



**AGENCY FOR
INTERNATIONAL
DEVELOPMENT**

**PROJECT BUDGET SUBMISSION
FY 1969**

**NIGERIA
SUPPLEMENT**

BEST AVAILABLE

**DEPARTMENT
OF
STATE**

OCTOBER 1967



AIRGRAM

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SUBJECT - **Progress To Date Submission**

REFERENCE - **TOAID 456**

Transmitted herewith are E-1 Progress to-Date sections for the Technical Assistance projects.

OTHER AGENCY

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OF **86**

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AGRICULTURAL EDUCATION, RESEARCH, EXTENSION - EAST - 722

Twenty-four Colorado State University (CSU) Contract Specialists continued and amplified activities previously established by AID direct hire staff. These activities are associated with, and part of, the operating program of the Ministry of Agriculture (MOA). Due to the situation in Nigeria, the entire CSU staff was evacuated during July.

Specifically, progress is as follows:

1. Umulike Agricultural Research and Training Station (ARTS)
 - (a) 465 farmers completed short courses in plant protection.
 - (b) Over 3,000 farm women attended demonstration classes in hygiene, sanitation, and child care held throughout the East.
 - (c) Over 500 farmers and field staff attended workshops on the proper use and handling of insecticides.
 - (d) A review and revision of the curriculum resulted in a reduction in the number of courses provided, to allow more hours of instruction and a laboratory period for each course.
 - (e) In December, 1966, 185 students completed ~~the~~ the one-year course for Agriculture Assistants (AA) and 29, the two-year course for Agriculture Superintendents (AS). 255 AA's and 35 AS's registered for the new session beginning in January 1967.
 - (f) A Plant Disease Clinic has been established which investigated approximately 150 disease specimens during the year. Investigations on 11 important diseases of crops continued through June 30, 1967.
 - (g) An analysis of late planted maize trials based on 18 trials conducted throughout Nigeria has been completed. Results indicate a return of 20 pounds of maize for each pound of nitrogen used, up to 90 pounds of nitrogen per acre, may be expected.
 - (h) Ten experiments have been conducted to determine the effect of various nutrient elements upon plant growth.

- (i) Improvement in facilities continued to develop with the installation of a meat cooler; construction of feed bunks, a cattle squeeze, and cattle pens; the equipping of a feed analysis laboratory; and the clearance of 25 acres of land for pasture and crops.
- (j) A battery of lysimeters (4 units) was installed and is now in operation. This installation is used in studying the movements of nutrient elements in soils under heavy rainfall conditions.
- (k) The agriculture information section prepared, edited and published annual reports, two extension circulars, and 20 research summaries for extension use.

2. Ezillo Livestock Ranch

- (a) The foundation livestock herd was expanded to over 300 animals.
- (b) 200 acres of land was cleared for various improved pasture practices and 150 acres of maize was planted.
- (c) Four staff houses, an office building (30' x 100'), a warehouse, a cattle barn with ~~associated~~ associated corrals, and a 100-ton capacity trench silo were completed (CON-financed).

3. Veterinary Services

- (a) Several improvements were made in facilities at the Ezzangbo Veterinary Investigation Center, including the construction of a small abattoir, piping water from the new reservoir, and remodeling the electrical system.
- (b) Vaccine production was initiated in Emugu in January and by the end of the reporting period the laboratory was producing Newcastle, Fowl Pox, Typhoid, Black Water, and Chick Embryo vaccine with a total output of 6,000 ~~shots~~ doses per week.

4. Extension and Related Services

- (a) The extension service assisted in the organization of local fertilizer sales campaigns which resulted in increased farmer sales from 124 tons in 1965 to 390 tons during the 1966 cropping season.

- (b) In December 1966, an annual extension planning conference was conducted at Uudike for MSU/CSU contractor personnel, agriculturists from the University of Nigeria, and all other extension personnel to review and plan the program and budgets for the coming year.
- (c) Young Farmer Clubs participated in project series involving 14 scientific related agriculture subjects.

Clubs statistics are:

	<u>1966</u>	<u>1967</u>
Number of Clubs	193	285
Number of Members	5,057	7,222
" " Local Leaders	291	490

5. Seed Improvement and Grain Storage

- (a) Sixteen grain storage bins have been erected during the period, bringing the total to forty-four on nine sites. Four of the erected bins have been designated for the improved maize program. Offices and warehouses have been completed at five of the sites.
- (b) 153 tons of improved maize seed were distributed to farmers during the 1967 ~~ma~~ cropping season as compared to 55 tons for 1966. Also 1,900 pounds of seed of eating maize, 300 pounds of popcorn, 900 pounds of soybean, 6,000 pounds of improved rice and 79,970 packets of vegetable seeds were distributed.

6. Horticulture

- (a) "A Guide to the Growing and Management of Citrus Nurseries in Eastern Nigeria" Technical Bulletin No.15 was published.
- (b) Citrus nurseries and rootstock nurseries have been established at five Ministry sites and at three village sites.

7. Participant Training

Nine new participants have entered training in the U.S. during the reporting period in various agricultural fields of study (5 in CSU Contract and 4 under regular PIO/P's). Two of the participants returned in July 1967.

8. Poultry Production - Abakaliki Poultry Center

- (a) Two 40' x 112' laying houses were constructed and concrete floors installed in five GON-financed poultry houses.
- (b) Four articles on poultry prepared at the Center appeared in News Bulletin published by the Information Service.
- (c) 92,000 chicks were produced and distributed during the period December 1966 through June 1967.
- (d) Four 10-week practical courses for poultry growers were completed by 640 farmers, 10 junior staff members of the Ministry and four members of the rural women's staff. A twelve week course was provided for the rural women's field staff on poultry raising and processing.
- (e) Organization of a disease surveillance veterinary program has been completed at the Center to include periodic blood testing and daily check of flocks to observe all sick birds.

FACULTY OF AGRICULTURE - UNIVERSITY OF IFE - 742

- 1. Eleven staff members from the University of Wisconsin continued to serve on the staff of the Faculty of Agriculture during the major portion of the reporting period. Twelve permanent positions were added to the Faculty of Agriculture at the beginning of the 1966/67 academic year. Only two of these positions remained vacant during the reporting period. Of the 13 Nigerian staff members, six are currently pursuing graduate studies in the U.S.
- 2. Several additional courses have been included in the curriculum to afford final year students limited course options.
- 3. The total enrollment increased from 47 students in 1965/66 to 73 in 1966/67; six graduates received their B.S. degree in June 1967.
- 4. The First Annual Research Report for the Faculty of Agriculture has been published.

5. The academic buildings for agriculture at the new site at Ile-Ife are nearing completion. It now appears that the faculty will move to the site in January 1968. Limited research is being conducted at the new site and development of the school farm is progressing. Farm buildings presently under construction include the swine breeding and farrowing houses, the poultry battery, and the deep litter and brooder houses. All of these buildings are GUL-financed.

FACULTY OF AGRICULTURE AND VETERINARY MEDICINE - ADEYUN BELLU UNIVERSITY - 743

1. During the 1966/67 academic year fifteen Kansas State University (KSU) Contract members continued to assist in the development of the Faculties of Agriculture and Veterinary Medicine. An additional member serves in the Extension Research Liaison Section (ERL) between the University and the Ministry of Agriculture (MOA). In addition, three KSU short-term and executive staff members have visited the project during the reported period.
2. Three Nigerian staff members completed work for the M.S. Degree and are serving on the staff of the Institute for Agricultural Research and faculty of Agriculture. Three others are presently pursuing advanced degrees under the KSU Contract. The training of prospective staff is far below the desired level due to a lack of qualified candidates, particularly in the field of Veterinary Medicine.
3. Student enrollments are as follow:

(a) Faculty of Agriculture

	<u>1964/65</u>	<u>1965/66</u>	<u>1966/67</u>	<u>1967/68</u> <u>Estimates</u>
Preliminary Year	5	11	9	15
First Year	14	18	34	16
Second Year	4	13	19	25
Third Year	6	4	10	18
Post Graduate	-	2	5	5
	<u>29</u>	<u>48</u>	<u>77</u>	<u>79</u>

(b) Faculty of Veterinary Medicine

Preliminary Year	4	9	10
Pre-veterinary	11	16	20
First Year	0	8	16
Second Year	0	0	0
Third Year	4	3	7**
Fourth Year	0	1	3
	<u>19</u>	<u>37</u>	<u>72</u>

**Anticipated transfer from University of Ibadan.

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4. A significant goal was attained in November 1966 when the University approved the curriculum for the Faculty of Veterinary Medicine as meeting the requirement for awarding the DVM Degree rather than the previously anticipated B.S. Degree in Veterinary Medicine.
5. Phase II (U.K./GOV-financed - \$238,000) of the construction of the Veterinary Faculty building (Clinical Surgery and Medicine), though approximately one year behind schedule, is nearing completion and will be in use at the beginning of the 1967/68 academic year. The arrival at the project site of the USAID-financed equipment for this facility is behind schedule due primarily to transportation difficulties arising from the current country situation.
6. Phase I (U.K./GOV-financed - \$182,000) of the construction of the Agriculture Faculty buildings is nearing completion; the buildings will be available for occupancy early in the 1967/68 academic year. This phase is approximately one year behind schedule in construction and equipping.
7. Approximately 65 percent of ^{the} USAID DG-financed equipment for teaching and research has arrived at the project site.
8. In March 1966, AIL advertised for interested A & E firms in the U.S. to submit bid proposals for preparation of preliminary plans and cost estimates for the final buildings as set forth in the ERA (exclusive of one pathology classroom) for both faculties. At this time action has been postponed pending future developments in the country.
9. During May 1967 an agricultural ^{workshop was conducted} communications for the staff of the Extension Research Liaison Section of the Ministry of Agriculture.
10. A special labor saving oxcart and bicycle cart have been designed and constructed in the Agricultural Engineering Section. Ten oxcarts and twenty bicycle carts have been distributed to the Ministry of Agriculture and private farmers for further testing.
11. The primary focus of the Extension Research Liaison Section to date has been on organization, administration and planning. Fourteen "Sesaru Technical Notes" have been produced and distributed. Recommended practices and guides to the production of fifteen crops have been written or revised. In addition, three popular ~~bulletins~~ bulletins have been published.

AGRICULTURAL EDUCATION - WEST - 744

1. Seven University of Wisconsin Contract Specialists continue to assist in the improvement of the curriculum and teaching methods for the Schools of Agriculture at Ibadan and Akure.
2. The student enrollment for 1966/67 was as follows:

(a) School of Agriculture, Ibadan

	<u>First Year 1</u>	<u>Second Year 2</u>	<u>Total</u>
Agriculture Superintendents	56	57	113
Animal Health Assistants	28	33	61
Home Economics	6*	0	-
Total	<u>86</u>	<u>90</u>	<u>174</u>

* Students enrolled for the one year course are also regular Agric. Supts.

(b) School of Agriculture, Akure

Agriculture Assistants	<u>206</u>	<u>211</u>	<u>415</u>
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(c) Farm Institutes

Ilorodu	93	49	142
Odeda	106	71	177
Ilesha	100	98	198
Total	<u>299</u>	<u>218</u>	<u>517</u>

3. The Chemistry Laboratory has been redesigned to allow for an increased student capacity from 12 to 18 per laboratory period.
4. The GON-financed construction of a home economics building at the School of Agriculture, Ibadan, has been completed. USAID-financed equipment has been installed and limited instruction began in October 1966.
5. Construction of the USAID-financed library and two classrooms at the School of Agriculture, Ibadan, is approximately 80 per cent complete and should be in use at the beginning of the 1967/68 academic year.
6. The architectural-engineering plans for a library-study hall and three classrooms for the School of Agriculture, Akure, have been completed.

7. Two participants departed for the U.S. for specialized training during the reporting period.
8. COH-financed farm shops at the three Farm Institutes have been constructed and equipped.
9. Increased use is being made of audio-visual equipment as a result of efforts of the Wisconsin staff in this direction. The film library and visual aids equipment have all been inventoried and repaired where necessary; films have been catalogued; and lists of available materials have been supplied to each staff member.
10. Cropping practices at the farm institutes, greatly improved during the past year, resulted in increased yields. Increased vegetable production has also resulted in better vegetables for student consumption. Surplus vegetables are made available for local sale.
11. A slaughtering facility has been completed at Ilesha and Moor Plantation (Ibadan). Walk-in-coolers have been installed at each of the three Farm Institutes for refrigerating freshly slaughtered poultry and swine.
12. A small feed mill was constructed at the Ilesha Farm ~~Department~~ ~~Institute~~ Institute in the fall of 1966. Equipment has been installed.
13. A three-week workshop in teaching methods, visual aids, uses of equipment was held for the teaching staff at the three institutes.
14. The COH has completed drilling a well and is continuing the installation of a water system at the Isorodu Farm Institute.
15. The Agronomy Specialist on the University of Wisconsin team has completed a Crops Manual for student use.

AGRICULTURAL EDUCATION - NORTH - 745

1. Technical Assistance to the Sazeru School was phased out in late CY 1966. One Extension Training Advisor was transferred to the Farm Institute program and is currently serving in that capacity. An additional Extension Training Advisor was ~~transferred~~ transferred from Guinea and has been at the Kabba School since December 1966. With the transfer of both of those technicians to agricultural extension work (North) in July, 1967, technical assistance to this project was phased out.
2. The number of Farm Institutes in operation increased during the reporting period from 22 to 32. It is planned to have 54 Institutes in operation by 1968/69.

3. Fourteen Farm Training Centers are operating as ~~originally~~ originally planned.

4. The student enrollment for 1966/67 was as follows:

(a) <u>Sagamu</u>	First Year	Second Year	Total
Home Economics	10	16	26
Agriculture Assistants	84	78	162
Asst. Agric. Supt. (Mech).	24	15	39
Asst. " " (Technical)	20	- Only 1 yr course -	-
	<u>138</u>	<u>109</u>	<u>247</u>
(b) <u>Kabba</u>	1	2	
Agriculture Assistants	48	36	84
(c) Farm Institutes - (1 year course) -			619
(d) Farm Training Centers - (1 year course) -			260

5. Sagamu School of Agriculture - 104 students graduated in December, 1966, are now working with Ministry of Agriculture as agriculture assistants and superintendents.

6. Kabba School of Agriculture - 41 graduated in December, 1966 and are now working with the Ministry of Agriculture as agriculture assistants.

7. Approximately 80 staff members from the Farm Institutes, Farm Training Centers and Schools of Agriculture participated in The Annual Short-Course Training Conference held in February 1967.

FUTURE AGRICULTURAL LEADERS - 748

A total of 315 Future Agricultural Leaders (FAL's) have been sent to the U.S. for Bachelor of Science (B.S.) or Doctor of Veterinary Medicine (D.V.M) degree objectives. The status of this group at the end of FY 1967 is as follows:

1. 190 students are in training pursuing degree programs:

	B.S.	D.V.M
Eastern Nigeria -	30	18
Western Nigeria -	38	4
Northern Nigeria -	69	10
Midwestern Nigeria -	19	2
Total	156	34

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2. A number of students are continuing training in U.S. to U.S. degree objectives funded under other TOAID projects or self-financed PIC/P's:

Eastern Nigeria	-	12
Western Nigeria	-	19
Northern Nigeria	-	11
Midwestern Nigeria	-	<u>5</u>
Total		<u>37</u>

3. 68 students have returned to Nigeria:

	<u>Total to-Date</u> <u>B.S. Degree</u>	<u>Completed</u> <u>B.S. Degree</u> <u>FI 1967</u>	<u>Terminated</u>
Eastern Nigeria	41	8	1
Western Nigeria	24	11	3
Northern Nigeria	8	6	4
Midwestern Nigeria	<u>7</u>	<u>4</u>	<u>0</u>
	<u>80</u>	<u>29</u>	<u>8</u>

AGRICULTURAL RESEARCH & EXTENSION - MIDWEST - 749

This project has been temporarily suspended due to internal civil ~~status~~ disturbances.

1. Field and Nursery Work:

Maintenance and development of rootstock nurseries and budwood gardens ~~is~~ had been carried out to meet the planting needs on the station. Newly imported clones ^{were} being multiplied for distribution to local growers. Some surplus planting stock is distributed to local farmers through the extension service.

Retraining of the budgrafting crew resulted in an increase of successful buddings to 63 per cent. The clonal collection now ~~is~~ includes 121 internationally recognized clones.

An additional 70 acres of field plantings were made, bringing the total planted acreage to about 570 acres. The field work included an intercropping trial, two experiments to test pretreatments of the natural forest cover as a means of reducing root disease incidence in subsequently planted rubber groves, tapping system demonstrations, and herbicide and fungicide ~~tests~~ trials.

The first experimental planting at the station, made in 1962, had been prepared for tapping in October. This experiment shows that with proper care, growth rates considerably above average can be expected in this area.

340 seedlings arising from the 1965 and 1966 hand pollination programs were set out in the field. 130 of the most vigorous of these plants were also cloned and set out in nine tree plots. Seedling families and clones especially ~~is~~ suited to local conditions will be selected from these types of plants.

2. Training, Information, and Plant Materials

During the year the junior staff members (5) of the station were selected through competitive examinations for further training by the Midwest Ministry of Agriculture. Though the routine operations of the station were significantly affected by their absence, it is felt that the end result will be worthwhile.

Three Peace Corps Volunteers received three months training on techniques and procedures recommended for establishing and operating small ~~rubber farms~~ rubber farms.

Five papers designed to establish uniform guidelines in carrying out cultural operations were issued.

Though the project is supported solely by the Midwest Regional Government, every effort is being made to develop contacts with Nigerian individuals and ~~and~~ organizations interested in rubber growing. In this regard, three budding have been trained for the Northern Region Ministry of Agriculture; budwood and clonal seedlings have been supplied to the four Ministries of Agriculture and commercial plantations; and a supply of 40,000 clonal seedlings have been distributed through the extension service to local farmers.

3. Construction

Although this phase of the project was considerably behind schedule, progress did continue on the development of the physical facilities for the project:

- (a) The \$42,000 Administrative Laboratory building has been completed.
- (b) Extension of the secondary road network was continued as necessary. Over 21 miles of road are now in use.
- (c) Crop enumeration was carried out on the final 1,357 acres of land. It is hoped that the former owners can soon be compensated and the land acquisition program completed to give the project the full 5,197 acres as planned.

AGRICULTURAL EXTENSION - MIDWEST - 780

This project has been temporarily suspended until country conditions permit a resumption of activities.

Inservice training of extension staff continued to be strongly emphasized by the Ministry of Agriculture. Those trained to-date are as follows:

<u>Agbadu Training Center</u>	<u>Previous years</u>	<u>Current year</u>	<u>Total</u>
Field Overseers Agric.	75	138	213
Credit Supervisors	-	66	66
<u>Headquarters (Benin)</u>			
Headquarters Staff	20	20	20
Senior Staff 1/	-	60	60
Training Conference			
	<u>284</u>	<u>95</u>	<u>359</u>

Three eight-week training sessions each were held at Agbadu Center for a total of 66 agricultural credit supervisors currently working to develop the newly created Mid-Western Nigeria Agricultural Credit Corporation. The Agbadu facility which provided training for Field Overseers will be used in training other MAIR groups; for example, Extension Service agricultural assistants and field personnel of the Forestry Division.

The USAID extension training adviser formerly assigned to the Agbadu Center assisted the various groups in ~~xxx~~ setting up their training schedules and arranging for instructors. In addition, he conducted weekly training sessions for the teaching staff. Instructional materials for livestock, poultry, arable crops, and tree crops were prepared by the USAID adviser for use at the Center. The materials were so successful that they were prepared for distribution throughout the Mid-West and produced in bulletin form.

The USAID tropical horticulture (extension) adviser encouraged the Ministry to inaugurate a tapper training program. A total of 64 demonstrator tappers received training on tapping techniques and are to continue to receive periodic refresher training.

Upon completion of their training, the 64 demonstrator tappers conduct the same ~~xxxx~~ lessons with their local tappers. Since this training was started in January 1967, ~~xxxx~~ about 15,787 tappers have been trained by the demonstrators. A Certificate of Training is issued to each tapper upon completion of his course.

The tropical horticulture (extension) specialist was developing a "Smallholders Rubber Scheme" aimed at the general improvement of the rubber industry in the Mid-West. The information of a Mid-Western State of Nigeria Rubber Advisory Board has been approved by the Ministry Government. As soon as the situation in the Mid-West returns to normal, this Board is expected to start functioning.

Considerable progress had been made in the arable crops activities of the extension program, especially in the Floating Rice Project at Illushi. The 1966 acreage was increased by more than two and a half times, giving a total of 650 acres planted in 1967.

The newly formed Information Section in the Extension Service is functioning well. A USAID information specialist based in the West made two short trips on TDY to Benin to assist the Ministry in setting up the Section's printing facility. An impressive number of publications have been issued. Two issues of a new series of bulletins for ~~the~~ farmers have been published: "The Production of Early Maize," and "The Production of Cotton". Other publications about 2,000 copies each include a book-let, the "Farm Settlement Scheme, Mid-Western State of Nigeria"; a bulletin entitled "Improved Rubber Tapping Procedures for Smallholders", and a Monthly Bulletin for the Internal Affairs Ministry.

USAID specialists and Peace Corps Volunteers cooperated in implementing the following: the "Clean Coagulum" campaign under which rubber farmers in nine villages were organized into a Cooperative Latex Collecting Unit to provide the higher priced undiluted coagulum to the crepe rubber factories, and a USAID-financed pump system to produce clean water for use in smoked sheet rubber production to upgrade the quality of the rubber.

AGRICULTURAL RESEARCH AND EXTENSION - WEST - 764

Extension Activities

The emphasis placed earlier on setting up maize demonstrations on farmers' plots was continued during the present year. A total of 270 acres have been established, with most areas having a variety of treatments incorporated into the trial. Wherever possible the plots were established in villages with most of the local farmers participating in seedbed preparation, planting, fertilizing, etc. After the harvest, comparisons are made of yields from using Ministry recommended practices over yields from traditional methods and varieties.

Work is progressing in stimulating the formation of rice cooperatives in the Abeokuta Circle. The new extension adviser stationed there has been instrumental in forming five new rice groups; however, some have ceased to function. The number of cooperatives now active is seven, involving 132 farmers on 103 acres. Six rice cultural demonstration plots were established. At each of these, method and result demonstrations were held. The USAID adviser and divisional staff set up a rice booth with educational material on rice production at two agricultural shows.

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The series of inservice training sessions for senior staff started in 1962 was continued, with both the ninth and tenth being held during report period. At the tenth session, over 200 senior Ministry officials were present. USAID continues to provide advisory services in planning the sessions, but the inservice training program is now largely a Ministry function.

The quality of inservice training given to junior staff improved during the reporting year. Unfortunately, as the financial situation became more acute, several of the training sessions planned and organized had to be canceled as travel funds for junior staff became curtailed.

Forty persons attended the first extension and working conference, a joint effort of USAID extension staff and Ministry personnel. The major activities proposed for the ensuing year were discussed at the conference. It is planned to hold the conference on an annual basis.

Home Economics

One of the major areas of progress was the intensification of food production projects in 21 villages. Projects include vegetable gardening, a poultry unit, maize plantings, maize dryers and silos, oil processing presses, and a community fish pond.

The Home Economics personnel set up educational exhibits at three agricultural shows.

A first Annual Achievement Day was held. Representatives of each village discussed the progress made in village development projects.

Home Economics work settlements are continuing with two participants who earned B.S. degrees in the U.S. assisting. The cocoa drinking scheme in grade schools, at one time reached as many as 50,000 children. The home economics staff is assisting also in promoting the maize plot demonstration program.

The program at the Home Economics Training Center began in January 1967 for six women agricultural superintendents who are in their final year at the School of Agriculture at Moor Plantation. The returned participants are proving capable in planning and executing activities at the Center.

Twelve women who work with the wives at 11 farm settlements attended a two-week course for home economics workers. The Ministry considers the training of a high quality. A second course is planned soon.

Young Farmers' Club Work:

The YFC program includes 6172 members, of which about 1850 are girls, 171 clubs, and 200 local leaders.

No inservice training sessions, covering goals, plans, calendars of work, and organizational procedures, were held for the 30 YFC staff members. Efforts to organize new clubs in villages are continuing. However, a lack of vehicles for many local YFC, and shortage of travel funds for others, resulted in fewer new clubs being organized than expected.

The YFC program is giving significant help to the Ministry's maize demonstration plot scheme: club members throughout the Western State are planting maize; six clubs have built or are building the low cost maize dryer and silo; 100 plots -- each 20 by 36 feet -- were planted to maize in cooperation with the FAO Freedom From Hunger Campaign; 16 self-help projects, one in each division, have been initiated through cooperation of Peace Corps Volunteers and USAID Self-Help funds; and YFC members set up exhibits at several agricultural shows.

The North Dakota 4-H Club Foundation program, entitled "Helping Hands Across the Seas", has been continued and enlarged. Fifty-four 4-H clubs in North Dakota contributed a total of \$372 to a revolving fund for the purchase of fertilizer, seed, and trophies and 60 YFC members were advanced the cost of fertilizer for their maize plantings. When the maize is harvested and sold, the cost of the fertilizer is to be repaid.

Four rabbitries were established in the Western State at four locations with a total of 126 breeding stock.

A YFC quarterly newsletter with a distribution of 500 copies was inaugurated during the reporting period. Two issues have been published.

Agricultural Information

Ministry of Information (MOI) publications continue to be oriented to the field workers and farmers. Over 250,000 publications on about 150 topics dealing with various aspects of agricultural and crop production were prepared. Soil maps, posters, poultry and other periodicals were also published. Approximately 3200 photo enlargements, some up to 19 x 28, were prepared for demonstration purposes. About 70 radio programs in support of current extension projects and objectives were broadcasted.

Training in the use of visual aids was provided at four semi-annual in-service training conferences, two each for senior and junior MOI officers.

One 16mm film on the construction of a low cost dryer and silo has been produced. Another film on farmer cooperative operations is nearing completion.

Staff members of the Information Section have received training in the repair of sound equipment. A repair service for equipment used at Schools of Agriculture, Farm Institutes and other Ministry installations is now provided by the Section.

At the School of Agriculture Ibadan, 150 visual-aid cases are being constructed for extension field workers. Each student will keep one case for his own use after graduation; the second becomes Ministry property to be made available for loan as needed.

Research Activities

1. A total of 142 Opaque maize lines were analyzed for crude protein content which ranged from 7.56 percent to 16.97 percent. These results will be used in further selection. Tests of the opaque variety showed it to yield, after processing, more and higher quality foodstuffs than the variety which had previously been considered satisfactory.
2. Breeding work aimed at improving the lysine content of white maize and the formation of an improved yellow synthetic variety has continued.
3. A sorghum yield trial was planted at Shaki.
4. An estimated 2,000 acres of kenaf were harvested for fiber from 1966 plantings and about 65 tons of kenaf seed were collected. Over 700 acres of kenaf were planted for seed production in 1967.

5. A number of training sessions were held for personnel assigned to kenaf seed production. The quality of work done by both harvesting and decortivating crews has improved considerably.
6. Twenty varieties of certified citrus, in the form of budwood, have been received from the U.S. A total of 130,194 budded citrus trees have been distributed or are on order.

A demonstration of fertilizer and weed control in a mature citrus planting is being carried out.

7. A one-acre citrus demonstration nursery has been set up at Moor Plantation. Nearly all the rootstock types, and especially the U.S. strain of rough lemon, are developing better than the locally used sweet orange rootstock. A demonstration of fertilizer and weed control in a mature ~~citrus~~ citrus planting is being carried out.
8. Export quality fruit at the rate of five tons per acre was harvested from the seven-year-old grapefruit planting at Agege. It is expected that the rate per acre will increase to 20 tons during the next 6 - 8 years.
9. Vegetable trials have been greatly expanded at Moor Plantation. For the first time actual yield figures are being obtained.
10. Three thoroughly tested cucumber varieties are now being recommended to growers.
11. Much information has been developed on tomato culture. Varieties have been founded that set fruit satisfactorily during the February to April period in spite of high night temperatures.
12. The rice improvement program is progressing normally. Six farmer demonstrations of rice growing were carried out. These were very successful and already local farmers were seen to be adopting the new methods. Study is being made of various hand tools and light equipment that might be useful for village rice culture.
13. A collection of 25 improved mango varieties has been assembled. Multiplication work is underway.
14. Ten varieties of pigeon peas were planted at Ilora for observation and seed production.

OTHER ACTIVITIES

1. The seed processing and storage building shell was completed. The electrical installations and the construction of a seed dryer for the building are nearing completion.

2. A demonstration grain dryer and crop storage silo was built for the Oyo Provincial Agricultural Show. Work has been done on a bulletin, a motion picture, and flip charts designed to help farmers to construct dryer-silos.
3. The construction of a seed laboratory has been delayed.
4. The Plant Pathologist to work with the Cocoa Research Institute of Nigeria arrived in December 1966.

AGRICULTURAL EXTENSION - NORTH - 770

1. Package Demonstration Plots

This demonstration scheme brings together in one package the materials and information necessary in following the recommended practices for a particular crop.

The package demonstration scheme has been expanded to include the entire Northern Region and all the major food and cash crops. The progress made in the package demonstration approach in all 13 provinces of the North is as follows:

<u>Year</u>	<u>Package Demonstration Plots</u>	<u>Crops</u>
1963	598	6
1964	3,000	6
1965	4,382	10
1966	5,775	14
1967	7,000	16

Local extension workers continue to use the package demonstrations in conducting method and result demonstrations at each plot to show farmers how to perform correctly the recommended practices and the results of doing so. The number of method and result demonstrations established yearly in Northern area is estimated to be between 40,000 to 50,000. (Each demonstration plot is used only for one year to allow different farmers to co-operate in having a plot on his land.)

2. Information Units

This subactivity, an integral part of the Field Services Division, MDA, has grown from its meager beginning with three employees assigned by the Ministry in 1964 to its present size of 52 employees, with a unit established in each of the 13 provinces. A photo/sound unit and exhibit van operate out of Kaduna for the support of the field officers and 17 mobile units are operating in the provinces. The production of information materials and teaching aids has grown

from a few mimeographed copies of recommended practices in 1964 to over 500,000 copies of posters, leaflets, bulletins, flip books, etc., available for use in all provinces. Production guides and recommended practices prepared by subject matter specialists of the Extension Research Liaison Section of the Ministry have been produced for 16 major crops. USAID has given commodity support to these activities in the form of: movie projectors, slide projectors, cameras, duplicating machines, typewriters, pickup trucks, and generators for the mobile units.

3. In-service Training

The schedule of conducting in-service training for all junior staff was continued and strengthened by holding it quarterly instead of semi-annually. In the past 12 months 200 training meetings were held throughout the North for a total of 2,000 Ministry and Native Authority staff members. USAID extension specialists have continued to instruct the trainers in giving method and result demonstrations, developing local leadership, using audio-visual aids and constructing other visual aids adapted to specific localities. The trainers were further instructed in the preparation and use of teaching plans and demonstrational materials. By the end of this reporting period in-service training for field staffs had become a regular activity of the Ministry. The senior officers are handling more ~~and more~~ of the responsibilities and activities connected with training, thus releasing USAID specialists to concentrate on other phases of the project.

4. Construction of Extension District Offices

This is a cooperative activity in which USAID provided galvanized metal corrugated roofing sheets, and the Ministry furnished window and door frames, and wall and roof studding. The local Native Authority provided the site and labor to erect the buildings. The roofing arrived and was distributed to the various sites during the reporting period. Many of the Native Authorities added to the material to construct larger buildings. Other Authorities used cement or blocks. A total of 123 district offices are planned. 55 have been completed, the remainder are in various phases of planning or construction.

5. Horticultural Activities

Upon completion of the consultant study conducted last year, the Potato Investigation Project has been expanded to determine strain response in the Plateau area against blight and nematode resistance as the main objective. Results this past 12 months have been exceptionally promising and some of the strains tested have shown considerable resistance to blight and nematodes, as well as being agronomically adapted and desirable. Seedling tubers, selected from the most promising family lines, were returned to the USDA potato breeding specialists at Beltsville, Maryland for crossbreeding. The resultant crosses have been returned to the Plateau Station for further selection. Considerable

progress has been made towards the goal of providing highly resistant, agronomically desirable seed potatoes by 1969. In August 1967 a Potato Field Day was held at Jos to acquaint the agricultural extension workers of the Plateau area with background information which will be useful in their work with the farmers. A walk-in cooler furnished by USAID is proving especially useful to the breeding program in overcoming storage problems.

LIVESTOCK DEVELOPMENT - WEST - 767

1. Dairy Industry Development

Most of the project activities have been concentrated at a farm in Agege. As a result of the organization of states by the Federal Government, the Agege Dairy Farm falls within the Capital State of Lagos rather than the Western State.

A previously serious water problem at the Agege Dairy Farm has recently been overcome with the installation of a deep well pump with sufficient capacity for crop irrigation.

Milk spoilage during delivery has been reduced through the use of 25-quart insulated route boxes which have been shown to hold ice for as long as 30 hours.

A milk production of 10,800 pounds from 20 milking cows in January increased to 30,000 pounds from 52 cows in June 1967.

A survey of milk sales in May 1967 at one station showed that out of 384 quarts of milk sold, 176 were purchased by expatriates and 208 by Nigerians.

A second loose housing pen for 100 Holstein dairy heifers imported from the U.S. in 1965 was placed in use at the Agege Farm.

A second shipment of 109 Jersey, Brown Swiss, and Holstein dairy heifers, imported from the U.S. in May 1967 by the Western Region Government, has been housed at the new dairy farm in Ikenne.

2. Beef Production and Scientific Breeding

In addition to his major work with the breeding program at the Fashola Livestock Center, the AID Beef Advisor continues to assist the artificial insemination program (scientific breeding) at the Agege Dairy Farm; beef cattle breeding and management activities at Ado-Ekiti and Shaki Cattle Ranches; and several local cooperatives in establishing cattle herds.

The Fashola beef cattle herd of some 1,100 Ndama has been placed on a seasonal breeding program with bulls placed with designated mating groups in the June of each year.

An analysis has been made of age at first calving and of calving intervals among 346 breeding females in the Fashola herd. The average age at first calving was 3.20 years in 1964/65, 2.67 in 1965/66, and 2.86 in 1966/67. The average calving interval was 436 days.

Training courses have been given in scientific breeding and in beef cattle management, with emphasis placed on pregnancy checking. A two-week course in artificial insemination was given at the Agege Dairy Farm.

A review of the A.I. program shows that 150 dairy and 40 beef calves had resulted from A.I. breeding up to June 1967.

Fourteen agricultural officers from the Ministry of Agriculture and Natural Resources received four days of special training at Fashola in general station management.

Special assistance has been given by the AID beef advisor to cooperatives at Oyo and Ilero in developing beef cattle projects. The Ilero group has formalized a land agreement which covers 6,000 acres. There are presently some 30 members in this cooperative with an average of some 40 herd of cattle each.

3. Poultry Development

An AID poultry advisor assisted this program until June, 1967 when he assumed the position of Agriculture Program Assistant in the regional office of AID at Ibadan. Since June, the limited available assistance to the project has permitted more independent operations by the Nigerian poultry staff.

Hatching is carried out at both Agege and Fashola throughout the year. During the months of April through June, 50,736 egg-strain chicks were hatched; 7,992 broilers and 1,455 turkeys.

The broiler market has continued to flourish and expand in volume with new processing started in Ibadan and Ife. The original per-bird pricing has been changed to a weight basis with a price charged of three shillings (42¢) per pound dressed.

Interest has also increased in the newly established program of turkey production with plans for 500 adult turkeys to be reserved for breeding at Fashola. A new turkey house was constructed with FAIR funds at the Fashola Poultry Center.

To help improve various aspects of management in poultry production, three extension bulletins were edited by USAID and FAIR poultry personnel at the

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Fashola Poultry Center and published by the MAIR Information Section.

The MAIR Home Economics and Poultry Sections, with USAID personnel in each respective area, promoted a "Eat More Poultry Meat" campaign at each of five agricultural shows through demonstrating several methods of preparing and cooking chicken and turkey, and selling the finished products to the public for a small fee.

4. Swine Development

The present USAID Swine Specialist arrived on duty April 2, 1967 after the position had been vacant for nine months. The Fashola Center remains the major site of swine development work. The following activities continue to be carried out at the Center: evaluation of breeds; training programs for private and government herdsmen; distribution of breeding stock to farmers, ~~and~~ demonstrations in better herd management practices, and research activities.

Present breeds on the Fashola Center consisting of Durocs, Large Whites, Hampshires, Landraces and crosses totaled 343 as of June, 1967.

Ten Hampshire pigs supplied by USAID arrived from the U.S. on April 26, 1967 and have been under observation by the AID Swine Advisor. Seven of these were ten weeks old when received and three were six weeks old. The older piglets gained an average of 1.8 lbs. for the first 127 days after arrival.

A study is being made of improved rations on the Fashola Center and comparisons have been made with a commercial pig pellet ration supplied by Livestock Feeds (Pfizer Ltd.)

Observations are also being made on the advantage of creep feeding of piglets to weaning as compared to the traditional practice of sow feeding only.

5. Veterinary Services Development

The development and improvement of Animal Health Services remains the main goal of this activity. The most significant achievement has been in the area of technical staff development.

The USAID Veterinary Advisor departed post on transfer to a contract position in July, 1967. The advisor had been active in helping to establish and to operate an Animal Health Assistant School. This position is being phased out.

Thirty-two second year students passed their examination at the Animal Health Assistant School in early June.

A USAID Advisor conducted a short course in veterinary medicine for eight senior agriculture students at the University of Ife, and 16 students in the first year pre-clinical veterinary medicine at the University of Ibadan.

A study made of the prussic acid content of giant star grass showed a higher acid content in the grass during the dry seasons rather than during the wet seasons.

6. Meat Processing and Marketing

The USAID Livestock Advisor handling the meat processing and marketing sub-activity also coordinates the entire project and gives help in sheep development.

During this report period, pilot abattoir and meat market facilities were completed and placed into operation at Bodijs near Ibadan. Pig slaughter facilities have been designed and constructed at the Odeda Farm Institute and at Moor Plantation.

The Moor Plantation Meat Sales Shop realized a sales volume of ₦17,880 (approximately \$50,000) for the year.

Pig slaughter at Fashole and Moor Plantation during the quarter of April, May, and June totaled 175 head while cattle slaughter at the Bodijs pilot abattoir for the same period totaled 106 head. With the upgrading of pig slaughter facilities at Moor Plantation, slaughtering formerly done at Fashole was transferred to this site to supply the Bodijs and Moor Plantation meat markets.

From December, 1966, when the Bodijs pilot abattoir was opened, through June, 1967, a total of 250 head of cattle were slaughtered. Of these 167 head came from private herds and 83 came from MAIR farms and farm settlements. The breeding of these 250 head consisted of 41.6 percent N'dames, 56.8 percent Ketekus, and 1.6 percent Muturu crosses. Hot carcass percentage weight of live weight was 50.8, 51.1 and 49.7 respectively for the above breeding.

Sheep assistance by the AID Livestock Advisor has been confined to the Ado Ekiti station flock of some 172 head. Death losses in this flock have been high and good management difficult to attain.

LIVESTOCK DEVELOPMENT - NORTH - 7741. Range Management

(a) Three major progressive steps were taken during the past year of operation. These included:

- 1) the completion of a two-year range management curriculum to be taught at the Gando Road Livestock Services Training School for Range Management Assistants and the arrival of a BLM/PASA range management instructor to initiate the instruction;
- 2) the completion of a range management feasibility survey by a BLM/PASA four-man team; and
- 3) the initiation of a broader Work Plan to include a Nigerian Public Land Program.

In addition to those three major accomplishments, the new Udubo Grazing Scheme boundary was demarcated and work initiated; milk collection was started on the Katsina Range Management Scheme, and further progress was made on construction work at the Sokoto, Kase, and Yature Schemes.

(b) A range management advisor stationed at Maiduguri is carrying out range work in Borno Province. With the completion of a new tarmac road into a previously inaccessible portion of the province, a new demonstration site for future activities has been selected and submitted to the Borno Native Authority for approval. A number of windmills and pumps have been installed on existing boreholes in the province, cement watering tanks installed, and grass seeding carried out.

2. Cattle Breeding and Ranch Management

(a) Beef Cattle Breeding: A Kansas State University contract technician continues to assist at the major AID-supported Borno breeding ranch and nine other livestock investigational breeding centers (LIECs) operated by the NAFR.

Breeding stock on the Borno Ranch and some of the LIECs have been classified as to grade or beef quality and prospective breeding bulls have been subjected to rate of gain or performance tests. Some crossing of imported breeds on the local Madara breed has been carried out at the Borno Ranch but major emphasis has been placed on the development of the local breeds. An improved record-keeping program has been established.

- (b) Cattle Ranch Management: This subactivity is carried out with the help of one direct hire AID technician at Hornu Ranch, ~~which consists~~ a ranch of 20,000 acres with an expected capacity of 1,000 breeding cows. The present size of the herd is approximately 250 cows with a total herd size of 500 animals. Disease problems, especially infection of pleuro pneumonia (PP), has been encountered in purchasing new breeding stock and has caused a delay in the stocking rate. All newly purchased animals have been quarantined and thoroughly checked for disease before allowing them on the main breeding ranch. The slaughter of newly acquired animals has been required in some cases.

About 200 acres of new land has been cleared and prepared for cultivation during the reporting period, some 2½ miles of new fencing constructed, and 2½ miles of ranch road improved.

Tapkis (surface ponds) and dug wells have been found inadequate as a stock water supply during the dry season and several boreholes (drilled wells), with plastic pipe for water distribution to adjacent pastures, have been proposed.

3. Cattle Fattening and Marketing

Increasing the size of the operation and improving efficiency has constituted the major accomplishments connected with the 6,000 acre Manchok Cattle Fattening Ranch. Ranch building construction was appreciably delayed by unsettled conditions.

However, construction is now nearing completion on all ranch buildings and well pumps with associated electric generators have been installed to supply all needed water for fullscale cattle operations.

The present number of head of cattle on the ranch is between 500 and 600, the number varying from time to time as fat cattle are sent to the Kaduna abattoir for slaughter and new cattle are bought.

The purpose of this ranch is to study the economics of fattening and marketing trade cattle and facilities planned will permit an operational capacity of 5,000 head of cattle annually. The ranch will also be used to demonstrate intensive pasture management and a program for the production of forage and feed crops to use in pen fattening cattle.

4. Meat Processing and Marketing

A USAID technician is assisting in the construction, equipping and operation of a 25 head per hour abattoir and a cold and hot stall meat market in Kaduna. These facilities were available for use in October 1966. USAID

technical/financial support to this activity is scheduled to phase out the end of September.

The abattoir and meat markets have been used as training facilities since the completion of construction. Over 30 Nigerians have received training in abattoir and meat market operations.

Approximately 200 head of cattle from the Manchok Cattle Fattening Ranch and more than 50 from LIBCs and sample procurements for the Livestock Meat Authority have been processed since the start of operations.

About 30,000 meat sales have been made, approximately 45 percent to local Nigerians and 55 percent to foreign expatriates.

5. Poultry Development

- (a) Poultry Stations: Major sites of this activity to-date have been at Kaduna and Jos with limited work at Ilorin. One AID poultry technician is assigned to this phase of poultry development.

During the period of this report both the Kaduna and Jos Poultry Centers, with hatching capacities of approximately 30,000 eggs at one time, and breeding flock capacity of 3,000 hens, have been put into operation following construction completion. Some of the feed mixing and processing equipment has not been installed.

Assistance was given in the reorganization of a poultry and egg Cooperative Marketing Society in Kaduna.

- (b) Poultry Pathology: An AID advisor continues to assist the MAFR in this activity. A poultry pathology laboratory has been set up at Kaduna where several Nigerians are receiving on-the-job training in post-mortem diagnosis of poultry diseases. During the first quarter of 1967 a total of 443 birds were presented for post-mortem study.

Several small flocks of White Leghorns which have not been immunized against the various prevalent diseases have been established in the vicinity of the laboratory for experimental purposes.

- (c) Poultry Extension: This phase of the poultry development program has been given continued assistance by the USAID technician assigned to the poultry stations in the absence of a poultry extension specialist for this position. Twenty-five field extension workers have been trained and are assisting private poultry keepers.

6. Technical Training and Education

- (a) Mando Road Livestock Assistants' School: Two AID technicians were formerly assisting at the school in the fields of Veterinary Medicine and Animal Husbandry but only the former position has been filled during the past year. AID-financed dormitory and classroom facilities for 60 students have been established. Twenty-nine first year students and nineteen second year students enrolled this school year. Country conditions reduced the second year class number.

With the absence of a USAID Animal Husbandry Advisor, the Veterinary Advisor has assisted in farming operations and livestock herd management. The cattle herd at the school has consisted of 70 head of school animals and 40 head of tsetse research animals which the school has agreed to feed and manage. Two-hundred and fifty layers, about a dozen hogs, and a few sheep complete the livestock listing in the school grounds.

Streptothricosis treatment, tick control, and trypanosome therapy have been under active investigation with student help.

One-hundred and forty tons of silage was made for livestock feeding. 700 bales of grass baled, and seventeen acres of guinea corn has been harvested from school grounds. Five acres of soya beans yielded 2,000 lbs. of seed.

- (b) Range Management Assistant Instruction: A short-term Bureau of Land Management consultant in Range Management visited the North in the fall of 1966 and prepared a curriculum to be used in training range management assistants. A BLM/PASA Range Management instructor who is now instructing six students arrived in April 1967. The number of students to enroll for the new school year is expected to increase.

7. Project Planning and Coordination

One AID Livestock Advisor has been stationed at Kaduna since November 1966 to assist the Area Agriculture Advisor in project planning and coordination, and provide technical and administrative field support to project technicians.

WATER SUPPLY INVESTIGATIONS - 702

Two USAID technicians, a chemist and geologist, continue to assist the GOI in determining the location, extent, movement and safe yield of groundwater in the Chad and Sokoto Basins. The quality of ground waters in these areas is to be analyzed in the laboratory at Kaduna and on site observations at the boreholes. A special investigation is to be made of the corrosive characteristics of borehole water in the Chad Basin. Other factors affecting the groundwater situation: such as, climate, topography, drainage, geology, and groundwater hydrology are within the scope of this investigation.

The following work has been accomplished on this project since September, 1966:

1. Five 1,600 feet deep boreholes have been drilled in the Sokoto Basin. At the time of drilling, geologic samples are collected at various depths from the surface to the maximum depth. The samples are then analyzed for mineral content, size and stratigraphical characteristics.
2. Approximately 150 water analysis have been made this year in the laboratory at Kaduna.
3. A study of the corrosion characteristics of borehole water in the Chad Basin is in process. The USAID Chemist is devoting his full time to this activity, the last phase of the field observations of this project.
4. In both the Chad and Sokoto Basins regular measurements of water level or pressure heads in boreholes have been made. This is a continuing activity in the Chad Basin. When the geologist left last September, the Geological Survey Office in Sokoto closed.
5. Other major items of laboratory work accomplished the past year include:
 - a. Expanding and improving equipment and facilities.
 - b. Preparing reagents and standard solutions needed for water analysis.
 - c. Ordering needed supplies and equipment.
 - d. Analyzing water samples from sources and areas of interest to the Water Supply Section of the Geological Survey of Nigeria.
 - e. Training two Nigerian technicians in water analysis.
 - f. Writing detailed procedures for water analysis specifically for the Kaduna laboratory. These

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procedures involve modifications and adaptations of standard methods to fit local conditions.

6. Reports issued:

- a. GSN Report No. 1439 "Groundwater Studies of the Geological Survey of Nigeria 1966 with Sections on History, Geology and Water Quality." By J.A.I. Olowu, D.A. Phoenix, and R.T. Kiser, October 1966.
- b. GSN Report No. 1441 "Chemical Quality of Waters in Nigeria 1965-66." By R.T. Kiser and J.A. Akingbehin. November 1966.

LAND AND WATER RESOURCES - WEST - 766

Two USAID direct-hire technicians are assisting the Ministry of Agriculture and Natural Resources to develop the manpower needed to carry out a soil and water conservation program in the Western area.

In the implementation of this training program the following major conservation work has been accomplished during the past 12 months:

1. 27 miles of terraces were constructed and vegetated;
2. 7,025 acres of contour farming were established;
3. 5,566 lineal feet of water ways were constructed;
4. 479 acres of pasture were established or improved;
5. 680 acres of land have been fertilized;
6. Six farm ponds were constructed. These are being used for fish culture, potable water supply, water for livestock and in some cases for irrigation of dry season gardens;
7. Twenty-eight miles of contour guidelines were built;
8. Grass seeding was completed on 50 acres;
9. 16.5 miles of road were graded; and
10. Forty-six land surveys have been completed and 46 maps produced.

One technician has completed his tour of duty and his position has been eliminated. The project is scheduled to be terminated in September 1969.

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LAND AND WATER RESOURCES - EAST - 769

Three activities are supported by this project: the Uzo Uwani Rice Irrigation scheme, the Rural Water Supply scheme, and the Surface Water Supply Investigations.

During the past year the following was accomplished:

1. Uzo Uwani Rice Irrigation Scheme

- a. 150 acres of irrigated rice were grown and harvested. The yield of the irrigated rice was 3,000 lbs. per acre, an increase of 1,600 lbs. per acre over rain-farmed rice.
- b. 800 acres were prepared for irrigation for the next season.
- c. Approximately 25 miles of laterals and drains were constructed for 500 additional acres.
- d. The GON established two villages of 90 houses each. Each village has a population of about 550 people.
- e. USAID assistance to this activity was suspended in August due to the civil war in the Region. This is four months earlier than the planned phase out, however, it is believed that the present staff of Nigerian engineers and technicians can continue the work with only a small loss in momentum.

2. Rural Water Supply Scheme

- a. Three water supply reservoirs with sand filter and pumps were constructed. Each reservoir furnishes water for about 2,600 people.
- b. Four additional reservoirs are under construction and are about 60 percent completed.
- c. This activity was phased out in August. Sufficient numbers of Nigerian technicians, equipment operators and drivers have been trained to continue the activity without further USAID assistance.

3. Surface Water Supply Investigations

- a. Seven officials were appointed to form the headquarter's staff of the new hydrologic section. All headquarter's staff have received in-service training.
- b. About 25 field observers and other supporting personnel were assigned to the hydrologic section. All have received in-service training. Thirty private individuals have volunteered their

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services as rain gage observers.

- c. Preliminary field reconnaissances for locating and selecting sampling sites were completed.
- d. Drainage areas of the region's principal river basins were computed.
- e. Two streamflow continuous recording gaging stations were put into operation. Numerous staff gages were installed.
- f. Five automatic and forty non-recording rain gages were installed.
- g. Minimum flow measurements were made at 15 sites proposed for developing surface water for domestic use.
- h. This activity was suspended in August due to the internal situation in the Region.

LAND AND WATER RESOURCES - NORTH - 3/2'

soil conservation technicians continue to assist the Ministry of Agriculture in:

1. Compiling information on land and water resources of the Lake Chad Basin of Northern Nigeria for possible irrigation development;
2. locating possible dam sites;
3. delineating irrigable areas;
4. evaluating the project for engineering and economic feasibility; and
5. providing the Government of Northern Nigeria with sufficient data to enable them to make a comparison of projects to determine which should be considered for full scale feasibility investigations and development.

Specific accomplishments during the reporting period are as follows:

1. Reconnaissance surveys to find dam and reservoir sites and land areas worthy of further investigations were made throughout the Nigerian portion of the Lake Chad Basin.
2. Sites for nine potential dams were located. The approximate dam heights, size of spillways, and reservoir capacities have been determined.

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3. More than 400,000 acres of land were examined and classified. About 135,000 acres were classified as being suitable for irrigation, and could be served from the proposed reservoir sites.
4. Laboratory analysis of over 4,300 soil samples and over 600 water samples were made. Field permeability and infiltration tests in connection with land classification were made in all nine areas.
5. Sedimentation studies of the Kano Basin were completed.
6. Four participants completed their training in the U.S. and are back on the job. Two other participants are in the U.S. receiving training from the Bureau of Reclamation.
7. Engineering and economic feasibility studies of the potential irrigation projects were initiated.

SOIL AND WATER CONSERVATION - NORTH - 773

Five technicians continue to assist the Ministry of Agriculture, Northern Nigeria in organizing, planning and implementing a soil and water conservation and management program in specific areas.

During the past year the following was accomplished in working toward the objective:

1. A guide to set technical standards and specifications for implementing conservation measures throughout the Region was prepared.
2. Twenty Ministry of Agriculture technicians completed eight months of intensive classroom/field training.
3. A total of 37 Ministry of Agriculture employees were assigned to this activity and have received in-service training at nine demonstration and training areas.
4. Thirteen different soil and water conservation measures were developed at the nine demonstration and training areas.
5. A project review was completed by a team of U.S. consultants.

HADEJIA VALLEY DEVELOPMENT - 703

This project completed during the reporting period reached the primary objective of clearing tsetse fly from an area of approximately 500,000 acres along the Hadejia River, thereby eliminating sleeping sickness in humans and permitting farm land development and farming activities in the area.

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Reconnaissance surveys continue to be conducted by local field workers to prevent reinfestation from occurring.

USAID assistance to this project was terminated in February, 1967.

AGRICULTURAL CREDIT - 062

Four Farmers Home Administration PASA agricultural credit advisors were on board during the reporting period.

One was stationed in Enugu in Eastern Nigeria as advisor on agricultural credit to the Chairman, Fund for Agricultural and Industrial Development (FAID), and to the Head, Supervised Agricultural Credit Branch, Ministry of Agriculture. The tour of duty of the advisor stationed in Enugu ended July 22, 1967.

The three remaining advisors continue to assist the Western Nigeria Agricultural Credit Corporation. One advisor, the team leader, is assigned to the headquarters office in Ibadan. One advisor is posted to each of the Corporation's "Circles" (area) field offices at Ibadan, Abeokuta and Akure.

During this period the agricultural credit advisors have concentrated their efforts on two main areas:

- (a) the training of Nigerian field and headquarters personnel in the techniques of operating a supervised agricultural credit program, including development of farm plans, preparation of loan documents, servicing of loans, borrower supervision, and loan collection; and
- (b) the improvement of the administration and management of an agricultural credit institution.

In general, fair progress has been made in training Nigerian personnel in agricultural loan procedures, but progress in improving administration and management was limited.

Specific accomplishments during the reporting period include:

East

1. Cumulative FAID agricultural loan activity from 1963 through May 1967 was:

<u>Type of Loan*</u>	<u>Loans No.</u>	<u>Approved Amount</u>	<u>Loans No.</u>	<u>Issued Amount</u>
Agriculture, direct	195	£253,663	161	£106,482
Agriculture, in-direct	21	62,507	18	41,353
Agriculture, industrial	8	18,465	7	17,259
Stork hydraulic presses	97	19,400	61	12,200
Total	321	£354,035	247	£175,294

2. Loan activity in the year ending May 31, 1967 was:

<u>Type of Loan*</u>	<u>Approved</u>		<u>Issued</u>	
	<u>No.</u>	<u>Amount</u>	<u>No.</u>	<u>Amount</u>
Agriculture, direct	101	£122,622	188	£51,791
Agriculture, indirect	21	62,507	18	41,353
Agriculture, industrial	3	2,320	4	4,119
Stork hydraulic presses	22	4,400	12	2,400
Total	147	£191,849	122	£99,663

* "Agriculture, direct" represents direct loans to individual farmers. "Agriculture, indirect" refers to loans to cooperative societies for on-lending to small-scale farmers for food crop production. "Stork hydraulic presses" loans are special loans to farmers to purchase improved presses for extraction of palm oil.

3. The number of zone (area) agricultural credit offices was increased from 8 to 13 and the number of agricultural credit supervisors increased from 8 to 13.
4. The number of junior agricultural credit staff was increased from 45 to 71.
5. Revised and simplified forms and procedures were prepared by the agricultural credit advisor, and necessary government approval for use of the new forms and procedures was obtained in July 1967.
6. On-the-job training was given to about 80 Nigerian agricultural credit personnel.

Work on the agricultural credit project in Eastern Nigeria was terminated in July 1967 because of the internal situation and the agricultural credit advisor evacuated to the United States.

West

1. Nineteen employees of the agricultural credit corporation completed one year's training in technical agriculture at the Akure School of Agriculture in July 1967.

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2. On-the-job training in agricultural credit through actual making and supervising of loans was given Nigerian credit personnel in 55 local loan offices and in three area offices.
3. Total supervised agricultural credit loans made from July 1, 1966 to June 30, 1967 was 236 loans in total amount of £34,802. Cumulative loan activity through June 30, 1967 was 375 loans in total amount of £48,129. The total amount of supervised loans outstanding on June 30, 1967 was £39,950.
4. Comprehensive and detailed recommendations for improvements in administration of the Western Nigeria Agricultural Credit Corporation were prepared by the agricultural credit advisors and given to appropriate Western Nigeria officials.

Mid-west

A report, Review of the Mid-Western Nigeria Agricultural Credit Corporation and Recommendations for Improvement, was prepared by the agricultural credit advisor (Eastern Region) and the agricultural economics advisor (USAID/Lagos).

AGRICULTURAL COOPERATIVES - 750

1. Approximately \$2,400 worth of selected books and bulletins on cooperatives and audio visual aids were delivered to the three cooperative colleges during the year to aid in improving teaching materials and programs.
2. Seven senior cooperative officers received short courses from six to twelve months duration in the United States under the participant training program, which did much to broaden their concepts of the potentials of cooperatives as private business organizations. The training was also helpful in developing their capabilities to deal with organization, finance, and management problems of cooperatives and developing improved educational programs.
3. A financial and management analysis report of a study of the Oshun Co-operative Marketing Union, Egbeda, Western Nigeria, was prepared and submitted to the Registrar of Cooperatives. The recommendations of the study were presented at a meeting with cooperative management officers of the marketing union and 75 delegates of its constituent cooperative societies.
4. The USAID Cooperative Management Specialist in Western Nigeria continues to study further and implement certain recommendations with respect to the Ijesha Cooperative Produce Marketing Union pilot cooperative program.
 - (a) Based on a recommendation of the Specialist, a reorganization of the Union was put into effect on September 1, 1966, which would make more effective use of personnel and save about 25 percent in the salary cost of Union and constituent society secretaries (local managers). Training programs were conducted during the year for management, directors, and senior secretary personnel to implement the change in organization.
 - (b) To diversify and increase the incomes of farmers and the Cooperative Union, a maize crop diversification program was introduced in February 1967. This is a cooperative venture including the Extension Services, the Ijesha Cooperative Union, and the Cooperative Division. With the assistance of six Peace Corps Volunteers, approximately 100 acres of improved variety (NG-1) maize were planted, under supervised management, by farmers of a selected group of cooperative societies. Arrangements were made with the Ministry of Agriculture and Natural Resources to turn over to the Cooperative Union USAID furnished grain storage bins and drying equipment for 100 tons capacity grain storage. The cooperative is paying for the cost of erecting and operating these facilities and will store and market the maize. Ten local cooperative societies have also constructed supplementary "bush" drying facilities.

A report describing this project entitled "Crop Diversification Program for Ilsha Cooperative Produce Marketing Union" was prepared in February 1967 and distributed by the Cooperative Management Specialist.

- (c) An agricultural production credit program was launched in the Union on March 1, 1967. It will continue on an experimental basis through September 1967. It will then be evaluated and modified as needed. This program involves the formation of Thrift and Credit Societies among the Union constituent societies to increase member capital investment in their cooperatives and finance crop production supplies.
- (d) In April 1967, with the assistance of a Peace Corps Volunteer, a new accounting system was started on a trial basis in the Union along side its present system. A change-over is anticipated after a trial of one year is completed.

FISHERIES DEVELOPMENT - 704

Technical assistance to this activity, conducted in cooperation with the Fisheries Division of the Ministry of Agriculture and Natural Resources (MARN), was terminated in early FY 68, except for the services of a Principal Fisheries Officer now transferred to Public Services and Staff Support.

The center of activities has been at the Ijora fishery docks (Lagos), the Aiyetoro fishing community some 180 miles from Lagos, and in Ibadan where the Western Region Fisheries Officer is stationed. Fish distribution points and sales outlets were established at Oyo, Ogbomosho, Ilsha, Ife, Ijebu-Ode and Ado-Ekiti in addition to Lagos and Ibadan.

During the period of this report the following major steps were taken towards fisheries development:

1. Construction of the 72 ft. fishing trawler, the Western Explorer, was completed in November 21, 1966 and dedicated and placed into use on December 3. During one week, fishermen on the explorer were able to bring in a catch of 400 boxes of fish per day.
2. Fifty-six and 36 ft. trawlers were also completed and placed into use by the Aiyetoro fishing community.
3. Three on-the-job trainees were trained in trawler net-making in Aiyetoro by the AID Gear and Equipment Specialist.

4. Fish landings at the Ijora docks during the first quarter of 1967 totalled 602,000 lbs. (301 tons).
5. The docks at Ijora have been overhauled and new blast freezing equipment has arrived but has not as yet been installed.
6. A local manager-trainee, Mr. S. A. Okunlawon, has assumed responsibility for the NAIR Fisheries Training Project following the departure of the USAID Fisheries Marketing Specialist.

Although funds were made available by the NAIR to ~~construct~~ ^{construct} a new dock, processing plant, workshop, slipway and office block with contract let, no work has as yet been started.

AGRICULTURAL PLANNING AID ADVISORY SERVICES - 212

The Agricultural Planning and Advisory project provides specialized staff to plan, advise, guide and evaluate the AID program of agricultural assistance to Nigeria.

Through regular USAID contacts with personnel of concerned Ministries, both Federal and former Regional, the Ministries have developed a greater appreciation of the importance of agriculture in the over-all development of Nigeria. Reviews and evaluations of project progress and future planning are a continuous process both within USAID and with the respective host government officials. This results in increasing or decreasing emphasis, technicians and financial support to maximize effective utilization of AID assistance to Nigerian agriculture.

Specifically, personnel under this project have been responsible for:

1. the preparation of Project Agreements and related documentation on twenty-six projects;
2. the development of work plans for each project and/or sub-activities;
3. assisting in the development of eight feasibility studies for possible development loan assistance;
4. coordinating the Food for Peace (Title III) program in Nigeria;
5. serving as contract representatives for eighteen contracts;
6. continuing the review, analysis and/or preparation of various project reports; this is illustrated by recent submission of Technical

Assistance Project History and Analysis Reports (U-520) on Projects No. 749 and No. 770. Other U-520 reports are in various stages of preparation.

AGRICULTURAL DEVELOPMENT STUDIES AND EVALUATION - 755

Consortium

The following progress has been made during this period:

1. The Project Work Plan, including objectives, methods of operations, and staffing requirements, has been critically re-examined in view of including in the plan for next year contingency provisions that would allow flexibility in meeting alternative country situations.
2. Two publications have been issued:
 - (a) Papers on Nigerian Rural Development. May 1967.
 - (b) CSMRD Research Results to Date, Prospects and Implications for USAID Assistance to Nigerian Agriculture. May 1967;
and a third is in process: Strategies and Tactics for Support of Nigerian Rural Development.
3. University Education in Agriculture
 - (a) A study on the relation between the number of available students qualified and financially able to study agriculture and faculties' enrollment targets has been completed.
 - (b) A study of the academic backgrounds of degree students, giving consideration to existing selection criteria has been completed.
 - (c) Determinations concerning the involvement of non-Nigerian staff in the Faculty of Agriculture at ABU in view of the current plans for the development of the Faculty have been made.
 - (d) Information on existing and planned departmental training in each faculty of agriculture has been compiled.
4. Sub-University and Extension Training in Agriculture
 - (a) An Extension Priorities Study was conducted to determine key issues upon which further in-depth research would be focused.

- (b) Based on the Priorities Study, in-depth studies of agricultural skills requirements, school of agriculture training programs, and extension field operations have been designed and primary data collection is well under way for each study.

5. Economics of Public and Private Direct Investments in Agriculture

- (a) Surveys have been completed on:

- 1) traditional land settlements and school-leavers farms in Western and Mid-Western areas of Nigeria; and
- 2) the oil-palm rehabilitation scheme in the East;

and one has been started to determine obstacles to the creation and expansion of tree-crop plantations in Western and Mid-Western areas of Nigeria.

- (b) An econometric model has been developed to describe the pattern of resource utilization that would adequately feed the people of Nigeria while maximizing net revenue to agriculture. Data for the above model showing how resources are now being used, present dietary levels and present dietary levels, and patterns of internal and export distribution are nearly complete.
- (c) A map has been prepared delineating the six geographic areas for Nigeria. Resource, nutrition, and population data are being developed for each area.

6. Modernizing the Northern Beef Industry

A specific plan of work has been developed and negotiated with the Livestock and Meat Authority and Ahmadu Bello University. Two staff members have been recruited to implement the plan.

7. Agricultural Research

- (a) Sixteen agricultural problems have been identified as needing special research attention. Papers on ten have been drafted for submission to a specially selected panel of research scientists for evaluation. One proposal, Soil Fertility in the Tropics, is to be examined by a panel in early January in preparation of a formal research project proposal ~~for~~ to be submitted to USAID for consideration.

- (b) A survey of existing research agencies, programs, staffing and financial support has been completed. (See CSNRD Report-5. A Survey of Nigerian Agricultural Research. October 1966.)

8. Agricultural Credit

The second publication, A Proposed Agricultural Credit Program for Nigeria, has been issued and distributed.

9. Agricultural Marketing

An economist has been employed and the plan of work has been substantially revised.

Economic Development Institute (Contractor)

1. Study of the Economics of the Poultry Industry in Nigeria - Project No. AID-620-169

- (a) A Work Plan was reviewed and approved in March 1967.
- (b) A study of commercial poultry farms is in progress. Data has been collected and is being analyzed.
- (c) Egg consumption survey data was collected in several cities in Eastern Nigeria during December 1966.

Owing to the unsettled conditions in the country and the evacuation of the project leader and other American personnel involved from Eastern Nigeria in July 1967, the project was terminated in September 1967.

2. Study of the Economics of Rice Production, Processing, Marketing and Consumption in Southern Nigeria - Project No. AID-620-156

- (a) Though this contract was signed December 6, 1965, the contractor was unable to recruit a project leader until November 1966. The project leader arrived at the project site on December 1, 1966. An Agricultural Economist (Research Fellow) arrived on February 13, 1967.
- (b) A Work Plan was approved February 20, 1967.
- (c) A small amount of field data had been collected before unsettled conditions necessitated the evacuation of the project leader in July 1967.

- (d) Because of the current situation in the country, this project was terminated on September 30, 1967.

Nigerian Institute of Social and Economic Research (Contractor)

1. Study of Prospective Returns to Alternative Types and Forms of Agricultural Investment in Nigeria - Project No. AID-620-163

- (a) Project leader for project was approved in June 1966.
- (b) Field work on this project was completed during the past year and seven preliminary draft study papers were submitted in August 1967 as follows:
- 1) Benefit-Cost Analysis of Government Investment Proposals - Introduction to Papers on Tree Crops.
 - 2) Benefit-Cost Analysis of Government Investment Proposals: Cocoa, Smallholder's Development.
 - 3) Benefit-Cost Analysis of Government Investment Proposal: Rubber
 - 4) Benefit-Cost Analysis - Prospective Returns to Government Investments - Oil Palm: Plantation and Smallholder's Projects.
 - 5) Nigerian Government Spending on Agricultural Development - 1962/3 - 1966/7.
 - 6) Northern Nigeria Demonstration Extension Program.
 - 7) Prospective of Study for Publication: (Book) on Agricultural Policy and Economic Planning in Nigeria.

2. Study of Marketing of Staple Agricultural Products in Nigeria - Project No. AID-620-170

The contractor continues to have difficulty in recruiting a suitable project leader for this study.

3. Study of Commodity Exports and Economic Development in Nigeria - Project No. AID-620-173

A project leader was nominated by the contractor in June 1967. The nominee has been approved and is expected to enter on duty in early October.

AGRICULTURAL ENGINEERING - 11ST - 765Grain Storage and Farm Structure

A USAID grain storage and farm structure specialist continues to assist the Ministry of Agriculture in erecting grain storage, drying and handling facilities and prefabricated steel buildings for shops, warehouse and sheds.

Specific accomplishments during the reporting period are as follows:

1. Seven prefabricated buildings have been erected, and five other buildings are being erected.
2. Thirty-five Nigerians have been given formal training and on-the-job training in the drying, storing, grading, testing and handling of grain.
3. Twelve drying bins and 10 grain storage bins have been constructed this year.
4. Two participants have just returned from one year of training in the U.S. in grain storage methods and warehouse principles and practices, respectively.

Agricultural Mechanization

All of the government-owned farm tractors and machinery are under the supervision of the Agricultural Engineering Branch of the Ministry of Agriculture and Natural Resources. There are approximately 300 tractors with full complements of agricultural machinery working at 68 locations in the Western Region. The organization and facilities necessary to operate, service and repair this widely dispersed fleet of tractors and equipment has been established. A spare parts warehousing and supply organization is nearing completion. A Central Warehouse has been erected in Ibadan and facilities have been provided for storing the necessary spare parts at each of the primary shops.

Specific accomplishments during the reporting period are as follows:

1. 4,000 acres of food crops and 7,000 acres of Kenaf were grown on government-owned farms that were mechanized.
2. Four hundred tractor drivers, one hundred and fifty mechanics and twenty-five Agricultural Superintendents received training in tractor driving, tractor mechanics, and farm power management, respectively.
3. Sixteen Nigerians are attending diesel and petrol mechanic courses at the Oyo Trade School.

4. Seven Nigerians are now studying Agricultural Engineering degree courses in the U.S. and Europe.

AGRICULTURAL ENGINEERING - NORTH - 771

Three U.S. agricultural engineers continue to assist the Ministry of Agriculture in establishing a Field Services Division section to investigate, develop and advise the Ministry on matters pertaining to farm machinery and agricultural mechanization.

To implement this program, AID assisted the MOA in establishing three Mechanization Investigation Centers in the North. A U.S. Agricultural Engineer is stationed at each center.

The following work has been accomplished on this project during the past year:

1. Research and development work on general purpose tractors, single axle tractors, small estate-type tractors, hand tools and animal power has been continuously pursued at two of the centers.
2. The agricultural engineering and development building has been designed and is now 65 percent completed. The power station is 80 percent complete, and approximately 10 acres have been cleared for an agricultural mechanization test farm.
3. Eleven investigations have been made at two of these Centers to determine the suitability of different types of farm machinery for use in two ecological zones.
4. A series of tests during the past year has been made on the effectiveness of herbicides in controlling weeds in upland rice.
5. Eighteen staff members have received on-the-job and formal training. Agricultural students from ADBU have received practical training at each of the mechanization centers.
6. Reports have been written on the 11 machines tested.

AGRICULTURAL STATISTICS - 204

1. In spite of unsettled conditions in the country and the exodus of technically trained staff of Southerners from the Northern Region in September 1966, reasonably good progress was made in the development of training aids and programs for Nigerians to carry on the Rural Economic Survey (RES) ~~book~~ program. For example, an excellent supervisor's training manual was prepared

by the Junior Statistician which was adopted for countrywide use.

- B. A training program was conducted for supervisors and enumerators in the Northern, Western and Mid-Western areas.
- C. The Planning and Development Unit made substantial progress in converting the processing of data from hand method tabulation to computer processing. This resulted in reducing the time delay between data collection and publication. The new method also revealed deficiencies in the data collection performance in some areas, making it possible to rectify sampling and non-sampling problems and errors sooner.
- D. The Planning and Development Unit in conducting field checks uncovered sampling problems in selected areas which resulted in a number of changes for improvement in sampling design and supervision of performance in late ~~xxx~~ collection.
- E. Rural Market Prices Report for May and June 1966 was published and distributed. Data currently being prepared for publication are the 1965/66 Consumption Enquiry (all items); the 1965/66 Farm Survey, additional Rural Market Prices for 1966/67; and the 1965/66 and 1966/67 Household Enquiries.
- F. A summary Report on the Organization and Present Status of the ~~xxx~~ Rural Economic Survey was prepared by the Senior Agricultural Statistician in May 1967.
- G. An evaluation of the Rural Economic Survey program was made in April, 1967. In view of problems related to the unsettled conditions in the country, the field work under this project was terminated in July, 1967 and the project closed out in September. During the four years, technical assistance has been provided, substantial progress was made in setting up an organization, developing procedures, and training Nigerian personnel for collecting, processing and analyzing the RLS data for publication.

TECHNICAL COLLEGE IADAN - 736

The faculty consists of twenty-one Nigerians, four expatriates, two German Volunteers and ten Western Michigan University specialists. Six of the 21 Nigerian faculty members are on study leave and another is assigned to the Ministry of Education. The student enrollment at June, 1967 was 632.

The following progress has been made during the reporting period:

1. Program Study Materials and training aids have been developed and are being used in the following eight advisory areas:
 - a. Commercial Education
 - b. Civil Engineering and Town Planning
 - c. Electrical and Mechanical Engineering
 - d. Science
 - e. Drafting
 - f. Student Personnel Program
2. A student personnel record system has been established to allow a more effective utilization of manpower.
3. The contract team continues to serve the community in numerous voluntary services requiring technical expertise, including participation in local educational television programs.
4. Six participants are in the U.S. pursuing studies:
 - (a) one started training in FY 1967;
 - (b) of those participants who started training in prior fiscal years:
 - (1) two are expected to return during the second half of FY 68, one in February 69, and

- (2) two are now studying under private financial arrangements and their expected date of return has not been determined.

ENGINEERING TRAINING PROGRAMS - 738

Funding for this program limited to participants' training ended in FY 1967.

1. Thirteen participants have completed training under this project:
 - a. two are working in the Ministry of Works and Transport;
 - b. two are faculty members at Technical College Ibadan;
 - c. two returned to work for the government in the East;
 - d. one works in private industry;
 - e. one is privately employed in the U.S; and
 - f. the assignments of five are unknown,
2. Seven are in training in the U.S. Their expected dates of return are: October 1967 - 1; December 1967 - 3; March 1968 - 2; and August 1968 - 1.
3. Two participant trainees financed initially under this project are continuing training under private financial arrangements.
4. Nine participants originally financed under this project were transferred to Project 736, Technical College Ibadan, Western Michigan University contract. Upon completion of their training, it is anticipated that they will join the College faculty.

Six participants are expected to return in August 1968, one failed, and two are continuing training in Canada under private financing.

NORTHERN NIGERIA TEACHER TRAINING PROJECT - 710

This is the first progress report on this project. The Wisconsin team of 19 specialists continues to assist in:

1. improving teacher training in the teachers colleges ;
2. the Ministry of Education in improving teacher education functions;

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3. the Institute of Education in research and Boards of Education functions; and
4. in developing a Nigerian staff to assume full responsibility for continuing the programs developed by the project upon termination of assistance.

During the reporting period work has been continuing on the production of syllabi, courses of instruction and other educational materials developed earlier by Ford Foundation specialists. Plans have been made to use these materials on an experimental basis during FY 1968. The successful implementation of the materials development program is expected to require an additional year. Materials have been developed for Mathematics, Geography, History, English, Principles of Education, General Science and Domestic Science. Some of these materials are already being used in the central teachers colleges. It is felt that further revisions in content must be made before the materials can be successfully used in the Nigerian educational context along with the methods prescribed.

In summary, it is possible to state that during the 1967 period final work has been done on some of the materials. More must be done in 1968 and full implementation of the materials program may be expected only if the project continues until 1969. Phase-out is well planned in accordance with the concentration of American staff in fewer colleges and returned participants to continue the project activities after the Wisconsin staff leaves in FY 1969.

AYETORO COMPREHENSIVE SECONDARY SCHOOL - 734

In view of the expected phase-out of assistance in two years, the activity targets of this project are being reduced, principally in the areas of curriculum and instructional materials development. Advisory services have been terminated in Mathematics, physics, social studies (to be continued under Ford Foundation auspices) and English. Advisory services in agriculture and chemistry will be terminated in November 1967 and August 1968, respectively.

Although a staff shortage for this project has persisted, it was somewhat alleviated during the past year. Some shortages still remain in the fields of agriculture, mathematics, science and business administration education. Through the concerted efforts of the School's Advisory Council and Agricultural Advisory Committee, budgetary and staffing difficulties were gradually overcome.

Accomplishments during the reporting period are as follows:

1. Instructional Materials Development

- (a) A workshop was held for 40 science teachers on the use of the completed

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syllabus developed at Aiyetoro for General Science Forms I and II.

- (b) Forty mathematics teachers met to review further the Entebbe Mathematics Series in view of revising it as needed to coordinate the Entebbe Series with the Basic Mathematics texts developed at Aiyetoro.
- (c) Syllabus for Social Studies Form I and II have been completed.
- (d) The Chem Study Text for Form IV and BSCS "Green Version" Form IV are being adapted to Nigerian instructional sequence. The Aiyetoro version of the BSCS biology is to form the basis of the UNESCO approach for an African Biology Syllabus.
- (e) The following Units for Form I were completed: Drawing, Mass Production, Wordworking, and Bench Metal.
- (f) Changes in course schedules for Forms I and II of the Industrial Arts program were made.

2. Agricultural Program

- (a) Agricultural out-buildings included an eight-pen piggery, a maize dryer and a silo for recently arrived sows and piglets.
- (b) Fifteen hectares of maize have been planted by the students for feed crops.
- (c) Individual student farm plots on a project-sharing basis continue.
- (d) Seventy Form IV students have selected Agriculture as one of their fields for examination by the West African Examinations Council.

3. Other Accomplishments

- (a) Six hundred 100 principals of Secondary Schools in West, Mid-West and Northern Regions attended a workshop on "The Role of Comprehensive Secondary Schools in Nigeria".
- (b) The School reached its peak enrollment of 980 students for this school year.
- (c) Three participants are in the U.S. for advanced training; one each in the fields of Biology, Chemistry and Industrial Arts.
- (d) The technical program buildings under auspices of Ford Foundation are nearing completion. Arrangements have been made for advisory staff to assist the program.

PORT HARCOURT COMPREHENSIVE SECONDARY SCHOOL - 735

The current country situation caused the evacuation of all personnel under this project. When conditions permit a resumption of assistance, planned activity targets and the course of action will be re-examined at that time.

Considerable progress has been made during this reporting period. Marked improvement has been realized in the professional-logistic support to the project by the Ministry of Education.

The accomplishments during the past twelve months are as follows:

1. 430 students have been enrolled, 130 above normal capacity.
2. 57 students graduated in December 1966, with 90% passing the West African Examinations Council Examinations. Over 80% passed in all subject fields.
3. Examination results for the specialized terminal programs are as follows:
 - (a) 100% passed in Wood Shop;
 - (b) 82% in Metalwork;
 - (c) 97% in Technical Drawing; and
 - (d) 93% passed in Business Education.

Due to the tremendous influx of skilled workers to the Eastern Region during this reporting period, only 25% of the graduates have gained employment in industry as of June 1967.

4. Six participants returned to the school after completing basic degrees in Industrial Arts and Business Education. One participant completed a year of graduate training in English as a second language, and the counterpart principal of the school completed a six-month internship program in school administration.
5. The Nigerian staff is now in full complement with the assignment of highly qualified personnel in Science, Commerce, French and Guidance. The principal and department heads except for social studies are Nigerians.

UNIVERSITY OF NIGERIA - 602

The progress of this project has exceeded the anticipated accomplishments and constitutes the following:

1. With the appointment of its first Nigerian Vice-Chancellor, the faculty and staff assumed greater responsibilities for the overall planning, direction and administration of the University. 458 senior faculty are employed in nine colleges; of this number, 366 (80%) of the staff were Nigerians as of December 1966. As of July 1967, six of the nine Faculties (Agriculture, Arts Education, Science, Social Science, and Medicine) were headed by Nigerian deans.
2. Despite lack of adequate classroom and dormitory space, the University admitted nearly 1,000 additional fulltime students in October 1966. This influx was due to the political developments in the country. The willingness of the faculty, staff and students to live and work together under crowded conditions indicated a significant achievement in working relationships. 3,100 students were enrolled in May 1967. A total of 650 students earned degrees in June 1967 convocation.
3. Overall university planning and operation including curricula, research, finance, facilities, staffing, admission procedures, space utilization, etc., continued to be strengthened.
4. An investigation of the grading and compensation of Junior and Intermediate Staff positions was completed during the first year of operation of the new personnel department.
5. Plans for the establishment of Office of University Research and for an Instructional Media Center, including allocation of physical space and the recruitment of advisors, were implemented.
6. The development of site plans for both Usukka and Kuga campuses continued.
7. During the period January 1966 to September 1967, a total of thirty participants were studying at ten American universities. Thirty-two participants had completed their studies and returned to Nigeria. Twenty-six additional participants were selected at UNI to begin their work in September 1967; however, they did not depart due to the country situation which developed during this past summer. Since the inception of the program in 1962, participants have earned thirteen Ph.D. and eleven Masters degrees at U.S. universities. In addition, eight were enrolled in new degree programs.

8. The professorial position of Director of Extra-Rural Studies was provided for in the budget for 1967-68. In addition, advertisements for applicants for the post of Deputy Director of the Division of Extra-Rural Studies have been published.
9. Through the help of a USAID Advisor, the Catering Department of the University has improved its food services for students. An additional refectory has been opened on the Ibadan campus. Food services for 300 students have been provided by this department.
10. USAID advisors assisted the Faculties of Social Studies and Education along with regional government agencies in planning, organizing and implementing a major conference at the University Continuing Education Center on the problems of the refugees. Conference costs were met by the University and by the government.
11. Representatives from government, university and private agencies attended a joint seminar on ~~Energy~~ Needs and Utilization.
12. Ford Foundation assisted in support of planning, organizing and implementing conference and seminars on community development and similar topics.
13. Faculty research projects under the research committee of the University continued with special emphasis on agricultural research, including livestock, farm crops and agricultural engineering applications.
14. The Senior Agriculture Advisor carried on successful experiments in growing quality tomatoes. Experimental plots produced over three tons of top grade tomatoes. Seeds produced from the best of these tomatoes were distributed widely by the government.
15. Two Nigerian senior staff members now working in the extension program joined the Extra-Rural Division. The new Continuing Education Center is now administered and operated by three senior Nigerian staff members.
16. The Junior Technical Engineering Society (JETS) program was enlarged. Members of the Engineering Faculty together with Continuing Education Center personnel developed teaching resources for use with secondary school engineering students.
17. New postal facilities were made available to students at the Ibadan campus.
18. The Faculty of Business moved to the Ibadan campus to bring it into closer contact with the business community.

COLLEGE OF EDUCATION, UNIVERSITY OF LAGOS (FEDERAL ADVANCED TEACHER'S COLLEGE) - 730

The College now in its sixth year is a stable institution; it has merged with the University; primary construction has been completed; the curriculum is well organized; the Nigerianization of the faculty is almost complete; and three classes have graduated. Specifically, some of the accomplishments are as follows:

1. In 1966, one hundred and sixteen graduates received the Nigerian Certificate of Education. In July 1967, of the 123 students examined, 109 successfully passed the Nigerian Certificate of Education.
2. One hundred and eighty students were admitted to the college for the 1967-68 school year. For the first time, physical education was included as a major subject area. Twenty applicants were selected for the physical education/biology program.
3. UCLA/USAID assistance to the development of the library phased-out with the departure of the contract librarian in May, 1967. During the period of assistance, basic holdings were purchased, work books, hand books and manuals were developed and a competent Nigerian library staff was developed. From January, 1966 to January, 1967 the library staff accessioned 5,786 and processed 5,331.
4. The Communication Media Center made excellent progress during 1966-67. An additional viewing room has been provided as well as an air-conditioned storage area for films and supplies. Educational films and materials valued at approximately \$21,247.70, and \$9,010.21 worth of equipment have been acquired.
5. Two hundred and ninety-six students received training in the use of audio-visual aids during the first quarter of 1966, 136 received similar training in the second quarter. Audio-visual workshops for primary and secondary teachers were administered during August and September of 1966.
6. Nigerianization of the staff is almost completed with a total of 39 Nigerians. During the past two years the college has made tremendous strides in building a competent and professional staff. All departments are adequately staffed with Nigerians with the exception of Mathematics.
7. A Nigerian has been serving as chairman of the Education Department for two years. Syllabi which were developed for all courses are reviewed periodically.
8. A total of 231 second and third year students participated in the student teaching program during the second and third quarters. The second year students completed five weeks of student teaching, and third year students, six weeks.

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9. In the Mathematics Department, drastic revisions in upgrading the mathematics syllabus were made. The instructional program underwent a thorough evaluation.

10. By decree, the Federal Advanced Teachers College merged with the College of Education, University of Lagos in April, 1967. The former dean, Faculty of Education, is now the dean of the new College of Education while the former principal EATC is now the Secretary in charge of administrative affairs for the new college. The new College of Education will be in full session during the 1967-68 school year.

ADVANCED TEACHERS COLLEGE OF EDUCATION, IBADAN (OLUNLOYO) - 731

Seven educators from Ohio University continue to assist in the development of the Olunloyo College of Education (Advanced Teachers College) through the expansion of the college's advanced-level teacher training program and the preparation of personnel for the complete Nigerian staffing of the college by 1968.

Four members of the contract team continue to cooperate with the Ministry of Education in the implementation of the in-service training program and the preparation of counterparts for the assumption of full responsibility of the program by the summer of 1968.

Two additional advisors have assisted in upgrading the commercial teacher education programs and developing programs for use in the secondary schools. These two educators have completed their tour of duty. With their departure, Ohio University assistance to commercial education was phased out. Major accomplishments during the reporting period are as follow:

1. The advanced teachers training program was expanded and strengthened to include a general science program in addition to the existing programs in physics, chemistry, and biology. The mathematics curriculum and instructional program was upgraded. One hundred two students graduated from this program in January 1967.

2. The commercial program was upgraded from the Grade I level to the NCE level. A plan for revising the curriculum has been developed. Two participants completed training in commercial education. The Ohio commercial staff completed the inspection of the programs of secondary schools in Western Nigeria. Approximately 2,000 secondary school-leavers' Commercial Certificate Examinations were processed.

3. The in-service education program has expanded, both in numbers of centers and in numbers of workshops, vacation courses, seminars, and like activities. Major efforts centered on the preparation of Nigerian counterparts to carry on the program upon the termination of AID assistance. The Ministry of Education has created a position for an in-service education director and twelve full-time in-service assistants to work in the field. More than 10,000 teachers utilized the facilities of the Centers and libraries and participated in the various types of available programs. In addition, an undetermined number of teachers were reached by the televised in-service education series.

4. Two additional volumes in the Accounts for Schools and Colleges series were published.

KANO TEACHER TRAINING COLLEGE (ADVANCED TEACHERS COLLEGE AT KANO) - 732

Nineteen Ohio University specialists continue to assist in the development of the College.

The major accomplishments during this reporting period are as follows:

1. The acquisition or improvement of commodities and other resources continues:

- (a) the college moved into the completed portions of the new campus;
- (b) the Kano In-service Education Center building was enlarged;
- (c) two additional in-service education centers were established;
- (d) a closed-circuit educational system was completed;
- (e) approximately 1,000 library books were acquired, bringing the total number to 8,000; and
- (f) additional instructional materials and materials development equipment, including an off-set press, films, slides, transparencies, and similar items, bringing the total number of audio-visual aids to near 500, were acquired.

2. Ohio staff members completed the writing of a five-year correspondence course of study in English and arithmetic for use by the Ministry of Education in-service education program. Two series of radio programs for teachers were completed and broadcast by the Ministry of Education. Eight vacation courses were conducted for teachers. Other afternoon, evening, and Saturday classes continue to be held for teachers at the in-service centers.

3. Six Nigerian educators started training at Ohio University in September 1966. The total number of participants who have completed training or are at Ohio now is seventeen.

4. Curriculum development continued on both the advanced level (III) and at the Grade II level:

- (a) All syllabi and specific class requirements for the major and minor subject matter areas in the three-year NCE program were completed;

- (b) Syllabi for a two-year Grade II program for holders of West African School Certificate (WASC) were developed; and
- (c) Syllabi and course outlines for the five-year Grade II program were revised and refined.

5. Student enrollment in the Grade II programs have continued to increase with 30 in the two-year program and approximately 300 in the five-year program.

6. Several thousand teachers were reached through the various in-service activities; 2,000 are enrolled in correspondence courses; 750 are participating in the various courses organized at the in-service education centers and materials development facilities; and an unknown number continue to benefit from the radio educational radio series.

MODERN AIDS TO EDUCATION - 208

During most of the past year, activity in the M.A.T.E. project proceeded along the established lines of producing experimental lessons in selected subjects for broadcast by radio and television, and utilizing these lessons in actual classroom situations. Tests are given to participating pupils at the end of each term to measure the effectiveness of using radio, television, and conventional methods in the learning process.

Progress has been varied at the four centers of project activity located at Kaduna, Lagos, Enugu and Ibadan. This variance was caused by local factors. (i.e., ministry support, technicians' abilities, the political situation, etc.).

The project activity at Ibadan was phased out earlier than scheduled due to non-support by the Western Ministry of Education. Project activity at Enugu was terminated because of political and military disturbances. Activities in Lagos State and Kaduna continued as planned.

Progress has been most notable in the Kaduna activity. In the North, two full terms of experimental lessons have been broadcast by radio and television to cooperating "control" schools. The current series, initiated in mid-September, 1967 for the third and final term, is expected to be completed by December.

A draft outline for a final report to be completed in mid-1968 has been developed by the Contractor (Board of Education, Washington County, Md.) together with officials of USAID and the Ministry of Education at Kaduna.

EDUCATIONAL BOOK PROGRAM - 723

1. This project, during the reporting period, moved closer to termination as a countrywide project. It is anticipated that with phase-out in March 1968 the project will develop into a regional activity under the sponsorship of various donors including AID.
2. Franklin Book Programs, Inc., a New York non-profit organization, continues to serve as the project's implementing contractor.
3. During the period, consultations were opened with the Federal Ministry of Education to map out a five-year plan for book and library development throughout Nigeria. This plan includes the establishment of a network of libraries for the country and the preparation of 100 text and supplementary books for school use.

4. Three writers workshops had to be postponed due to country conditions. They were scheduled to be held at the University of Lagos, University of Nigeria, and Ahmadu Bello University. Four workshops were held during the previous period in each of the four regions.

5. During the year the third annual convention of the Nigerian Publishers Association, a USAID assisted professional group, was held at Ibadan. 28 Nigerian publishers convened to discuss matters relating to the development of this new industry, including a project to sponsor the publication of a Nigerian Books in Print for circulation throughout the world book market.

6. Franklin offices in Nigeria continued to review and edit manuscripts completed by individual Nigerian writers. Seven titles were published by local private publishers. Twenty-one book manuscripts had reached final editorial stages and some have already been accepted by private publishers at the period's ending.

TEST DEVELOPMENT AND RESEARCH - 746

The following represents the progress to date during FY 1967:

- A. Thirty-seven tests were developed for educational institutions and thirteen Public Service and Professional Examinations.
- B. Seventeen research projects were completed:
 - 1. Survey of Secondary School Selection Procedures in Nigeria.
 - 2. Management Selection Study.
 - 3. Northern Nigeria Teacher Education Project Evaluation.
 - 4. Comparative Study of the Papers of the Northern Nigeria Common Entrance Examination.
 - 5. Development of System for Annual Evaluation of Secondary School Selection.
 - 6. Standards of the West African School Certificate.
 - 7. Scholastic Aptitude Test for University Selection.
 - 8. Item Selection Study.
 - 9. Modern Aids to Education Evaluation.

10. West African School Certificate Study on Scoring Formulas.
 11. Afro-American Institute Scholarship Selection Study.
 12. Validity of Current Entrance Selection, University of Nigeria.
 13. Yaba Trade Center - One and Two Year Follow-up.
 14. Factor Analysis of the I-D Tests.
 15. Common Entrance Examinations Statistics.
 16. Validity Study at Comprehensive High School - Aiyetoro.
 17. Entebbe Mathematics Project.
- C. Over one million tests were administered to over three hundred thousand candidates.
- D. One participant was in training in FY 67 and is expected to return in December 1967.

EDUCATIONAL PLANNING AND ADVISORY SERVICES - 747

1. Phase out of the Education Planning and Advisory position in Eastern Nigeria was accomplished in June 1967. A viable Educational Planning Unit in the Ministry of Education was established and fully staffed with Nigerians, consisting of a professional core of three planning officers and a support staff of 21 administrative assistants, secretaries, clerk-typists, and file clerks. The Planning Unit has the training skills and competence to conduct basic educational research, collect and interpret data, and make short and long-range educational preparations.
2. The Education Advisor in the North, ^{serving} ~~acting~~ as the USAID professional education representative, ^{and} is concerned with all USAID educational activities in that area, and serves ^{as} ~~as~~ liaison officer in the Ministry for all education matters.
3. The Education Planning and Advisory staff, not directly engaged in project activities, monitors all USAID education projects and provides planning and advisory services to all Ministries of Education, Nigerian universities, and other major educational institutions.
4. The Education and World Affairs (EWA) contract AID/afr-285 completed the following reports in final form during the period:

- a) Analysis of Human Resource Development and Utilization in Nigeria, Summary and Conclusions ;
- b) Education Training and Employment in Nigeria ;
- c) The Cost and Financing of Education in Nigeria ; and
- d) Toward the Development of New Employment Oriented Educational System for Nigeria.

5. Participant Activity - Two students returned in FY 1967. One is employed as an Education Officer; the other's present employment is not known. One participant left for training in FY 1967. He is expected to return in September, 1970.

Three additional participants were in training from the previous fiscal year: one is to return in February, 1968; two others in August, 1968.

PUBLIC SERVICES TRAINING AND STAFF SUPPORT - 214Participant Training

From FY 1959 and through FY 1967, a total of 235 Nigerians have received training in the U.S.

U.S. training has now been provided for officers from all of Nigeria's Regions and the Federal Government.

The impact of this program has reached into high levels of the Nigerian public service. Past surveys have indicated that eleven people who have received U.S. training have achieved the rank of Permanent Secretary. A good many of the returnees have occupied significant middle or high-level positions, such as: Director, Federal Survey; Administrative Officer, Premier's Office; General Manager, Nigerian Railway Corporation; and Chief Water Engineer, Ministry of Works. A large number of participants have received promotions since returning to their posts in Nigeria.

Operational Staff Support

This component, started in 1965, has made slower progress. Currently, three U.S. technicians are serving in Nigeria under a salary topping off arrangement:

- (a) one is an advisor in Communications Media to Ahmadu Bello University's educational audio-visual operation;
- (b) a second is serving as an advisor to the newly ~~newly~~ established Information and Promotion Center. This post is particularly significant in Nigeria's plans to encourage and facilitate ~~some~~ expansion of private industry as a major part of its long-range economic development and progress; and
- (c) the third is serving as Principal Fisheries Officer in the Ministry of Agriculture and Natural Resources.

Although experience is still rather limited, it appears that the foregoing arrangements are working out satisfactorily for all parties.

It is anticipated that requests for similar ~~xxx~~ salary-topped U.S. officers will increase over the next several years, particularly in view of the recent creation of states.

ZARIA INSTITUTE OF ADMINISTRATION - 7401. Participants

- (a) Two participants completed their study toward Masters Degrees in the U.S. and have returned to the Institute as members of the staff.
- (b) Seven Nigerian staff members were ~~selected~~ ^{selected} for training in the U.S. and departed in April and August 1966. These are all scheduled for Masters Degree programs and should return to their teaching assignments in February and November 1968.
- (c) Two staff members departed for the U.S. to enter training during FY 1967.
- (d) Five participants are in the process of being selected for study beginning in September, 1968.

2. Organizational Structure of the University

The contract team was instrumental in the reorganization of the Institute of Administration into the Faculty of Administration with Departments of Business Administration and Public Administration, effective January, 1967. This was a significant achievement and materially ~~xxx~~ raised the status of those departments within the organizational structure of the University. The Pittsburgh Chief of Party became the first Dean of the Faculty of Administration.

3. Planning

The contract team is assisting materially in developing the University's quinquennial plan (1968-1972), particularly that portion dealing with the Faculty of Administration.

4. Students

- (a) Forty BA degrees from the Faculty of Administration were awarded in June, 1967, and twelve in the diploma program. This reflects an increase from a total of 21 degrees and diplomas awarded in 1966 and 35 in 1965.
- (b) Sixty-two new applicants for the Degree program have been admitted to the Faculty of Administration for the academic year beginning in October, 1967. This, too, shows an ~~increase~~ increase over the intake of 1966.

ECONOMIC DEVELOPMENT AND PROJECT PLANNING - 756

A direct-hire AID economic advisor arrived in July 1965 to help set up a Project Planning Unit for the Government of Midwestern Nigeria (MOPW). During his two year tour, the advisor produced three major project appraisal reports (Rubber Estate Project, Small Holder Cocoa Estate Project, Child Health Center Project) and carried out cost-benefit surveys of various projects in the educational and transportation sectors. In addition, he completed an economic appraisal of the Benin Drainage Project.

FACULTY OF BUSINESS AND SOCIAL STUDIES - UNIVERSITY OF LAGOS - 739

1. The Faculty of Business and Social Studies, reorganized in October, 1966, now consists of three units — The School of Social Studies, the School of Administration, and the Continuing Education Center. The first Nigerian Dean, a well-qualified and experienced person, heads this new Faculty. New York University staff members serve as heads of the Department of Business Administration, the Department of Accounting within the School of Administration, and director of the Continuing Education Center.
2. During the 1966-67 academic year, 344 students were enrolled in the Faculty of Business and Social Studies. 51 graduated in July, 1967 with BA degrees. Approximately 360 students are expected to enroll during the 1967-68 academic year.
3. The Continuing Education Center has made sufficient progress in becoming an integral part of the University structure. Classes are conducted at the Center for persons in Business, Government and other professions. The Center now has its own budget and is scheduled to move to larger quarters during the current academic year.

The University has also begun recruitment for a counterpart to the NYU staff member to be assigned as Deputy Director for the Center. This person will take over as Director when the NYU staff member leaves in July, 1968.

4. Ten Nigerians have been scheduled in the participant training program under this project. (one participant has returned to the U.S. to obtain a Ph.D). Two completed their studies and have returned to teaching assignments at the University. Seven participants are currently in training in the U.S. Of these, four are expected to obtain Masters Degrees in Business Administration and ~~will~~ return to teaching assignments at the University of Lagos in January, 1968. Two are scheduled to return in August 1968 with ~~the~~ Ph.D. Degrees. The seventh, a doctoral candidate now studying under private financial arrangements, should complete his studies sometime during 1968.

5. The Faculty of Administration library was increased during the year by 752 books treating such fields as business administration, accounting, economics, finance, management, and marketing.

ELECTRICITY CORPORATION OF NIGERIA-TECHNICAL & MANAGEMENT TRAINING
& ADVISORY SERVICES - 759

1. J.G. White advisors supervised on-the-job training programs (about 4 $\frac{1}{2}$ months) for 40 ECH Nigerian technical employees in the use of U.S.-manufactured electrical utilities.
2. Pre-commissioning tests of the Lagos-Ughelli high tension line have been performed.
3. Tests on the Kaduna-Zaria-Kano line were performed. These tests revealed certain deficiencies and inadequacies which had to be corrected before the line could be considered operational.
4. Personnel to be assigned to the Kaduna-Zaria-Kano line have been trained.
5. During FY 1967, one member of the Contractor's field team, the Management Specialist, completed his one-year tour of duty. A second member, the Relay Engineer, returned to the U.S. before the end of his two year tour for personnel reasons.

INDUSTRIAL PLANNING & PROJECT APPRAISAL - 761

Accomplishments under the Arthur D. Little (ADL) contract during the reporting periods are as follows:

- (1) A number of general appraisals have been completed for the agricultural sector. These appraisals serve to identify the most promising products for future development.
- (2) A study of the metal-working industries initiated under an earlier ADL contract continues.
- (3) Three government-owned industrial enterprises have been analyzed, and measures designed to minimize losses have been recommended.
- (4) The organization of a Government Planning Unit has been completed and is partially staffed. Counterpart training has started.

- (5) Aspects of industrial problems and projects submitted to ADL by the Ministry of Industry for review include: duty relief and ~~import~~ tariff protection on tires; building material production; establishment of a phosphate fertilizer plant; and the viability of a vehicle assembly plant.

INDIGENOUS INDUSTRY DEVELOPMENT - 714

Industrial Development Center (IDC) - Owerri

1. Participant Training.

- a. One participant has completed US training and returned to post;
- b. One is in training in the US; and
- c. Three have been prepared to begin training.

2. Consultations to Incipient and Established Small Industries.

Over 1700 consultations to Nigerian entrepreneurs took place in the field and at the IDC. These consultations provide the catalyst for IDC services to entrepreneurs.

3. Advisors at the IDC have assisted in the following:

- a. The beginning of a small aluminum casting plant (Jimex Pack Co.);
- b. The initiation of a bookkeeping system (Two Brothers Mechanical Workshop);
- c. The selection and installation of machinery for three businesses (Ohoh Iron Works, Anka Cooperative Wood Carving Industry, and the Modern Cabinet Company);
- d. The establishment of four woodworking plants (Orlu Cooperative Woodworkers Society, Limited, Eastern United Furniture Company, Isojob Furniture Company, and Ukawoods); and
- e. Shoe manufacturing production problems.

4. New Product Development.

The following products exemplify those ~~products~~ demonstrated to entrepreneurs for use in or for production:

- a. Wheel bearing puller
- b. Low cost electric welder
- c. Tooled leather products
- d. Bedspring production tools
- e. Hooked rugs
- f. Hooked rugs hand machine
- g. Small iron smelting furnace
- h. Permanent casting molds
- i. Modern design furniture

5. Seminars.

Approximately 40 weeks of seminars have been held on new products, production methods, the use of production tools and techniques, bookkeeping methods, marketing and sales techniques.

6. IDC Construction.

The textile building has been completed and is in partial use. The conference hall and library are complete and in use. The dormitory (48 beds and dining area) is about 40% completed. An addition to the Leatherworking Department is 80% complete (GOLEI funds).

Industrial Development Center (IDC) - Zaria

1. Seminars were held on production methods, bookkeeping, marketing, sales and management techniques.
2. Over 200 consultations to new and ~~existing~~ established small industries took place in the field and at the IDC.
3. New product development has been initiated. An improved gari grater has been designed, ^{tested} and a prototype is now being built. Since gari processing is a widespread industry in Nigeria, small-scale improvements of this type can become exceedingly important if an increase in food production is ultimately effected.

4. It should be pointed out that progress toward planned targets at the Zaria IDC has been slower than at the Owerri IDC due partially to existing buildings presented to the latter upon initiation of the project.
5. New IDC construction. Shop buildings are about 90% complete, and the machinery is being installed as it arrives.

INDUSTRIAL MANAGEMENT & TECHNICAL SERVICES - 712

1. Publications

- a. The readership of the bi-weekly Industrial Newsletter, originally 500 when first published in September 1963, increased to 3,600 in July 1964, 5,600 in July 1965, 7,200 in July 1966, and 9,600 in July 1967.
- b. The bi-monthly Woodworking Newsletter, originally sent to 500 recipients in October 1964, had a circulation of 700 in July 1965, 1,000 in July 1966, and 1,000 for June 1967.
- c. A Shoemaking Newsletter (published first in July 1966) and Automotive Newsletter (published first in September 1966) were originally sent to 500 recipients. By June 1967, both periodicals had a readership of approximately 750.

2. Technical Inquiry Service

During FY 1965, over 500 Technical Inquiry Service inquiries were submitted to AID/N; in FY 1966, over 700 were submitted. One hundred eighty-nine inquiries were submitted during FY 1967 with no future substantial expansion anticipated.

3. Correspondence Course Project

This project started in October 1964 with 64 students. Of this group, 19 have satisfactorily completed the courses, 28 are continuing and 25 have dropped out. According to AID/N and officials of the two private US correspondence course schools conducting the training, this performance compares favorably with the norm established by students in the US.

4. Management Training

Twenty five Management Seminars, with an average attendance of 41 per seminar since the inception of this project, have been conducted for middle and top management level representatives of Government Ministries, statutory corporations, and private enterprise. This program will be merged with the Nigerian Institute of Management programs.

EASTERN NIGERIA HOUSING AND HOME FINANCE - 711

The project, as originally designed, was successful in achieving its specific objectives and was phased out at the end of FY 1967.

The Savings & Loan Division of the Eastern Nigeria Housing Corporation (ENHC) is now a viable unit operating an efficient program. Professional ENHC engineering and architectural staff are on the job and capable of performing at a competent level. The ENHC's ability to plan and construct housing estates has been admirably demonstrated at the Trans-Amadi site, Port Harcourt.

Financial Activities - Savings and Loan

The growth of savings deposits, and in long-term loans to home buyers has remained steady and consistent.

	<u>Savings Deposits.</u>	<u>Loans.</u>
30 September, 1964	₦ 21,701	None
30 September, 1965	90,103	₦ 63,749
30 September, 1966	180,254	331,040
30 April, 1967	234,919	495,556

(US \$ 667,773) (US \$ 1,387,556)

Depositors number about 4500. GORN guarantees each depositor up to ₦3,000 (\$24,00). Borrowers number about 800. The interest rate is 8% which is about the average charged by banks on secured commercial loans.

Estate Development

To May 31, 1967 the ENHC had ₦1,505,000 (US \$4,214,000) available for housing estate development. Sources included allocations from the GOEN (\$3,110,000), and interest - free loans from Shell-BP Petroleum (\$168,000) and the Nigeria Petroleum Refining Co. (\$336,000).

Using the available funds, the ENHC has developed seven estates ^{and} constructed 902 dwellings (mainly in the Port Harcourt and Enugu areas) with an additional 214 units under construction. Except for 99 rental units, the remaining 803 dwellings have been constructed for sale and have been sold to Eastern Nigeria citizens. Finally, 1582 vacant plots are in various stages of site development, including water and sewer facilities.

Of the 902 dwellings constructed, 558 or 62% have been sold to low income workers earning ₦200 (\$560.00) or less per year. This represents the first time that dwellings in this price range have been constructed in Nigeria for sale to the public, and also the first time that substantial dwellings in this price class with facilities such as shower bath, flush toilet and sewerage facilities have been constructed for sale.

Previous to the organization of the ENHC, housing in Eastern Nigeria was constructed only upon individual order, and then only upon payment of the entire construction costs in advance. For the low-income worker this meant that only after a lifetime of savings, and perhaps not even then, would there be sufficient funds to purchase a plot and construct a dwelling.

The record of accomplishment of ENHC is further impressive in that the ENHC has been the means of establishing a new industry in the Eastern Region, namely, an indigenous housing and home finance industry which, in the long run, will provide a stimulus to the economy of the area.

All senior staff members of the ENHC have learned much concerning the laying out of estates, the installation of amenities, the advantages of competitive bidding and mass purchasing, and the types of dwellings Nigerians design. They are now prepared to do long-range planning of estates in order that there will be areas ready for the construction of dwellings.

It is also significant that several investors are known to have acquired tracts of land either adjacent to or near the estates developed by the ENHC, where they will either subdivide the areas or subdivide and construct dwellings. In either case the ENHC has given them the inspiration for development.

SPECIAL SELF-HELP & DEVELOPMENT ACTIVITIES - 7571. Completed Activities Approved in FY 1966 and FY 1967(a) Okpe Bridge - 66/32/16 (E)

The village of Okpe derives its income from the sale of agricultural goods in the Ugoja market which can be reached only by crossing a fairly large river. Several wooden bridges that have been built by the villagers have washed away. During 1965 the townspeople raised a few hundred pounds toward the construction of a new bridge. USAID was requested to assist in the purchase of building materials for the construction of the bridge and to this end obligated \$1,900 in FY 1965. However, when USAID engineers were called in to monitor construction they decided a wooden bridge would be impractical and recommended that a steel bridge be constructed. USAID contributed a total of \$3,990 to fund the steel bridge as well as the drawings of the structural details. The villagers provided labour and other materials.

(b) Otwa Bridge Project - 66/116/7 - (100)

The objective of this activity is to provide assistance in completing the construction of a bridge at Otwa (pop. 21,000). The completion of the bridge would facilitate the transportation of goods and people. In 1959-60 work on the bridge was initiated by the townspeople who have provided \$2,300 and contributed all the manual labour. Construction of the bridge was halted in 1963 due to lack of funds. USAID contributed \$4,379 along with a Ministry of Works contribution to provide construction materials for the bridge.

(c) Dispensary/Maternity Center, Okage - 66/109/10 (100)

The objective of this activity was to build a combination dispensary-maternity center for the village of Okage, located twenty miles by bush path from the nearest hospital. A registered nurse who lives in the village is to provide basic medical needs. A doctor, living 40 miles from Okage, has volunteered to serve as an advisor during construction and will visit the center once a month to take care of serious medical problems. The total cost of the project is \$975 of which the village has raised \$600 and will contribute the land and all labour. The USAID contribution of \$1,051.64 provided construction materials.

(d) Dug Wells at Bakatari - 66/113/13 (N)

Two dug wells have been constructed in Bakatari Village to supply water to the village during the dry season. The Village Council administered the project. The local people contributed ₦10, all labour, and hand tools. The USAID contribution (\$297) provided concrete pipe for casing the well, casing for a cover and a simple water lifting device consisting of a bucket, rope and spindle.

(e) Ajasa Grammar School Dam - 66/114/9 (N)

The USAID contribution (\$429) for cement, concrete blocks and steel assisted the townspeople in raising a dam at Okeagbe to supply the Grammar School with basic water needs. Okeagbe is situated on a high plateau with an inadequate water supply. For three months each year the townspeople and the students at the Grammar School have to walk a round trip of three to six miles each day in order to secure water. The Principal of the school organized the construction of a dam and reservoir to provide water throughout the dry season. In raising the dam the students and townspeople provided the labor and a construction supervisor.

(f) Classroom Roof, Oshunde - 66/116/6 (N)

This activity involved the replacement of a roof blown off during a storm in the vicinity of the St. Barnabas Anglican Church primary school. The school has 300 students. The cost of replacing the roof was ₦300; the townspeople raised ₦200. USAID contributed ₦100 for construction materials needed to complete the roof.

Upon completion of the roof, the community then decided to renovate the walls. This project has been completed also.

(g) Hospital Road, Kabba - 66/129/3 (N)

The purpose of this project was to stabilize 4,800 feet of road to prevent erosion, and to construct an adequate drainage system to establish a firm road. The road leads to a 60-bed hospital recently opened in Kabba, a town of approximately 23,000 people. The road is one of the main arteries for the town's traffic.

The people of the community dug the drainage ditches, spread laterite, poured concrete and installed the culverts. The Native Authority provided shovels, diggers and other tools. The USAID contribution (\$1,194) provided laterite, concrete, cement reinforcing rods, miscellaneous equipment, and financed the rental of a grader.

The road serves not only the hospital but the entire area in that community.

(h) Classroom Building, Kagarho - 66/140/5 (H)

The Catholic Mission in Kagarho District has been carrying out a program of community development. The Mission has obtained the services of a nurse, social worker, and a domestic science advisor from Germany to conduct courses for female village leaders in hygiene, child welfare, domestic skills, vegetable gardening and home crafts. The USAID contribution (\$2968) provided construction materials for two classroom buildings. The men in the district provided unskilled labor; the women collected sand and made the blocks. The local people provided funds for the cost of skilled labor.

(i) Itaosi Dam Bridge - 66/148/11 (W)

USAID provided funds (\$1,027) for cement, steel rods and aggregate in the construction of a dam-bridge on the Itaosi River seven miles from the Ilora Farm Settlement. A road has been built approaching the Itaosi river from both sides. A river crossing at Itaosi would complete a main access route that would connect Itadan, Igaiya, Imini Itaosi, Ilora, and Oyo. The bridge allows the villages mostly farmers to market their products more ~~cheaply~~ cheaply and conveniently. It also allows 60 more children to attend the school established by the villagers - these children were ~~previously~~ previously unable to attend school during the rainy season. An attempt was made by the villagers to build a bridge in 1962 but due to faulty planning the bridge washed out.

The villagers levied a tax on themselves in order to start the construction and provided all the labor.

The villages are now constructing a fish pond above the dam to provide fish for sale.

(j) Small Dam, Odedoyo - 66/149/12 (W)

A USAID contribution (\$477) provided a bulldozer in assisting the villagers to construct a dam at Odedoyo designed to increase the water supply that becomes very critical during the dry season. The income of the village is derived primarily from agriculture (the crops include cocoa, oil palm, citrus, maize, vegetables, yam, cassava, plantain and bananas). A small number of poultry, sheep and goats are kept. The village has a population of approximately 10,600.

The ~~local~~ village ~~organization~~ organization located a suitable site for a small dam and cleared the site with local labor. The village contributed all labor and land. An Agricultural Assistant was posted at the village to assist in supervising construction.

(k) Community Tools, Oshun Division - 66/152/14 (E)

At the time this proposal was submitted to USAID, two Peace Corps Volunteers were assisting twelve community development projects underway in Oshun Division. These projects affected approximately 8,000 people from twenty or more farming villages. Because of the lack of tools and equipment, the Volunteers proposed the establishment of a Community Development Tool Pool from which tools could be borrowed and used at the various sites. The local people involved in the community development projects provided voluntary labour in the construction of several roads and community farms. A USAID contribution (\$787.50) provided the required tools.

The twelve community development projects were completed.

(l) Tools for Afikpo Division - 66/160/20 (E)

This activity was implemented in response to a ~~request~~ ^{request} for a supply of tools for use by a number of communities participating in the rural development program in ~~Afikpo~~ Afikpo Division. Four pilot communities ~~are~~ ^{are} engaged in clearing bush for the community farms and constructing approach roads by community labour. A stock of tools is kept at Divisional level to be loaned under the supervision of the Divisional Officer. A USAID contribution (\$858) provided the required supply of tools.

The projects for which the tools were requested were completed.

(m) Motor Park and Market, Orerokpe - 67/146/1 (W)

Orerokpe, ~~is~~ a central area in the Western Urhobo District, ~~but it~~ did not have a market motor park.

The self-help contribution consisted of land and labor including bricklayers and carpenters.

USAID contributed \$1964 (\$699) to finance the procurement of construction materials (cement, gravel, pole lines, planks, zinc sheets).

The market was officially opened in April, 1967.

(n) Completion of Maternity Center, Usiele - 67/163/5 (HW)

The community of Usiele had an incomplete maternity center currently being used by the villagers and people from the surrounding area. The Catholic Mission in Ughelli is providing the services of a midwife and assistant.

The self-help contribution consisted of monetary contributions and labor, including masons and carpenters.

USAID provided \$280 (\$100) for the purchase of building materials needed to complete the structure.

(o) Road and Bridge Construction, Ojo Village - 67/168/7 (W)

This project involved the construction of a road and bridge to connect Ojo Village with Ajejanle, Apapa. These new constructions afford an expanded market for agricultural produce for both villages.

The self-help contribution by both villages consisted of all labor and building materials for the project. The Ministry of Economic Planning of the Western Group of Provinces provided technical supervision.

The USAID contribution (\$289) provided basic construction tools and the services of a bulldozer and operator.

This completed project was started last August by a group of American ~~Some~~ Crossroaders. Upon the departure of the Crossroaders the villagers requested assistance from USAID to complete the construction.

(p) Market Place at Uamba Achi and Water Storage Tank, Ojinato - 67/169/2 (E)

Ten members of Operation Crossroads Africa ~~have~~ assisted these two communities in improving their market and water supply, respectively.

and \$95,

The self-help contribution consisted of certain construction materials and labour. The communities of Uamba and Ojinato ~~has~~ raised \$75/ respectively, for their projects. Also, there were about 12 Public Health Inspectors working at these sites.

USAID contributed \$560 (\$200) to purchase the additional construction materials needed to complete these projects.

(q) Completion of Town Hall, Orobo - 67/171/4 (E)

The object of this project was to complete a town hall for the village of Ikot Abia, a farming community of 2,000 people.

The self-help contribution consisted of the provision of the land, labor, sand and gravel.

The USAID contribution (\$850) provided the materials necessary to complete the construction.

(r) Community Oil Palm Farm, Imilike - No. 67/175/8 (E)

The people of Imilike community worked to establish an oil palm farm. The villagers intended to plant a 70-acre plot this year to use as a demonstration and instruction center. Ninety farms were involved in this activity.

The self-help contribution consisted of all labor and monetary contributions in payment for the land being leased by the village.

The USAID contribution (\$434) provided tools for clearing the land and planting and maintaining the farm.

As of July 1967, the oil palm farm had been established.

(s) Poultry Project, Sabonsidda-Ora - No.67/178/15 (W)

Twenty-five farmers organized a Poultry Farmers' Society to start a poultry business to sell eggs.

The self-help contribution consisted of land, labor, some equipment and a monetary contribution of ₦90 for the construction of a poultry building which has recently been completed.

The USAID contribution (\$578) provided 500 laying pullets.

All the pullets have been housed.

(t) Bridge Construction, Obinkita - No.67/181/11 (E)

This completed project involved the construction of an adequate bridge at Obinkita to connect a compound of 500 people with the rest of Obinkita and to make the Obinkita-Anokomin road, on which the present bridge lies, a serviceable one. The self-help contribution consisted of labor, sand, gravel, and a monetary contribution of ₦30.

The USAID contribution (\$280) provided cement and lumber.

(u) Vehicular Bridges, Fagbohun - No.67/182/9 (W)

This project involved the construction of two vehicular bridges, one having a 9-foot span and the other a 12-foot span, to provide farmers with lorry access to the nearest market. The bridges are of direct benefit to about 2,000 people.

The self-help contribution consisted of labor and a ₦200 monetary contribution. Disengoff Ltd., Ibadan, provided a cement mixer and operator, and transportation of gravel and expanded metal.

USAID provided \$372 (₦133) for steel, expanded metal, and cement.

(v) Visual Aid Cases for Auro and Moor Plantation Schools of Agriculture - No.67/191/13 (W)

USAID provided materials needed in constructing 470 visual aid cases made by Agricultural Assistants and Superintendents (during their free time) in training at the foregoing Schools of Agriculture.

These cases are to be used by 235 trainees in employing visual aids to help ~~communicate~~ communicate new ideas to farmers more effectively. The remaining 235 cases will be made available through a supervised loan program to other field extension workers, farm settlement and ~~institute~~ institute instructors, school of agriculture lecturers, Peace Corps Volunteers, and USAID ~~institute~~ technicians.

The Ministry of Agriculture & Natural Resources is developing the visual aids for reproduction and distribution to users of the portable cases.

The 470 visual aid cases have been completed.

(w) Obio Ugiere Well - No. 67/195/16 (R)

This completed activity involved the construction of a well to alleviate the problem of water shortage during the dry season. (During the dry season only a two-inch deep twenty-foot wide water pool is available for this village of about 7,000 to meet its water requirements.)

The self-help contribution consisted of 472 and 25 cubic yards of sand and gravel for the well lining.

USAID provided funds (\$143) for the purchase of cement and reinforcing rods for the construction.

2. Other Activities Approved in FY 1966 and FY 1967

(a) Ilorin Water Supply - 66/66/1 (W)

This activity involves the supply of two 60 Kw generators, from excess property, to provide standby power for the Ilorin temporary water supply project. A USAID contribution (\$16,104) also provided six pumps and meters for this project. A pipeline from the pumps located at a nearby river to the city reservoir was constructed by the Ministry of Works.

The pumps, meters and one generator have been in use for over a year. The installation of an improved water distribution system within the city by the Ministry of Works continues. The second generator has been shipped and is scheduled to arrive shortly.

(b) Farm Settlement Scheme, Ile-Oluji - 67/173/6 (W)

The primary objective of this scheme is the development of modern farming communities. It concerns the initiation of community projects in which the settlers can be involved. The ~~the~~ erection of a community hall is of paramount importance to the realization of this objective.

The self-help contribution consists of unskilled labor, the moulding of blocks, and monetary contributions towards the employment of skilled labor. The Ministry of Agriculture and Natural Resources is providing technical supervision, skilled labor, lumber and roofing.

The USAID (\$1884) contribution is providing cement, expanded metal and miscellaneous materials for construction.

The community hall is expected to be completed by mid-October.

(c) Poultry Co-operative Building, Kaduna - 67,68/176/12 (ii)

The Poultry Producers Marketing Organization is requesting assistance for the construction of a building for use by the organization. This organization could serve as the ~~the~~ pilot scheme for an established marketing service throughout the North.

The self-help contribution to the Marketing Organization would consist of the building site and all labor, equipment, or equivalent monetary contributions.

The USAID contribution of \$6,000 is to provide building materials. An itemized list of materials will be submitted to USAID upon completion of building plans and specifications by the Ministry of Works. The obligation of funds is contingent upon the following:

- (1) Acceptance of the Organization as a legal co-operative by the Ministry of Social Welfare and Co-operatives;
- (2) Supervision of the Co-operative's operations by the Ministry of Animal and Forest Resources (MAFR) in co-operation with USAID technicians;
- (3) Provision of the building site and all labor or equivalent monetary contributions by the co-operative;
- (4) Preparation of building plans and specifications by the Ministry of Works;

- (5) Approval of expenditures of USAID contributed funds by a representative of the MAFB and the responsible U.S. personnel
- (6) Review of detailed construction plans by the Mission to verify funding requirements and technical feasibility.

The Marketing Organization has been accepted by the Ministry of Social Welfare and Co-operatives as a legal co-operative.

Status of Approved Activities Located in the East (as of July 16, 1967) and the Midwest (as of August 20, 1967):

(a) Completion of Otua Grammar School - 66/106/8 (M)

USAID funds (\$4,322) were used to purchase construction materials needed to complete a ~~class~~ classroom block and dormitory for the School at Otua (pop. 21,000). The school was established in 1963 by funds amounting to \$1,600 collected from the community; this sum proved inadequate to complete the first two buildings - the classroom block was nearly completed, but the dormitory remained at foundation level.

The classroom block has been completed and the dormitory constructed to window level.

(b) Construction of Primary School, Odame - 67/161/3 (M)

Odame, a farming village of 1500, has no primary school. Approximately 120 children between the ages of 6 and 10 are not receiving instruction. A Catholic Mission already operating in the area is willing to supply teachers if a building could be constructed.

The self-help contribution would consist of the provision of the land, all wood necessary for construction, and labor.

USAID had approved \$730 (\$261) to purchase building materials, but the Ministry of Education did not approve the project.

Since the obligation of funds was contingent upon the approval of this project by the Ministry of Education, this proposal will be given no further consideration.

(c) Construction of Drainage System, Ayogwiri Village - 67/177/21 (7%)

The farming community of Ayogwiri, through the Village Development Committee, has requested assistance from USAID to carry on the construction of a drainage system adjacent to the main road, making it a serviceable one to allow farmers to transport their agricultural produce to three ~~markets~~ nearby market towns.

The self-help contribution by the villagers would consist of labor and \$100. The Ministry of Trade and Industry had contributed \$262 to hire a bull-dozer and finance the construction of one culvert box and ring.

The USAID contribution (\$1274) would provide construction materials and culvert rings for four culverts and 800 ft of cement walling.

The obligation of funds was contingent upon a review of detailed construction plans by the Mission (BNG). As of August, 1967, plans had not been received.

(d) Construction of Ivora/Iyanoh Motor Road, Ivora/Iyanoh - 67/179/20 (NM)

The four-mile motor road to be built by the Ivora/Iyanoh Development Committee would connect the two farming villages to two roads leading to the large markets of Ukpilla and Fugar. This road would allow for an expanded market for the produce of both villages.

The community self-help contribution would consist of labor and the service of a bull-dozer. Timber for the construction was donated by the local Council. The Ministry of Trade and Industry has provided the necessary tools and equipment.

The USAID (\$3864) would provide construction materials including cement, sand, and gravel.

The obligation of funds was contingent upon a review of detailed construction plans by the Mission (BNG). As of August, 1967, plans had not been received.

(e) Market Garden, Igbo Eze - 67/180/10 (E)

The Igbo Eze Multi-Purpose Cooperative, Ltd., consists of 25 school-leavers working since November, 1966, to develop a 25 acre market-garden. Produce from the garden will help alleviate

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the food shortage caused by an influx of refugees into this area. It is hoped that this farm can also be used for training students in rural development at the University of Nigeria, Nsukka.

The self-help contribution consists of all labor and land, approximately 100 acres. The University of Nigeria at Nsukka plans to donate several varieties of cassava, yams, and tomato plants. Cucumbers and corn are available for use in this project from the market at Enugu and the Ministry of Agriculture.

USAID contributed \$276 for the purchase of tools for clearing the land, maintenance, and gardening.

Work on this project had started before July, 1967.

(f) Ofafia High School Water Supply, Ofafia - 67/185/14 (b)

This activity involves the construction of a ground level impounding reservoir and pump system to improve the existing water supply to the high school. Currently the students must carry water over rough terrain from a spring $\frac{1}{2}$ mile from the school. (This school is a community-sponsored one.)

The self-help contribution consists of labor, \$134.18.00, and all sand and gravel necessary to complete the project.

The USAID contribution is providing a pump, pump fittings, a storage tank, galvanized iron pipe, and construction materials for an impounding ~~xxxx~~ reservoir.

Work on this project had started before July, 1967.

(g) Construction of Market, Okpe - 67/187/19 (b)

The Okpe Community Development Committee requested assistance from USAID to carry on the construction of a 200-stall market that would serve to improve the economy of the village by providing facilities for a larger market that could offer a greater variety of produce to attract more people to Okpe, an agricultural community of 7,000.

The self-help contribution consists of all labor and a monetary contribution of ~~\$\$\$~~ \$510. The Ministry of Works contributed \$60 for ring culverts.

The USAID contribution (\$1764) is providing ~~\$\$\$~~ sheets for the roof. As of August 20, 1967, 100 stalls had been completed.

(h) Obowo Cottage Hospital Water Supply, Obowo - 67/197/17 (E)

From the sale of palm fruits the people of Obowo collected \$10,600 to build a hospital. USAID provided \$1736.10 for the construction of a water supply system to consist of an engine, a pump, and 5,000 ft of piping. All labor was to have been furnished by the community.

Work on the project had started before July 1967.

(i) Women's Welfare Center, Benin City - 67/146/22 (34)

The Women's Welfare Center has been conducting a program since 1965 designed "to raise the standard of living of women".

Evening courses in English, sewing, infant/child welfare and cooking are offered. Officials from the Ministry of Economic Development and the Ministry of Education give periodic lectures on shopping and household economy, meal planning (including special preparations for the sick), hygiene, and nutrition. One-hundred and twelve adults are currently enrolled in this program.

To meet the needs of an expanding program, accompanied by an increasing demand for the services at the Center, plans for the construction of a building were made in 1966.

To date most of the construction has been completed through fund-raising activities of the Welfare Center and monetary contributions from the Midwest Government, the Community, ~~the~~ the Catholic Mission, and Misericordia (a West-German overseas development fund).

The self-help contribution by the Community consists of all labor, a contribution of \$350, a \$3000 pledge, nine thousand cement blocks, and all gravel as required. The Ministries of Land and Housing, and Works formulated the plans for the building and have provided technical supervision of construction.

The USAID contribution is providing roofing and electrical wiring.

As of August 1967, the roofing had been completed; the installation of electrical wiring/well underway; and classes were being held at the Center.

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(j) Completion of Ezinifite Maternity Home, Ezinifite - 67/208/18 (E)

A USAID contribution is assisting the Ezinifite - Amaekulu Development Committee in completing a maternity home which will serve over 10,000 people.

A community contribution to this project of 1060 was used to obtain the site, clear the land, fill the foundations, and build the structure to wall level.

A USAID contribution (\$2175) provided construction materials for the roofing, cement for plastering, and certain basic equipment for the Home.

Work on this activity had started before July, 1967.

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