audit Certificate due for 1979-80, only 30% has been received from the Government Auditor. He has agreed to furnish the remaining certificates before the end of March,1983. In respect of Audit certificate of NARP we are upto date.

-:114:-

The audit report for the year 1976-77 was reviewed by the Accounts Committee. There were 12 sittings of the Committee. A large number of audit objections in the report has been cleared. The recommendation of the Committee will be placed before the Next Annual Meeting of the General Council.

•••••