REPUBLIC OF CAMEROON

MINISTRY OF HIGHER EDUCATION AND
SCIENTIFIC RESEARCH
M E S R E S

INSTITUTE OF AGRONOMIC RESEARCH
I R A

National Cereals Research
and Extension Project
N C R E

Q U A R T E R L Y P R O G R E S S R E P O R T

JULY - SEPTEMBER 1984

UNITED STATES
AGENCY FOR INTERNATIONAL
DEVELOPMENT
U S A I D

INTERNATIONAL
INSTITUTE OF TROPICAL
AGRICULTURE
I I T A

TABLE OF CONTENTS

I - SUMMARY DESCRIPTION OF N.C.R.E. ACTIVITIES

During the period July to September 1984 the National Cereals Research and Extension (NCRE) Project team was mainly involved in harvesting the first season crops and preparing for the planting of the second season crops.

From July 2 to 11, the Director of IITA Cereals Improvement Program Dr. Yoel Efron, visited NCRE trials in the South West, Littoral, West, North West and Central Provinces. He was accompanied by Mr. Jack Keyser, Head of Communications in IITA. Mr. Keyser came to take photographs of IITA activities in Cameroon for the Bamenda 1984 Agricultural Show. NCRE Chief of Party was with them throughout the tour.

From July 18 to 20, Dr. Eugene Terry, Director of the IITA International Cooperative and Training Programs visited the project to consult with IRA Director, NCRE Chief of Party and USAID officials. He seized the opportunity to bid farewell to USAID Director Mr. Levin who left Cameroon end of August for a post in Panama.

The NCRE Maize Breeder for the lowlands Dr. Jay Chung resigned his post effective end of August to take up a new position with the Asian Development Bank in Manila, Philippines. IITA has already identified a replacement whose appointment is pending approval from USAID and the Government of Cameroon. His identity will be disclosed in the next progress report.

From July 30 to September 7, the National Coordinator of NCRE Project Dr. Ayuk-Takem and the Chief of Center IRA Maroua Mr. Boli participated in a seminar on "Management of Agricultural Research Facilities and Organizations" held in Washington D.C. They were both sponsored by USAID/ Cameroon.

.../

Finally, this third quarter saw the return of one NCRE training participant from the U.S. Mr. Edward Ngong-Nassah returned with two masters degrees in Agronomy and Extension from South Dakota State University and has been posted to IRA Bambui to work with the TLU team.

The following pages show separately the major activities of each of the components of the NCRE project during the third quarter of 1984.

II - MAIZE RESEARCH UNIT

A. MAIZE IMPROVEMENT - LOWLAND

MAIN ACHIEVEMENTS

1. Data were collected from all National Variety Trials (NVT) and all Experimental Variety Trials (EVT).

2. Observation and selection were made in all Population Improvement Trials (Gusau TZB 81 D.F., Variety Breeding, Ekona White Half-sib selection and Ekona Yellow Half-sib selection and Gene Pool).

3. About 15000 plants were crossed in diallel fashion and 3000 others were selfed in an effort to develop lines for the hybrid program.

4. First season trials were harvested and second season trials planted in the lowland rainforest areas.

List of trials harvested and planted during this period.

Location	T r i a l	Activity	Date
Nkolbisson (Yaounde)	N.V.T.	Harvesting	03/08
	EVT LSR (W)	-"-	-"-
	EVT LSR (Y)	-"-	-"-
	EVT 12A	-"-	-"-
	Diallel Experiment	-"-	24/08
	Population Improvement	-"-	-"-
	- Ekona White	-"-	-"-
	- Ekona Yellow	-"-	-"-
	- Gusau TZB 81 DF	-"-	23/07
	- Gene Pool	-"-	30/09
	Sweet Corn Multiplication	-"-	-"-

.../

Location	T r i a l	Activity	Date
Nkolbisson (con'd.)	Diallel Evaluation	Planting	
	Gene Pool	-"-	
	Ekona White Half-sib	-"-	
	Breeding Nursery	-"-	
	Sweet Corn Multiplication	-"-	
N T U I	N.V.T.	Harvesting	07/08
	EVT LSR (Y)	-"-	-"-
	EVT 12A	-"-	-"-
	Variety Breeding	-"-	27/08
	Hawaian Inbred line Evatn.	Planting	11/09
	Hybrid Trial White	-"-	-"-
	Hybrid Trial Yellow	-"-	12/09
	EVT-ESR	-"-	-"-
	Diallel Evaluation	-"-	13/09
	Ekona White Half-sib	-"-	14/09
	Ekona Yellow Half-sib	-"-	-"-
	Variety Breeding II eval.	-"-	15/09
NJOMBE	N.V.T.	Harvesting	16/07
	EVT LSR (W)	-"-	-"-
	EVT 12A	-"-	-"-
	Diallel Evaluation	Planting	07/09
	Ekona White Half-sib eval.	-"-	-"-
	Sweet Corn Multiplication	-"-	-"-
EKONA	N.V.T.	Harvesting	01/08
	Ekona Yellow Half-sib	Planting	06/09
BERTOUA	N.V.T.	Harvesting	
	EVT LSR (W)	-"-	
	EVT LSR (Y)	-"-	
	Variety Breeding I	-"-	
	IPTT (TZESR-W)	Planting	27/09
	EVT ESR	-"-	28/09
	Diallel Evaluation	-"-	-"-
	Ekona Yellow Half-sib	-"-	29/09
	Variety Breeding II	-"-	30/09
DSCHANG (Mbo Plain)	N.V.T.	Harvesting	08/09
	Acid Tolerant Screening	-"-	

.../

MAJOR PROBLEMS ENCOUNTERED

1. Tours of the trials planted during the last quarter in the Northern Province revealed the following problems:

- Poor plant stand due to soil erosion (Sanguere, Ndock), termite (Maroua, Kousseri) and water management (Kousseri).

- Poor ear formation and probably poor filling of kernel at Maroua. The two trials planted at this location received up to September 15 less than 200mm of rainfall.

2. Most of the plants in all the trials around Yaounde were severely damaged by thieves inspite of the four guards posted there to watch the trials at daytime and nightime. Gusau TZB 81 DF Experiment had more than 30% of the plants chopped down by thieves before any data could be collected.

3. Lack of suitable research land in Yaounde
4. Poor land preparation.
5. Lack of seed preparation room.
6. Lack of safe storage facilities.
7. Lack of suitable planting and harvesting equipment, i.e. Hand planters, Husking pins, etc.
8. Lack of drying facilities specially needed in the lowland rainforest after the first planting season.

FOLLOW - UP ACTIVITIES

- Harvesting in the Northern Provinces.
- Analysis of data already collected.
- Management of 2nd season trials.
- Crossing in Yaounde Breeding Nursery.
- Data collecting.

B. MAIZE IMPROVEMENT - MID-HIGH ALTITUDE

This period was occupied by trial observation and evaluation at all sites and harvest at most sites in the West and North West Provinces. Dr. Everett attended the International Maize System Planning Conference at IITA and the West African Maize, IRAT Planning Conference at Bouake, Ivory Coast.

Results of trials are not yet compiled but several general observations can be reported.

1. Populations released from the national program for the higher altitudes perform well in many locations, but need improvement in characteristics such as lodging resistance, uniformity and streak resistance.

2. The two mid-altitude populations Shaba and Kasai, introduced and now extensively tested by the NCRE Project have certain desirable characteristics but need further selection for H. turcicum resistance.

3. There appear to be a few well adapted inbreds among the 700 streak resistant lines introduced. These will serve, after further testing, as parents in the breeding program.

4. There appear to be a need to divide the breeding program into material for 1000-1500m and for 1500-2000m altitude.

5. Of the international system materials tested (IITA, CIMMYT) only two populations (Pool 9, MSR) and some inbreds appear sufficiently adapted. The others, though possessing certain desirable characteristics, would require substantial selection for H. turcicum resistance and improved ear-tip cover as well as conversion to streak resistance.

.../

6. Several East Africa hybrids perform well, but because of seed production restrictions, would be useful only as parents in a breeding program.

7. Facilities for seed processing, seed storage and off-season irrigation are seriously hampering the breeding program.

FOLLOW - UP ACTIVITIES

Will include finishing harvest in the West and North West, harvest at Ngaoundere (SODEBLE), data processing.

C. MAIZE AGRONOMY - SOUTH

MAIN ACHIEVEMENTS

In the lowland high rainfall regions, the last quarter activities were harvesting the 1984 first season crops and planting the second season ones. Trials and harvesting dates are as follows:

LOCATION	EXPERIMENT	HARVEST DATE
N T U I	1 - Maize/Groundnut intercropping	17/07/84
	2 - Maize/Cowpea intercropping	-"-
	3 - N x P fertilization	24/07/84
	4 - Fertilizer Placement	-"-
	5 - Rotation maize/leguminous crops	-"-
YAOUNDE	6 - N x P fertilization	25/07/84
	7 - Fertilizer placement	-"-
EKONA	8 - N x P fertilization	02/08/84
	9 - Maize/Cassava intercropping	-"-
NJOMBE	10 - Maize/Groundnut intercropping	03/08/84
BERTOUA	11 - Fertilizer placement	08/08/84

.../

The second season trials are as follows:

LOCATION	E X P E R I M E N T	PLANTING DATE
N T U I	1 - Rotation maize/leguminous crops 2 - Fertilizer placement	
YAOUNDE	3 - Till x Fertilizer placement	
BERTOUA	4 - Fertilizer placement	
EKONA	5 - Maize/Cowpea intercropping	
NJOMBE	6 - Maize/Cowpea intercropping	

MAJOR PROBLEMS ENCOUNTERED

- Lack of storage facilities.
- Lack of maize dryer.
- Lack of permanent labor at Yaounde site.

FOLLOW - UP ACTIVITIES

- Data analyses of the first season trials.
- Data taking of the second season trials at all sites.
- Plot management at Yaounde site.

D. MAIZE AGRONOMY - NORTH

MAIN ACHIEVEMENTS

- research activities were devoted mainly to the management and replanting of some trials located in the IRA antennas (about 45 trials).
- visited and made relevant observations, collected the data for the on-farm trials conducted with SODECOTON of the cereals agronomy and breeding components (about 50 trials).

.../

- started the harvesting of some maize trials and the sorghum trials.

- organized several visits to research sites with the SAFGRAD and Cowpea/CRSP program.

MAJOR PROBLEMS ENCOUNTERED

- Lack of work space in IRA station.
- Problem of vehicle and transport of personnel : we have practically one vehicle in good condition for 3 researchers and about 100 trials to be managed and long distances between the trials.

FOLLOW - UP ACTIVITIES

- Harvest of the maize agronomy trials conducted in the IRA stations and antennas in the Adamaoua and North Provinces.
- Harvest of the sorghum agronomy trials in IRA antennas in North and Extreme-North Provinces.
- Harvest the "on-farm" trials conducted in cooperation with SODECOTON.
- Prepare the samples of sorghum to be used for palatability test in cooperation with SAFGRAD and SODECOTON.
- Start the statistical analyses of the research data and the interpretation of the results.

III - RICE RESEARCH UNIT

During this period, the unit completed seeding and transplanting of all varietal improvement and agronomic trials planned for the 1984 2nd season. All varietal trials planted during the first season were harvested and post-harvest operations concluded. Major activities during this period were management and fertilizer application of all upland trials at Mbo and Ndop Plains; harvest and post-harvest operations of most first season trials; land preparation, nursery seeding and transplanting of all varietal and agronomic trials at Mbo and Ndop Plains.

During this quarter the unit tested an IRRI-devised power tiller rice transplanter and seed drill (for direct seeding of pregerminated rice seeds on need) at Mbo and Ndop Plains. A few weather equipments were also installed at the Ndop Plain experimental site.

A. MAIN ACHIEVEMENTS

Major activities during this period were as follows:

- Land preparation, seeding, fertilization, weeding and management of upland trials at Mbo and Ndop Plains.
- Observation, data collection, harvest, post harvest operation of varietal irrigated trials conducted during 1st season at Mbo Plain.
- Observation, field data collection, harvesting and post-harvest operations on the maize fertilizer trial at Mbo Plain.

.../

- Land preparation, fertilization, nursery seeding and transplanting of irrigated trials at Mbo and Ndop Plains.
- Supervision of multilocational trials.
- Testing of three rice machineries (power tiller, rice transplanter and direct-seeder) at Mbo and Ndop Plains.
- Installation of some weather equipments at Ndop Plain.
- Continued on-the-job training of technicians and field assistants.

1. LIST OF TRIALS TRANSPLANTED (Varietal Improvement)

MBO PLAIN

a) Rainfed Lowland

	Trial	No. of Entries
1.	International Rainfed Rice Shallow Water Observational Nursery	231
2.	Observational Yield Nursery	36
3.	Preliminary Yield Trial	15

b) Irrigated Lowland

1.	International Rice Cold Tolerance Nursery ...	175
2.	Observational Yield Nursery - VE	30
3.	Observational Yield Nursery - E	39
4.	Observational Yield Nursery - M	38
5.	Preliminary Yield Trial - E	11
6.	Preliminary Yield Trial - M	7
7.	Advanced Yield Trial - E	16
8.	Advanced Yield Trial - M	15
9.	Observational Yield Nursery - CIAT Materials	14
10.	Elite Varietal Trial	5
11.	International Rice Yield Nursery - M	30

.../

Trial		No. of Entries
12.	African Lowland Rice Yield Nursery	16
13.	WARDA - Short duration Moist Zone Trial	14
14.	WARDA - Initial Evaluation Trial	148

VE = Very Early Duration
E = Early Duration
M = Medium Duration

NDOP PLAIN

a) Irrigated Lowland

1.	International Rice Cold Tolerance Nursery	144
2.	Observational Yield Nursery	60
3.	Preliminary Yield Trial - E	24
4.	Preliminary Yield Trial - M	22
5.	Advanced Yield Trial	20
6.	Elite Varietal Trial	8
7.	International Rice Yield Nursery - M	30
8.	African Lowland Rice Yield Nursery	16

D S C H A N G

1.	Cold Tolerance Nursery	107

2. LIST OF AGRONOMIC TRIALS SEEDED/TRANSPLANTED

a) Mbo Plain - Upland (Mbomi-10)

1. Soil and crop residue management in rainfed upland rice
2. Effect of green manuring upland rice with crotalaria caricia on nitrogen response and rice yield.
3. Effect of row spacing on the performance of some upland rice cultivars.
4. Phosphate response in upland rice.
5. Potash response in upland rice.
6. Broadcast vs. banded phosphate in upland rice.

.../

7. Subtractive fertility trial with upland rice.
8. Observational trial on agronomic evaluation of some upland cultivars at Mbo Plain.
9. Seed multiplication with Crotalaria caricia and Teflosia spp.

b) Mbo Plain - Irrigated

1. Nitrogen response in irrigated rice
2. N x P interaction in irrigated rice
3. Response to P sources of irrigated rice
4. Long-term trial on rates and frequency of phosphate application in irrigated rice.
5. Effect of green manuring irrigated rice with Sesbania spp. on nitrogen response and yield of irrigated rice.
6. Seedling age effect on the yield of irrigated rice
7. A comparative study on manual transplanting, machine transplanting and direct-seeding in irrigated rice.
8. Weed management in irrigated rice.

c) Ndop Plain - Irrigated

1. Date of planting
2. Green manuring irrigated rice with Sesbania spp.
3. Plant population density x variety x fertilizer level interaction in irrigated rice.
4. Seedling age effect on the yield of irrigated rice.
5. Comparison among direct-seeding, machine transplanting and normal transplanting in irrigated rice.
6. Nitrogen response in irrigated rice.
7. Response to phosphate sources of irrigated rice.
8. Weed management in irrigated rice.
9. Nitrogen response of an aromatic rice cultivar.

.../

3. LIST OF AGRONOMIC TRIALS TO BE TRANSPLANTED DURING THE FIRST HALF OF OCTOBER AT MBO PLAIN.

1. Sixth INSFFER trial on N-fertilizer efficiency in irrigated rice.
2. Comparison of two IRRI devised deep placement N-fertilizer applicators with manual application of urea in irrigated rice.
3. Effect of lime, phosphate, rice straw and Sesbania used as soil ammendments on the yield of irrigated rice in a problem soil.
4. Potash response in irrigated rice.

B. MAJOR PROBLEMS ENCOUNTERED

- Crop management problems at Ndop Plain due to shortage of daily labourers and support staff.
- Very slow progress in the installation of the Ndop Plain weather station due to the delay by UNVDA in fencing the area.
- Harvesting of sweet potato agronomic trials at Mbo Plain by neighbouring people.
- Damage of upland varietal trial at Njombe by birds.

C. FOLLOW - UP ACTIVITIES

During the next three months the following activities will be performed :

- Fertilization and inter-cultural management of transplanted trials at all locations.
- Observations and collection of field data on upland and irrigated trials at all locations.

.../

- Analysis of field and harvest data of 1st season's trials.

- Harvest and post-harvest operations on early maturing trials upland and irrigated at the respective locations.

- Testing of IRRI-devised rice harvester, threshing and grain cleaner at Mbo and Ndop Plains experimental sites.

- Continue on-the-job training of national counterparts, technicians and field assistants.

IV - SORGHUM AND MILLET RESEARCH UNIT

A. MAIN ACHIEVEMENTS

During the third quarter the sorghum and pearl millet research unit was involved in the following major activities :

- The planting of sorghum multilocational varietal yield trial in the zones of Benoue (medium group) and Extreme-North Province (early group) was completed (Table 1).

- The planting of all the sorghum and millet breeding experiments as proposed for 1984 for the Guiring research station were completed (Table 1). Also the planting of international sorghum striga nursery was completed at Ndonkole near Maroua under striga infestation.

- The planting of international sorghum stem borer/shoot fly nurseries at Sanguere and international multiple sorghum diseases resistance nursery at Touboro were completed in the second week of July 1984.

- The intercultural operations were followed for all the sorghum and pearl millet breeding experiments at various locations.

- The observations and data collection of all the sorghum and millet experiments desired at various locations are in progress.

- Hybridization and selection program are in progress for both sorghum and millet crops.

- The sorghum breeder attended the Regional Workshop of Pearl Millet Improvement for West Africa at ICRISAT Sahelian Center Niamey, Republic of Niger from August 31 - September 4, 1984 organized by ICRISAT Center.

../,

- The sorghum and millet research team also participated in National Seed Multiplication Seminar organized by FAO/Project Semencier for North Cameroon from 20 - 29 August, 1984 at Garoua.

- The transplanting of Muskwari sorghum breeding experiments are in progress at Salak, IRA sub-station.

B. MAJOR PROBLEMS ENCOUNTERED

- Just like previous quarter lack of support staff is major problem encountered by sorghum and millet breeding research unit.

- This year rainy season in the Extreme-North Province should be classified as drought season because the rain distribution is very erratic. The experiments at various locations failed due to moisture stress. These are as follows:

  - The multilocational varietal yield trial (MSVAYT)-I (early group) and preliminary pearl millet yield trial under rainfed condition at Kousseri and Maga failed after excellent germinations.

  - The MSVAYT-I (early group) at Guetale attained good germinations but because of moisture stress, there was heavy attack of pests like spittle bug, leaf hopper and stem borer which attacked all the 16 entries; only five entries survived namely : S-35, S-34, CS-57 and CS-61 at all the replications.

  - At Guiring research station all the experiments are drying because of moisture stress and the yield loss will be expected up to 60%.

  - The locations like IRA Tchatibali and IRA Soucoundou, the MSVAYT-I (early group) were replanted and at Tchatibali the trial is again facing moisture stress whereas at Soucoundou it appeared to be satisfactory.

  - The MSVAYT-II (medium group) at IRA Sanguere received heavy rain after planting and affected by soil erosion.

  - In conclusion, this season appeared to be good for screening of the promising breeding material resistance to pests and drought.

.../

C. FOLLOW - UP ACTIVITIES

The sorghum and pearl millet research unit will be involved in the following activities in the next three months:

- Hybridization and selection program will remain in progress by the end of crop season.
- Recording of the observations of all experiments conducted during the rainy season will be completed.
- Harvesting and threshing operations alongwith all the data desired will remain in progress for all the experiments at all the locations.
- The compilation of the data of all the sorghum and millet breeding trials will remain in progress during this period.
- The statistical analysis will be followed after completion of the compilation process of all the rainy season experiments.
- The observations of the Muskwari sorghum (transplanted) will remain in progress for the breeding experiments laid out at IRA Salak sub-stations.
- The F_1s crosses of sorghum involving exotic x exotic, local x local and exotic x local developed during rainy season, 1984 by hand emasculation and pollination will be planted at Guiring research station under irrigated conditions to study the F_1s and to advance in the F_2s of all crosses.
- The nucleus seed of various promising sorghum entries will be multiplied at Kousseri, Maga and Agri-Lagdo, Karewa under irrigated conditions depending upon the availability of land for the purpose of 1985 rainy season experiments namely: sorghum breeding, sorghum agronomy, sorghum pathology, sorghum entomology and sorghum SAFGRAD trials/experiments.
- Continued on-the-job training of technician and field assistants in the plant breeding aspects of sorghum and millet crops.

TABLE I

IITA-NCRE SORGHUM AND MILLET IMPROVEMENT PROGRAM

LIST OF SORGHUM TRIALS AND NURSERIES PLANTED DURING RAINY SEASON, 1984

Sr. No.	NAME OF TRIAL / NURSERY	Date of Sowing	No. of Entries	Plot Size	No. of Reps.	LOCATIONS
1.	International Sorghum Variety Adaptation Trial	2/7/84	24	5 x 3.2m	3	IRA Maroua
2.	International Sorghum Striga Nursery	4/7/84	12	4 x 1.6m	6	NDONKOLE near Maroua
3.	Preliminary Sorghum Varietal Yield Trial - I	2/7/84	21	5 x 4 m	3	IRA Maroua
4.	Preliminary Sorghum Varietal Yield Trial - II	3/7/84	25	5 x 4 m	3	IRA Maroua
5.	Preliminary Sorghum Varietal Yield Trial - III	3/7/84	25	5 x 4 m	3	IRA Maroua
6.	Multilocational Sorghum Varietal Yield Trial-I (early group - Extreme-North Province)	2/7/84	16	5 x 4.8m	4	IRA Maroua
		9/7/84	16	5 x 4.8m	4	YALDEO near Maroua
		21/6/84	16	5 x 4.8m	4	IRA Guetale
		19/6/84	16	5 x 4.8m	4	IRA Tchatibali
		11/7/84	16	5 x 4.8m	4	IRA Soucoundou
		28/6/84	16	5 x 4.8m	4	SEMRY II, Maga
		26/6/84	16	5 x 4.8m	4	SEMRY III, Kousseri (Irrigated)
		12/7/84	16	5 x 4.8m	4	SEMRY III, Kousseri (Rainfed)
		4/7/84	16	5 x 4.8m	4	AGRI-LAGDO, Karewa

7. Multilocation Sorghum Varietal Yield Trial - II (medium group - North Province)	2/7/84	16	5 x 4.8m	4	IRA Maroua
	21/6/84	16	5 x 4.8m	4	IRA Bere
	20/6/84	16	5 x 4.8m	4	IRA Sanguere
	22/6/84	16	5 x 4.8m	4	IRA Fignole
	23/6/84	16	5 x 4.8m	4	IRA Touboro
	15/5/84	16	5 x 4.8m	-	IRA Mbang-Mboumg
	2/6/84	16	5 x 4.8m	-	-"- -"-
	18/6/84	16	5 x 4.8m	-	-"- -"-
	4/7/84	16	5 x 4.8m	-	-"- -"-
8. Crossing Program	25/6/84	20	5 x 4.8m	-	IRA Maroua
	4/7/84	20	5 x 4.8m	-	-"- -"-
	20/7/84	20	5 x 4.8m	-	-"- -"-
9. International Stem borer/shoot fly resistance nurseries of sorghum	13/7/84	50	-	-	IRA Sanguere
10. Multiple diseases resistance nursery of sorghum ...	13/7/84	76	-	-	IRA Touboro
11. F_1 and F_2 generations	5/7/84	21 F_1s + 10 F_2s	-	-	IRA Maroua
12. Parents and their hybrid seed production program ...	4/7/84	8	5 x 8 m	-	-"- -"-
13. Pre-extension trial with SODECOTON in the Benoue Zone	End of June 1984	3	5 x 10 m	6	Fignole, Ndock, Mayo-Galke, Touboro
14. Maintenance promising sorghum lines	2/7/84	96	5 x 2.4m	-	IRA Maroua
15. Development of breeders seed of advanced sorghum lines	3/7/84	4	20 x 200m	-	-"- -"-

LIST OF PEARL MILLET TRIALS PLANTED DURING RAINY SEASON, 1984

Sr. No.	NAME OF TRIAL / NURSERY	Date of Sowing	No. of Entries	Plot Size	No. of Reps.	LOCATIONS
1.	ICRISAT Pearl Millet African Zone A Trial - 1984	26/6/84	16	5 x 4.8m	6	IRA Maroua
2.	ICRISAT/SAFGRAD Pearl Millet Regional Yield Trial - 1984	26/6/84	10	5 x 4.8m	4	-"- -"-
3.	Preliminary Pearl Millet Yield Trial - 1984	26/6/84	11	5 x 4.8m	4	-"- -"-
		16/7/84	11	5 x 4.8m	4	SEMRY III, Kousseri

V - ENTOMOLOGY RESEARCH UNIT

A. MAIN ACHIEVEMENTS

Most part of the third quarter of 1984 was spent visiting farmers maize storage facilities in the MBAM District in order to take an inventory of maize insects in storage.

At Nkomeyos near Yaounde, two trials were conducted on farmers' fields :

- Trial on the dosage of Furadan
- Trial on the various methods of applying Furadan.

Finally the first season results were analysed.

.../

PROGRAM OF ACTIVITIES

A) Maize in storage : Sampling of maize stocked by farmers in the district of MBAM.

LOCATIONS	D A T E S
BAFIA	3 - 5/9/84
OMBESSA	6 - 8/9/84
BOKITO	10 12/9/84
NDIKINIMEKI	13 - 15/9/84
N T U I	17 - 20/9/84

B) Maize in the field :

A C T I V I T I E S	LOCATIONS & D A T E S		
	BERTOUA	YAOUNDE	EKONA
Planting	21-22/8/84	29-30/8/84	03/9/84
1st capture of insects ..	25-28/9/84	03-05/10/84	29/31/10/84
2nd capture of insects ..	23-26/10/84	02-03/11/84	20-23/11/84
3rd capture of insects ..	12-15/11/84	26-28/11/84	03-05/12/84

VI - THE TESTING AND LIAISON UNIT (T.L.U.)

A. MAIN ACHIEVEMENTS

MAIZE TRIALS :

- Late season maize trials: Twelve on-farm superimposed maize fertilizer trials were designed and are being executed on the late season maize in the Bali area.

- On-Farm Variety x Fertilizer Trials: With the exception of the high elevation sites in Bui, all of these trials have been harvested (including the associated crop, whether beans or groundnuts). -A total of 14 in the NWP and WP-.

- On-Farm Superimposed Maize Trials: All have been harvested in the North-West and West Provinces. -Twelve sites-.

- Maize Fertilizer Response Trials: Two (2) of the four (4) fertilizer response trials have been harvested.

- On-Farm Maize Trial Minikits: Sixteen minikit trial sites in the Ndonga/Mantung and Bui Division have been visited by members of the team. The response from the farmers and MINAGRI staff to the minikits was very encouraging. Of the 600 maize trial minikits distributed to MINAGRI Village Extension Workers (VEW's) to be set out on farms throughout the NWP and WP, over 100 completed observation forms have been received to date.

- On-Station Maize Trials: All except one on-station adaptive maize agronomy trials have been harvested and the data is being assembled for analysis. Late season bean crops have also been planted in the respective trials.

.../

RICE TRIALS :

- On-Farm Irrigated Rice Variety Trials: The transplanting and first and second fertilizer applications have been completed for the irrigated rice trials on five (5) farms in the Menchum Valley in the NWP. These trials include five improved rice varieties and the local variety (introduced by the Taiwanese 15 years ago), and are replicated within farms.

- On-Farm Irrigated Rice Production Trials: The TLU has finished transplanting large plot (200 sq.m.) irrigated rice trials on 24 farms in the Ndop Plain. These trials are being carried out in collaboration with the Upper Noun Valley Development Authority (UNVDA). Each of the trial plots is planted to one of two rice varieties selected by the NCRE rice breeder or the variety currently being planted by UNVDA farmers (i.e., Tainan V). Two levels of cultural management are being applied as well.

RICE FARMER SURVEYS :

- Exploratory Surveys of Rice Farmers in the Menchum Valley(NWP): Twenty-two rice farmers were interviewed during the months of May and June. The tabulation and analysis of results have been completed, and a report is in progress.

- Survey of Rice Farmers in the Ndop Plain (NWP) :
Plans are underway for a larger scale exploratory surveys of UNVDA rice farmers in the Ndop Plain. The final arrangements are to be negotiated with the Director of Production and Chief of Extension for UNVDA. The sample size proposed is 150 farmers, and is to be representative of the more than 3000 farmers in the 6 sectors defined by UNVDA. Again, the TLU staff will conduct the actual interviews.

.../

AGRO-SOCIO ECONOMIC SURVEY :

- The TLU in Nkolbisson is also involved in conducting an agro-socio-economic survey of farmers in Ntui sub-Division. During the last quarters, questionnaires were administered to 153 peasants chosen at random. The data is now being tabulated for analysis.

B. MAJOR PROBLEMS ENCOUNTERED

- The major problem regarding the efficient functioning of the Testing and Liaison Unit, at this point, is a shortage of vehicles and drivers during the peak periods of activity.

- Another serious problem concerns the lack of sufficient office space for researchers, and particularly the NCRE staff at Bambui Station.

C. FOLLOW - UP ACTIVITIES

During the months of October through December the TLU will continue a very busy schedule, including the following activities :

- Harvest of the remaining on-farm maize trials.
- Analysis of on-farm maize trial results (statistical and economic).
- Analysis of on-station adaptive maize agronomy trials.
- Analysis of results of maize minikit trials.
- Management of the On-farm Irrigated Rice trials in the Menchum Valley and the Ndop Plain (29 in all).
- Harvest of Rice trials and analysis of their results.
- Implementation of the Rice Farmer Survey in the Ndop Plain; tabulation and analysis of results; and writing of a report.
- Writing of the Annual Report of TLU activities for 1984.
- Planning a program of activities for the TLU in 1985.

VII - ADMINISTRATION

In this quarter, the Administrative Officer made two missions, to four NCRE trial locations. In July he accompanied Dr. Everett to SODEBLE at Wassande to discuss with SODEBLE's Chief of Production some administrative matters related to the supervision of NCRE trials, the volume of which has increased tenfold since 1983. Mr. Chamberlain also conferred with Dr. Talleyrand in Garoua before returning to Nkolbisson.

In August the Administrative Officer made his first official visit to the IRA Stations at Dschang and Bambui. At Dschang, in addition to visiting the rice trials at Santchou (SODERIM), he had the opportunity to discuss with Dr. Animesh Roy and the Chief of Station some administrative matters of mutual concern. Of particular importance was the speeding up of the transformation of one of the rooms at the Dschang station which is to become a soils laboratory. Equipment purchased by the project for soils analysis is waiting to be put to use by the NCRE Rice Team and other IRA researchers at Dschang.

Also in this quarter a proposed amended project budget was prepared in consultation with the USAID Project Officer based on the revised time-frame of the Project's Phase I.

THE NCRE INTERNATIONAL STAFF AND COUNTERPARTS

I. International Staff :

NAME	POSITION	IRA LOCATION	NATIONALITY
Dr. Emmanuel A. Atayi	Chief of Party	Nkolbisson	Togolese
Mr. Toby Chamberlain	Admin. Officer	Nkolbisson	American
Dr. Jay Chung	Maize Breeder	Nkolbisson	American
Dr. Animesh C. Roy	Rice Agronomist	Dschang	Bangladesh
Dr. D. Janakiram	Rice Breeder	Dschang	Sri-Lankan
Dr. Henri Talleyrand	Cereals Agronomist	Garoua	American
Dr. Om P. Dangi	Sorghum Breeder	Maroua	Indian
Dr. J. Kikafunda-Twine	Exten. Agronomist	Bambui	Ugandan
Mr. Dermot McHugh	Agric. Economist	Bambui	American
Dr. Leslie A. Everett	Maize Breeder	Bambui	American

II. National Counterparts

a) In Country :

NAME	POSITION	LOCATION
Dr. Jacob A. Ayuk-Takem	Maize Breeder & Coordinator NCRE	Bambui
Dr. Charles Thé	Maize Breeder	Nkolbisson
Dr. Jean Tonyé	Maize Agronomist	Nkolbisson
Mr. Julius Takow	Rice Agronomist	Dschang
Ms. Pauline Zekeng	Extension Agronomist	Bambui
Mrs. Regine Aroga	Entomologist	Nkolbisson
Mr. Claude Nankam	Plant Pathologist	Bambui
Mr. Marc Samatana	Socio-Economist	Bambui
Mr. Ngoko	Plant Pathologist	Bambui
Mr. Titus Nga Ngoumou	Cereals Agronomist	Garoua
Mr. Jupiter Ndjeunga	Socio-Economist	Nkolbisson
Mr. Edward Ngong-Nassah	Extension Agronomist	Bambui

b) In Training

NAME	SPECIALIZATION	U S UNIVERSITY
Mr. Cletus Asanga	B.S. Cereals Prod.	Oklahoma State
Mr. Fabien Jeutong	M.S. Rice Breeding	Louisiana State
Mrs Christie Ngundam	B.S. Cereals Prod.	University of Missouri
Mr. Bernard Soneh	B.S. Cereals Prod.	California State Fresno.