



Oklahoma State University in Ethiopia

TERMINAL REPORT
1952-1968

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FOREWORD

This publication and the film "Our Ethiopian Adventure" comprise the terminal report stipulated in the Contract AID-W-629 between the United States of America and the Oklahoma State University.

Map of ETHIOPIA



Ethiopian Provinces and Selected Cities

INTRODUCTION

Interest in international affairs has been in evidence at Oklahoma State University for many years. This awareness and concern was greatly stimulated when President Henry G. Bennett accepted an official invitation by the Imperial Ethiopian Government to visit Ethiopia in April, 1950. The purpose was to evaluate the existing educational program in terms of effectiveness in meeting the needs of the nation and to suggest needed adjustments and changes which would provide Ethiopia with a comprehensive, dynamic program. He traveled extensively throughout the Empire inspecting current installations and discussing his observations with professional and lay people. He quickly saw the agricultural potential that could be maximized through a planned program of agricultural education. He outlined a proposal for a nationwide system which provided for an Agricultural College with the component parts of teaching, research and extension. His Imperial Majesty Haile Selassie I received this plan enthusiastically and indicated that the steps necessary for activation would be taken. Here the timing and sequence of events become a matter of interest.

In his inaugural address on January 20, 1949, President Truman had proposed as his fourth point:

We must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas. More than half the people of the world are living in conditions approaching misery. Their food is inadequate. They are victims of disease. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas.

For the first time in history, humanity possesses the knowledge and the skill to relieve the suffering of these people. The United States is pre-eminent among nations in the development of industrial and scientific techniques. *The material resources*

which we can afford to use for the assistance of other peoples are limited. But our imponderable resources in technical knowledge are constantly growing and are inexhaustible . . . Our aim should be to help the free peoples of the world, through *their* own efforts, to produce more food, more clothing, more materials for housing, and more mechanical power to lighten their burdens.

More than a year had elapsed when on June 5, 1950, the legislation now known as Point Four was signed into law and the Technical Cooperation Administration was created. In December of the same year Dr. Bennett was appointed to direct the program. Just a year later Dr. Bennett lost his life in an airplane crash while on an inspection of projects in the Middle East.

Meanwhile, other events were taking place. "The Point Four General Agreement For Technical Cooperation Between the United States of America and The Ethiopian Empire" was signed in Addis Ababa, Ethiopia, on June 16, 1951. "The Agreement For A Cooperative Agricultural Education Program Between the Imperial Ethiopian Government and The Government of the United States of America" was formalized in Addis Ababa, May 15, 1952.

The objectives of this cooperative program in agricultural and mechanical arts education were set forth:

1. To promote and strengthen friendship and understanding between the people of Ethiopia and the United States of America and to further their general welfare.
2. To aid the efforts of the people of Ethiopia to develop their agricultural and related resources, to improve their working and living conditions and to further their social and economic progress.
3. To this end, to facilitate the development of agricultural and mechanical arts education activities in Ethiopia through cooperative action, and,
4. To stimulate and increase the interchange between the two countries of knowledge, skills and techniques in the field of agricultural and mechanical arts education.

To carry out the cooperative program a special technical service designated as the Imperial Ethiopian Agricultural College Fund (hereinafter referred to as the Fund) shall be established as an independent agency of the Government of Ethiopia. The Director of the Fund shall be assigned by the United States in accordance with Article VI (1) hereof. The Emperor of Ethiopia will appoint a Special Representative of Vice-Ministerial or higher rank to consult with the Director in all operations of the Fund.

The Fund shall establish, direct and administer the Imperial Ethiopian College of Agricultural and Mechanical Arts

in Ethiopia (hereinafter called the College), which will conduct instructions, lectures, demonstrations, research, experimentation, extension service and other education activities to promote the development and use of agricultural and mechanical techniques among the people of Ethiopia.

The following day, May 16, 1952, an *Agreement Between the Technical Cooperation Administration and Oklahoma Agricultural and Mechanical College* (now OSU) was signed. The University agreed to carry out on behalf of the TCA in Ethiopia the undertakings assumed by the U.S. Government set forth in the *Agreement for a Cooperative Education Program*.

In carrying out its obligations the University agreed to:

- 1) Give assistance to the Government of Ethiopia in the establishment and operation of a college of agriculture.
- 2) Give assistance to the Government of Ethiopia in the establishment and operation of a country-wide system of agricultural extension services to the people of rural areas.
- 3) Give assistance to the Government of Ethiopia in the establishment and operation of agricultural research and experiment stations.
- 4) Administer such other specific projects and operations, and give such other assistance to the Government of Ethiopia in related fields pertaining to the economic development of Ethiopia, as the TCA may request and the College may accept.

On August 17, 1952, an advance group of six senior staff members arrived in Addis Ababa to set in motion a program that was to operate continuously until September 30, 1968. It soon became apparent that many facets of the total program needed simultaneous attention to insure the proper fitting together of the parts into the whole.

The Jimma Agricultural Technical School (an academic high school with an agricultural orientation) was opened October 13, 1952. This school was to serve as a source of future college enrollees and also as an interim site for college students pending the establishment of the Agricultural College.

A suitable site for the college had to be selected and steps taken to procure the land. This was followed by determination of buildings to be constructed in terms of priorities, blue prints and specifications prepared, bids taken and contracts for construction awarded and subsequently supervised. Concurrently, that an agricultural college program geared to the needs of the Empire be developed. Therefore, a presentation of the sequence of events and activities by the University will show how it met the contractual objectives.



First meeting of Oklahoma State University and United States government representatives with his Imperial Majesty, Haile Selassie I and members of his cabinet at Adis Ababa, Ethiopia in 1952.

The Jimma school will be dealt with first since it provided the basis for much that was to follow. The establishment of the Agricultural College including location of site, construction of physical plant, teaching, research and extension aspects, and public service will be treated in one section. Participant training for phasing in of Nationals to replace contract personnel will comprise another section. This approach will enable one to follow the progress of the undertaking as it started from "scratch" in 1952 until sixteen years later when an on-going educational institution complete with modern physical plant, well-developed academic and research branches, and a predominantly Ethiopian faculty had been transferred to Ethiopian administration. It is left in good hands.

One additional point should be mentioned at this time. The original group of six contract employees arrived on the scene almost simultaneously with the first of the TCA direct hire personnel who represented the administrative and fiscal segments of the organization. Project discussions between the local mission and the IEG soon emphasized the urgency of getting technicians in other areas as well as agriculture on the job immediately. In order to reduce the time required for recruitment, TCA requested the University to employ personnel through the contract mechanism. People thus employed would provide technical competence for the various projects as they were approved. Since this was above and beyond the original intent of the contract, supplemental agreements and additional funding were necessary. The University functioned as the recruiting and fiscal agent; responsibility for administration, supervision, and operation of technicians in areas other than Agricultural Education was vested in TCA.

Projects in this category included Agricultural Programs other than college (animal disease control, farm machinery, etc.), Language Education, Arts and Crafts, Technical Education, Water Resources and Well Drilling, Public Administration, and the Eritrean Program.

Funds disbursed through the contract for these projects totaled \$1,596,114 or 13.4% of the total provided for contractual operations.

The Jimma Agricultural Technical School

An operational agreement between TCA and the IEG signed June 24, 1952, provided for the development and operation of an agricultural secondary school which would also furnish interim facilities for beginning the Agricultural College. It was further agreed that courses of study would be offered for the training of agricultural technicians. Responsibility for the development and direction of the school program was assigned to the Agricultural College staff.

The Imperial Ethiopian Government agreed to make available all existing buildings, equipment, machinery, tools, teaching materials, land, and facilities at Jimma together with two gashas (approximately two hundred acres) of land for practical work and experimentation in Agriculture.

Jimma, the capital of Kaffa Province, is located some two hundred miles to the southwest of Addis Ababa. The elevation is about 5500 feet, the climate and vegetation is sub-tropical, and rainfall is abundant. Kaffa is said to be the home of coffee, which is the principal crop of the Province.

The first contingent of staff for the Jimma school arrived in early September, 1952. School was scheduled to open in October. The buildings and equipment mentioned in the operational agreement consisted of the remains of an Italian-built school plant that had not been in operation for some time. The buildings were in a poor state of repair, and the neglected grounds had become a veritable jungle of weeds and bushes. Local electrical power was by no means dependable, and the school well was far from adequate to meet water requirements.

The staff immediately set about clearing the grounds, repairing the buildings, and making plans for opening the school in a matter of weeks. Plans for the construction of a dormitory were initiated. Arrangements were made for students to be quartered in various sheds and buildings.

It was definitely a makeshift arrangement put together in a very short time to serve as a temporary measure. The school opened on schedule.

Meanwhile, the announcement of the opening of the school was made throughout the Empire, using the rather limited communication media available. There was space for eighty students; more than five hundred applicants, all clamoring for admission, came to Addis Ababa on the appointed day for interviews. Educational opportunities were very limited; admission was a privilege and not a right. Competition for the few available spaces was keen—previous school records were fragmentary or non-existent, so there was no real basis for evaluation. Since there were to be four classes, the successful applicants were somewhat arbitrarily assigned as freshmen, sophomores, etc. It was a most subjective approach based on little more than value judgments of the interviewers. It is interesting to note that some of those who did submit some documentary evidence later availed themselves of the opportunity at graduation time to supply their correct names for their diplomas. Recently a survey was made to ascertain the accomplishments of these eighty students. Fifty, after graduating from Jimma, completed the requirements for a B.S. degree at Alemaya. Of this number, 26 have received M.S. degrees from U.S. institutions, and 16 have completed or are in the process of completing doctoral programs. It is hoped the more sophisticated methods of tests and measurements now used as a basis for selection of students will be equally accurate.

The objectives of the Jimma Agricultural School have been stated as follows:

1. To prepare the student for further study in the field of agriculture.
2. To prepare the student for positions of leadership in the government, in society, and in the economic activities of his country.
3. To give the student sufficient academic background and practical training to enable him to organize and maintain his own farm unit.
4. To give students an understanding of history and of the importance and possibilities of their own country.
5. To teach students to become constructive citizens of their country.
6. To teach intelligent conservation of national resources.
7. To develop better health habits and improve sanitation.
8. To give students a better understanding of the world about

them so that they may appreciate their neighbors and profit from their experience as well as lend a helping hand to those neighbors when needed.

9. To afford a community center for the City of Jimma and the Kaffa Province.
10. To promote on the whole the principles of sound and progressive citizenship.

The curriculum for the school was developed in cooperation with the Ministry of Education, Ministry of Agriculture, and the University Contract staff. It was planned with the needs of Ethiopia uppermost in mind and based upon concepts already established in the Empire. The Jimma curriculum evolved over time and was adjusted as the situation warranted. It was constructed to have a desirable balance of theory with practical application with sufficient emphasis on academics for college preparatory students.

Following is the four-year program to meet the preceding objectives: Sixteen units of credit listed below was required for graduation. One additional unit of credit could be earned in music, which could not be substituted for any of the required subjects. One credit was given for any subject taken daily for two semesters. One-half unit of credit was given for any subject taken two or three hours a week for one year.

All students receiving a high school diploma from the Jimma Agricultural Technical School were considered to have a major in agriculture. The high school program as outlined was college preparatory.

FOUR-YEAR CURRICULUM

	Subject	Hours Per Week	Units Credit
Class 9	English I	5 (full year)	1
	General Science	5 (full year)	1
	Agriculture I	3 (full year)	1/2
	Amharic I	3 (full year)	1/2
	Practical Math	5 (semester)	1/2
	Hygiene	5 (semester)	1/2
Class 10	English II	5 (full year)	1
	World History	5 (full year)	1
	Amharic II	3 (full year)	1/2
	Biology	5 (full year)	1
	Agriculture II	6 (full year)	1
Class 11	Ethiopian History	5 (semester)	1/2
	Farm Mechanics	5 (semester)	1/2
	Chemistry	5 (full year)	1

	Algebra	5 (full year)	1
	Agriculture III	6 (full year)	1
	(Two afternoons with three full periods each)		
Class 12	Agriculture Economics	5 (full year)	1
	English IV	5 (full year)	1
	Geometry	5 (full year)	1
	Physics	5 (full year)	1
	Agriculture IV	6 (full year)	1

(Two afternoons with three full periods each)

The school that opened in 1952 under conditions somewhat less than ideal continued through the 1965-1966 school year. During this period the annual enrollment ranged from the initial eighty to two hundred eighteen. The original contract staff of seven increased to a high of fourteen five years later (1957), after which a gradual reduction took place as Ethiopian replacements became available. The two remaining contract staff members were phased out July 1, 1966.

Since the institution was a boarding school the students were involved in many extracurricular activities which greatly broadened their educational horizons. Hobby clubs including music, art, leathercraft, photography, radio and play-writing, and acting were very popular with students. A vigorous program of organized physical education and recreation contributed materially to the health and general welfare. Participation in the physical education program was required of all able bodied students; they were encouraged to participate in competitive sports through a planned series of intramural tournaments and track and field meets.

The student body was drawn from the eighth grade graduates scoring in the upper ten to fifteen percentile in the Ministry of Education School Leaving Examination and represented most of the fourteen provinces in Ethiopia. Therefore, they came from different ethnic, cultural, economic, and religious backgrounds. Also a number of different tribes and different languages were represented.

This great diversity was one of the reasons that a student work experience program was made a basic part of the curriculum. Consequently, each student enrolled in a minimum of twelve hours per week of work in research and practical farm work to obtain work experience and to further his education in agriculture. The younger students rotated to various projects during the first two years to gain a better understanding of the Agricultural program. Older students could specialize and had some supervisory responsibilities. The student was able to gain experience in farm operations (many came from non-farm situations), could test what he had learned in the classroom, and could also earn a



Jimma Agricultural Technical School — Jimma, Ethiopia

small sum of money required for personal needs. Recognition by the students of the dignity of honest labor was made possible through the work experience program.

The manner of construction and the kind of materials used in the physical plant made necessary a continuing program of repair and renovation. Two new structures, a 200 capacity dormitory and a Farm Mechanics and Shop building, were completed and put to use.

The first graduation exercises were held August 6, 1953, for the nineteen members of the Senior Class. This group enrolled as college freshman at Jimma in October, 1953. The second graduation exercises were held July 28, 1954, for the eighteen class members. They likewise became members of the second college freshman class at Jimma in the fall of 1954. The first group of college freshmen (now juniors) moved to the University College of Addis Ababa in September, 1955, for instruction provided by Contract personnel stationed in the capital city. Jimma was to provide four years of high school and the first two years of college until the completion of the 1958 school year, at which time the facilities under construction at Alemaya were ready for occupancy. Jimma then functioned as a high school with contract assistance until 1966.

Twelve classes, totaling 550 students, graduated from Jimma. The Jimma school made possible the proposed College of Agriculture at Alemaya. It not only provided the interim facilities while the college physical plant was under construction; it also was an initial and continuing source of student material for Alemaya. Without the solid continuation of the Jimma Agricultural Technical School, the College of Agriculture would have experienced difficulty in progressing beyond the brick and mortar stage.

During 1965, a study evaluated the effectiveness of the instruction at the Jimma school. The major areas included were (1) an evaluation of phases of the school program by the graduates, (2) a rating of certain phases of the graduates' work by their supervisors, and (3) a study of the performances of the graduates in their college work. The results of this study are in a publication entitled *An Evaluation Study of the Jimma Agricultural Technical High School in Ethiopia*. Copies are available on request.

Fifty percent of the Jimma graduates have continued their formal education at the College of Agriculture. Ninety-four percent are in agricultural occupations or pursuing an education in preparation for agricultural occupations, and less than six percent are in occupations not related to agriculture. Jimma has been a major source of supply for the Extension Service of the Ministry of Agriculture. However, Jimma grad-

uates are to be found throughout the various Governmental Ministries, educational institutions, and private industry. Graduates have made and will continue to make genuine contributions to the growth and development of Ethiopia. Simultaneously with the starting of classroom instruction, the research program began to receive attention. Projects were selected, plans for experimentation were adopted and followed, and research findings were published. The scope of the research program is indicated by the following list of projects:

RESEARCH PROJECTS Jimma Agricultural Technical School 1952-1966

1. Jimma Agricultural Technical School Herbarium
2. Observations & Increasement Plots which are Supplemental to Variety Testing
3. Coffee Sun Hedgegrow Demonstration *
4. Coffee Variety Test (International Selection)
5. Museum Planting of *Coffea* Species
6. *Coffea arabica* Observation Plot
7. Ethiopia Coffee Experiment.
8. Date-of-Seeding Experiment for some Field Crops in the Jimma Area
9. A Study and Partial List of Local Plants & Uses
10. Variety Testing of Locally Selected Crops and Introduced Crops
11. A Comparison of Corn Cultural Practices Broadcast Seeding Versus Row Drilled Seeding
12. Corn Residue Management Experiment
13. Corn Rate of Planting Experiment
14. Response of Coffee Seedlings to Various Applications of Plant Food Elements N, P, K, and CA
15. Determining the Effects which Minor Elements Might Have in Causing Abnormal Leaf Development in Coffee
16. Studies of the Destructive and Useful Insects of Ethiopia
17. Cyto-Morpho-Genetic Studies of Sorghum
18. Cytogenetic Studies in *Coffea*
19. Development of Animal Drawn Tillage Machinery
20. Construction of an Oxen or Mule Powered Unit to Convert Animal Power into Mechanical Power
21. Development and Demonstration of a Hand Operated Wooden Clothes Washing Machine
22. Comparison of Tillage Costs of Tractor Drawn Machinery with Improved Animal Drawn Machinery in Row Planted Corn
23. Construction of an Animal Operated Threshing Machine for Farm Use
24. Comparing Egg Production of Native & Imported Hens
25. Developing an Economical and Productive Poultry Ration for Laying Hens
26. Developing an Economical & Rapid Growth for Baby Chicks
27. Improving the Wool & Mutton Producing Ability of Indigenous Sheep Through a Crossbreeding Program

28. Improvement of Indigenous Cattle Through Crossbreeding
29. Soil Temperature & Soil Moisture in Relation to Types of Mulch
30. A Fertility Study of Coffee Producing Soils of the Jimma Region
31. The Response of Bananas to Fertilization
32. Forestry Nursery
33. Tomato Culture Experiment
34. The Response of Tomatoes to Fertilization
35. The Response of Native Red Onions to Fertilization
36. The Response of Cabbage to Fertilization
37. Irish Potato Method of Planting Experiment
38. Irish Potato Variety Experiment
39. Sweet Potato Variety Test
40. Morpho-Genetic Identification of Several Teff Selections.
41. Morpho-Genetic Identification of Noog Selection
42. Bean Variety Test and Seed Increasement
43. Broomcorn (*Sorghum vulgare*) varietal trial planting and production methods for the Jimma Area
44. Civet Production Under Different Systems of Management
45. False banana, Ansete, or Ensete (*Musa ensete*) selections common to Ethiopia and a Study of Cultural Practices, Fertilizer Response, Pruning, etc., including Cytological, Morphological Characteristics
46. Fukunaga Coffee Pulper
47. Development of a Thresher Suitable for Wheat, Barley, and Teff
48. Development of a Harvester Suitable for Wheat and Barley Operated by Animal Power
49. Rain Water Storage for the Ethiopian Farm Home
50. An Intensive Study of the Fertility Status of the Soils of Jimma Agricultural Technical School Compound and of the School Experiment Station at Gerin
51. A Basic Study of Ground Temperature and Moisture Evaporation Variations at the Jimma Agricultural Technical School, Jimma Ethiopia
52. Development of a Suitable Cage for Housing Civet Cats
53. An Experiment to Determine the Best Spacing for Red Beets
54. A Study of Orange Maturity and Its Relation to Rootstocks and Environment
55. Tomato Culture Experiment
56. An Experiment to Determine the Best Spacing in Carrot Planting
57. A Variety Study of Chili Peppers
58. The Adaptability of Avocado Fruit to the Jimma Region
59. Determining the Coffee Growth Period for the Jimma Region
60. Bean Variety Yield Study
61. Improving the Beef Yields of Indigenous Cattle Through Selection, Production Testing, and Management Practices
62. Determination of Self Pollination Rate of *Coffea arabica*
63. Determining Teff Damage Caused by *Sitophilus Granarius* and *Spermophagus* Sp.
64. Report on Weather Data Kept Seven Years in the Kaffa Region
65. The Preparation of a Generalized Soils Map of Ethiopia
66. The Extent and Influence of Ground Temperature and Evaporation in the Bottom Land Soils of the Jimma Region

67. A Fertility Study of The Soils of The Major Coffee Producing Regions in Ethiopia
68. An Enterprise and Farm Management Survey of the Jimma District (Aweaja), Kefa Province
69. Crambe Observation
70. Grass, Legume Observation

Beginning with 1953, annual field days familiarized the general public with the school activities in the academic and research phases. This event became quite popular with the high ranking officials of the Government and also with the farmers of Kaffa Province. The experimental plots visited during a conducted tour of the farm provided farmers an opportunity to observe the improved practices in livestock and crop production. The ideas gained at these field days were put into effect on individual farms. Evidence of the influence of this activity are obvious throughout the area. Field days were the first step in getting the results of agricultural research applied to the individual farms.

Responsibility for the future operation of the school was assumed by the Ministry of Agriculture on July 1, 1966.

The Imperial Ethiopian College of Agricultural and Mechanical Arts

The original group of six staff members arrived in Ethiopia in August 1952, and set about the task of determining a suitable site for the agricultural college. For a period of more than four months the group traveled by four-wheel drive vehicles the high plateau area inspecting sites that had been proposed by various people as possible locations for the college. Distance traveled was in excess of 5000 miles; observations were made in the Provinces of Shoa, Hararge, Arussi, Kaffa, and Sidamo. After considerable deliberation, a report was presented to the Imperial Ethiopian Government entitled *Recommendations for a Program of Agricultural and Mechanical Arts Education for Ethiopia* dated January, 1953.

A part of this report is as follows:

A. General Recommendations:

The Imperial College should be easily and quickly accessible to the different branches of the central government, particularly the Ministries of Agriculture, Education, Commerce and other governmental agencies closely related to agricultural and mechanical arts industries. The College should have close working relations with other colleges and universities and particularly with the Haile Selassie I University which is located in Addis Ababa. A source of technical information in agriculture readily available to governmental officials would be very valuable in establishing agricultural policies.

The President of the Imperial College and the Dean of Agriculture will be responsible for the administration of the College and the curricular and technical administration of the junior institutions. The respective college heads of animal science, soils and plant science, college extension and other departments will be responsible for research and extension programs at the Imperial College and at the junior colleges, as well as for the technical instruction. These workers will need to

maintain frequent personal contact with the junior colleges.

The Imperial College should not be merely the institution where instruction in agriculture is given to those attending classes; it should be, as well, the center where Ethiopia's over-all agricultural research program should be planned, supervised, recorded and evaluated; it should be the center from which the results of this research can be disseminated through the College facilities. The Imperial College should be the arena of Ethiopia's agricultural progress, the fountainhead of Ethiopia's agricultural achievements, the center to which the people of all provinces may look for leadership in agricultural development.

In view of these facts, the committee recommends that the Imperial College be located not more than 80 kilometers distant from Addis Ababa at a specific site where the principal factors are the best to be found in the area. Addis Ababa is the center of the government and also is very nearly the geographic center of the nation; it is the transportation hub (highway and airline); the market center; it is also the climatic center; all three of the most important soil types, red, brown and black loam can be found within the 80 kilometer radius of the capital.

An agricultural institution located remotely cannot render the needed service to the country as a whole. If the Imperial College were located at Gondar, Asmara, Lechemti, Gambella, Jimma, Soddu, Harar or Asba Tafara, it would be a decided asset to the particular region chosen but would fall far short of achieving its full potentialities as a national institution. All of these locations are many kilometers from the center of the nation and the central government, roads are undeveloped and railroad facilities are absent. Supervision and administration would be expensive and difficult.

Briefly:

a. This is a long-range program of agricultural education and plans should be developed accordingly.

b. An agricultural education program should serve all of the provinces in Ethiopia. A central location, geographically, governmentally, climatologically, and edaphically is extremely desirable.

c. Proper administration of the entire program can be done if the College is centrally located.

d. No one college can be so located as to be representative of all sections. Ethiopia is too widely variable in soil, climate and topography for one station to answer all the questions of all areas. Therefore, junior colleges should be created for the purpose of attacking the problems of particular areas and also for the purpose of extending the educational opportunities.

e. It is not unreasonable to assume that these junior institutions will develop into provincial four-year colleges. When this aspect of the long-range plan materializes, the Imperial Col-

lege will become truly national in scope.

The committee has reviewed the material contained in the Haile Selassie I University Committee Report on Agricultural Education as compiled July, 1952. It is evident that much thought and effort has gone into this study. The sections dealing with the Agricultural College have been of special interest. While the opinions, with reference to location, are not entirely unanimous, there does appear to be strong sentiment for a site in the proximity of Addis Ababa.

B. Specific Recommendations for a Site

The committee has traveled every main highway leading from Addis Ababa in an effort to locate the best site for the Imperial College. Several specific sites have been examined carefully according to the established criteria. The farm consisting of approximately 15 gashas of land with some additional rough land adjoining Bishoftu on the east is recommended as the site for the Imperial Ethiopian College of Agricultural and Mechanical Arts. This location is approximately 45 kilometers southeast of the capital city.

The completed report was submitted to the Ethiopian officials for consideration. The sequence of events leading to the selection of the present site at Alemaya is described in a report prepared by the local TCA Mission in September, 1953.

The College President and the Director of the Fund were received twice by His Imperial Majesty to discuss the recommendations. The first audience on March 11 was opened by His Imperial Majesty who stated that with respect to the location of the College he had noted that the staff, after weighing the relative advantages of several areas, recommended Bishoftu as the site for the College and the Central Experiment Station. He stated that although he appreciated the advantages of Bishoftu he believed it most important to decentralize institutions of learning and particularly institutions of higher learning. Speaking on the advantages of Harar he remarked that it is an agriculturally rich area and that if it were located in that area, it could serve effectively the entire Ethiopian Empire. The Director and the President-Designate agreed that the Emperor had presented good points and pointed out that the purpose of Point 4 was to assist Ethiopia to develop in such a manner that the best interests would be served. The Emperor agreed that the program of education should include not only resident teaching but the development of a comprehensive program of agricultural research and an agricultural extension system as well. The President-Designate emphasized that such a program to be fully effective should be conducted from a centrally located point. The Emperor agreed that this factor should be given consideration and said that he would consider the matter further. It was

requested that the Director and the President-Designate also devote additional study to the whole question.

The second audience with His Imperial Majesty took place on March 27. The President-Designate reiterated the reasons why the staff had recommended a central location for a national agricultural education program which would include resident teaching, research and extension. He pointed out that the staff had carefully re-examined the situation and on the basis of the discussions had not changed from their original position that the interests of Ethiopia would best be served from a central location. He pointed out, however, that these conclusions were arrived at solely out of professional consideration based on experience in the educational fields. He further stated that it was recognized that other factors, of which the group might not be cognizant, must be considered by His Imperial Majesty in arriving at a decision of this nature. His Imperial Majesty was assured that if there were overwhelming reasons overshadowing the technical aspects which would make it desirable to locate the College at Harar, Point 4 would make every effort to assist in developing an effective program. The Emperor stated that it was his decision that a location near Harar should be used for the College site. The Director then suggested that a junior institution similar to the one in operation at Jimma be located at Bishoftu and that the Central Experiment Station and headquarters for national extension service be operated at Bishoftu. The Emperor stated that he was agreeable to this suggestion.

At the request of the Emperor, the day following the audience, Point 4 representatives met with His Imperial Highness, the Duke of Harar, Governor-General of Hararge Province. A site was inspected and His Imperial Highness agreed that it was a good selection since it is representative of the area and also located on the main road between Dire Dawa and Harar.

The site (elevation about 6500 feet) is on the east side of Lake Alemaya with the nearest point of the property about three kilometers from the village of Alemaya. Eleven and one-half gashas of land, approximately 1150 acres, were made available by Imperial decree. Most of the area is a reasonably flat valley transversed by a small stream. One gasha consisted of a steep, badly eroded hillside thickly populated with villages and covered with euphorbia and cactus thickets. This area was to be the site for college buildings with the remainder to be devoted to livestock, crops, and farming operations incident to teaching research and maintenance.

With the agreement reached on location, attention turned to land surveys, title acquisition, physical plant lay-out, preliminary sketches, blue-prints and specifications, contract awarding and construction supervision, and the innumerable details involved in the establishment of a physical plant. The Oklahoma State University architect designed the

lay-out and provided supervision of construction.

The problems involved in constructing the college physical plant can best be described by quoting from a publication, *History and Development of Physical Plant and Services Department, 1954-1968*:

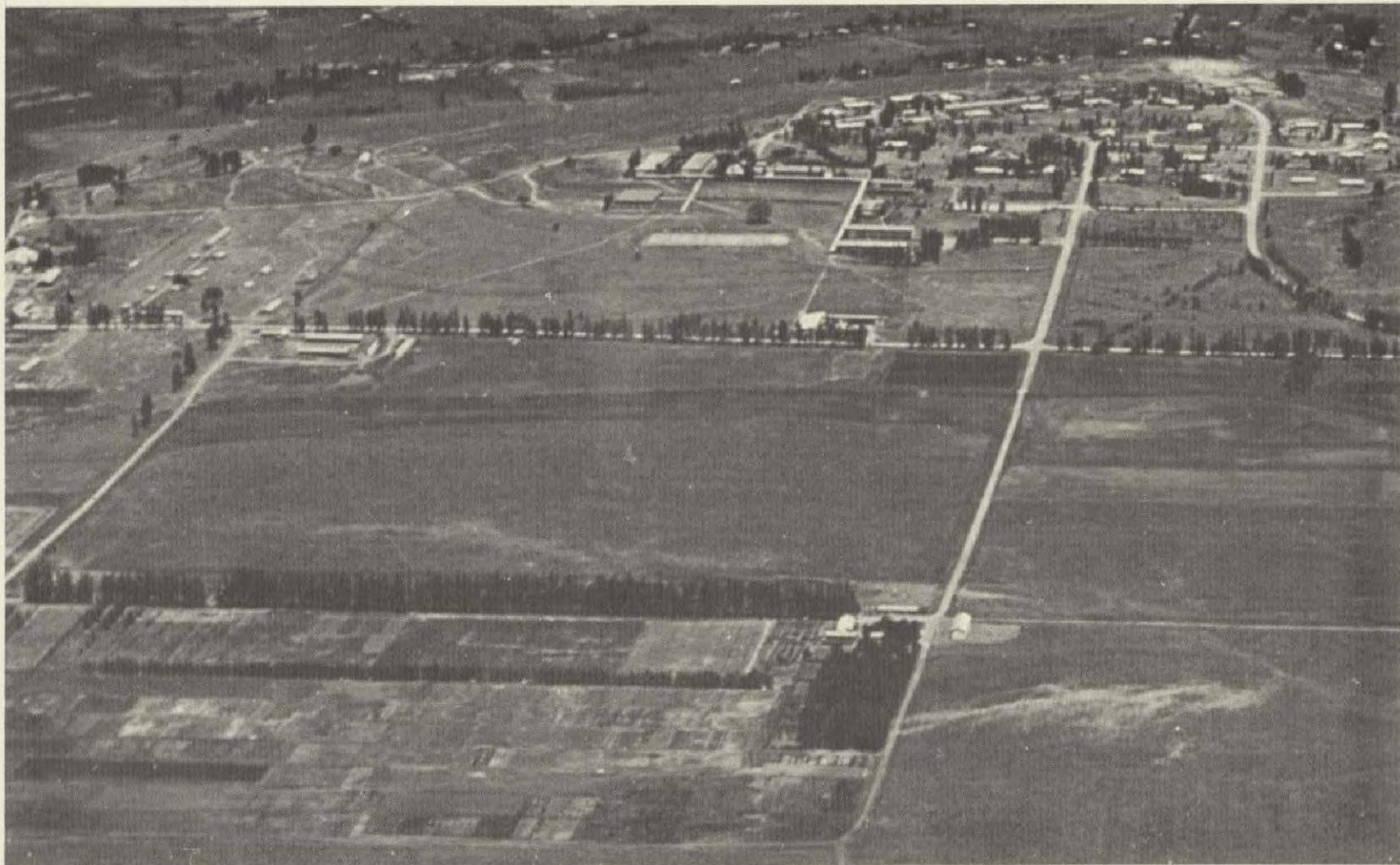
The first most important task was to survey and establish the definite boundaries. This was important because all families of the local Kotu were to be moved outside of this boundary. There was no real solution to this problem other than local Ethiopian officials given the authority to use police or army force to see that the area was evacuated. Fortunately force was not required, although most families felt that they had been unjustly treated, a feeling which only lately has begun to disappear. To help to restore confidence in this new enterprise which had sprung up among them a school was established for the Kotu children at the urging of the late Dr. H. F. Murphy. The school was completely operated and financed by staff and students from the College of Agriculture. This project has been so successful that now the school is comprised of four structures with a daily attendance of more than 400 students ranging in grades from one to eight.

While the boundary was being established and the local people moved to new locations, the architect was busy in his search for competent contractors. Most of the contractors were located in Addis Ababa and were of Italian descent. Most of them were not builders by training and few understood engineering principles required for construction larger than family houses. Many of them, upon hearing that there was going to be a large contract let, hastened to the Ministry of Public Works and had themselves listed as available contractors.

Another search conducted by the architect was for suitable building material. Fortunately cement was not a problem since the Italians had established a large cement plant in Dire Dawa which was still in operation. Brick could not be used because there was no suitable brick clay in the area and also no firing furnace. It was finally decided that the best and most available material was local limestone which could be shaped into building blocks. This was fortunate from another aspect. The Italian contractors understood the working of stone and consequently among the Ethiopian populace there were quite a number of reasonably skilled stone masons.

The procurement of suitable wood for forming, scaffolding, and finish work was extremely difficult. Even today, as fourteen years ago, there are no kilns from which dried lumber can be obtained. The local lumber is cut from green trees and shipped directly to the lumber yard for sale. It is virtually impossible to prevent warping and shrinkage with such material.

Prior to construction it was necessary to prepare the building site. The gullied hillside area was chosen for the construc-



College of Agriculture, Haile Selassie I University, Alemaya, Ethiopia, 1967

tion sites. The hillside, because of its excessive gradient was not suitable for agriculture. However, as a building site it gave a beautiful panorama of the rest of the campus, Lake Alemaya and the scenic Chercher Highlands in the background. The flat valley land was left for the establishment of experimental areas and for the College farm. None of the contractors had earth-moving equipment with which to move the tremendous amounts of earth. It was decided that the Physical Plant Department would buy two D-4 Caterpillars which could also be used in the farming operation and the Department would henceforth be responsible for all landscaping and earthmoving.

The tremendous task of ordering, receiving, collecting and transporting of materials was the direct responsibility of the Physical Plant Department. It was often times necessary for the department head to journey to Djibouti, the seaport, some 350 kilometers east of Dire Dawa, to personally supervise the immediate movement of supplies to the railway for shipment to Dire Dawa. There were no local supplies available other than limestone and some lumber. All other supplies were collected in Addis Ababa and shipped by rail to Dire Dawa.

The first two contracts let were for the construction of a telephone line, linking the College with the Oklahoma State University TCA Contract Office in Addis Ababa, and for a large Butler building purchased from the American Embassy. This building had housed the American Exposition at the Silver Jubilee (25th year of reign of Emperor Haile Selassie I) in Addis Ababa. At the College it served as headquarters for the Physical Plant Department and also as a dormitory and kitchen for the first group of students.

Labor, especially of a skilled nature, was not existent locally. It was necessary for contractors to bring employees from Addis Ababa who were in most cases only semi-skilled laborers. Quarters had to be established at the site for housing since there was no housing available in the area.

In 1956, the contract was let for the original group of buildings (see table of construction at the end of this report). At the time it was the largest single building contract ever let in Ethiopia. To give the reader an idea of the scope of this construction this contract represented 5,998.78 square meters of floor space (64,787 square feet). The problems of supply, supervision of labor both by contractor and architect were myriad. Off-shore purchases did not arrive on time, trains carrying supplies from Addis Ababa were delayed, and as stated earlier, hurried trips were made to speed up the movement of goods. However, the work moved ahead at a steady pace and the first staff families were able to move to the campus in 1957 even though electrical distribution lines and water distribution lines were not completed.

While construction was being carried out the Physical Plant

Department was involved in terracing of hillsides, fencing the outside boundary, cross-fencing within the boundary and preparation of the experimental crop area and the College farm in general.

Of course the rainy season produced a sea of mud because all cover had been stripped from the hillside and valley. During this time it was extremely difficult to move the heavy loads of supplies over the muddy track from the main road to the building sites. Many times it was necessary for vehicles to spend the night in a mud hole guarded by a 'zebanya.' This emphasized the necessity for immediate construction of all weather roads from the main road at Alemaya as well as within the campus itself.

Following is a chronological listing of construction projects and the completion dates:

Project	Completion Date
Telephone line to College	May, 1956
Butler Steel Building	July, 1956
Supply and installation of a 258 kva generator	November, 1956
Supply and erection of electric dist. poles	August, 1956
Employees Quarters	1956
Power plant building	July, 1956
Original Group of Buildings	
One Classroom Building	
One Administration Building	
One Clinic	
One Cafeteria	
One Dormitory	
Ten Staff Houses	
Covered Passageway	
Site Grading and Retaining Walls	January, 1957
Water and Sewage System	April, 1957
Electric Dist. System	April, 1957
Roads and Parking Lots on Campus	May, 1957
Road from Alemaya to College	October, 1957
Walkways on Campus	November, 1957
Poultry Laying House	December, 1957
Feed Grinding and Storage	1957
Agricultural Engineering Building	August, 1958
Campus Telephone System	1958
Five Staff Houses, One Dormitory, One Classroom Building	September, 1959
Brooder Houses—4—Colonial Type Wood	1960
Pedigree Houses—6—Chika houses	1961
Brooder—Layer Comb Houses Three	1961
Hay Barn	1961
Greenhouse	1961

Project	Completion Date
Brooder Houses—2—Tin Type	1962
Layer Houses—3—Tin Type	1962
Extension Center	1963
Six Staff Houses	September, 1963
American Dependent School	1963
Library	1963
Brooder House Tin Type	1963
Concrete Tilt-up Silo	1963
Dairy Heifer Barn	1963
Staff Houses—2	1964
Feed Mix Plant	1964
Dairy Barn	1964
Dairy Loafing Barn	1964
Dairy Hay Barn	1964
Entrance Gate Building	1964
Duplex Staff Houses—4	1965
Concrete Tilt-up Silo	1965
Library Basement	1966
Horticulture Field Laboratory	1966
Lion Cages—3	1966
Potato Storage	1966
Concrete Tilt-up Silo	1967
Concrete Tilt-up Brooder House	1967

During the construction of the original group of buildings, staff members were housed in Addis Ababa. The 1953 Jimma graduating class had remained at Jimma for the first two years of college work, then moved in 1955 to the University College of Addis Ababa where instruction was provided by contract staff members. This class moved once more, this time to Alemaya for the final semester where they met requirements for graduation in 1957.

As the physical plant neared completion, contract personnel moved to temporary quarters in Dire Dawa. This city, on the railroad and air-line route from Addis Ababa, is some forty-five kilometers from Alemaya. Staff members made the daily trip to the college over a winding mountainous road that rises more than three thousand feet in a distance of about fifteen kilometers. Staff members moved to Alemaya late in 1956.

With the limited facilities and staff available, it was possible to handle only the junior and senior classes at Alemaya during the first year of its operation, and freshman and sophomore college work was continued at Jimma. The four year college program became an actuality at Alemaya with the beginning of the 1958-1959 school year. Meanwhile, on January 16, 1958, His Imperial Majesty visited the Imperial Ethiopian College of Agricultural and Mechanical Arts. The occasion was the formal dedication of the institution "to the welfare of the people

of Ethiopia . . . through friendly cooperation between the governments of Ethiopia and the United States of America." He spoke as follows:

It gives us great pleasure to be present here to inaugurate the College of Agricultural and Mechanical Arts, an occasion which marks a great and far-reaching advance in our programme for the promotion of agricultural education. This institution will serve as a source of inspiration in carrying out the agricultural programme which we have laid down for the future.

In establishing this College for the development of the natural wealth of our country, agriculture and animal husbandry, on modern and scientific lines, our main purpose has not been merely to develop and utilize these basic resources to supply the daily needs of our people, but, in addition to produce a surplus to be shared with other countries of the world. Ethiopia, to some degree, has done this in the past. For example, when the world was sorely distressed by lack of food immediately after the Second World War, our country, although she herself had for five long years been struggling to recover from the terrible damage inflicted upon her during the War, was yet able to perform a significant service in supplying foodstuffs to the countries of the Middle East, and we have been pleased to observe how, since then, our people have increasingly devoted themselves to improving the agriculture of our country.

A country and a people that become self-sufficient by the development of agriculture can look forward with confidence to the future.

Agriculture is not only the chief among those fundamental and ancient tasks which have been essential to the survival of mankind, but also ranks first among the prerequisites to industrial and other development.

History affords us ample evidence that mankind abandoned its nomadic way of life and developed a settled, communal economy only when man became skilled and competent in agricultural techniques. From the beginnings of recorded history, right up to the Middle Ages, and even as late as the beginning of the Industrial Age in which we now live, agriculture has always constituted the fundamental source of wealth for the human race.

Only when a solid agricultural base has been laid for our country's commercial and industrial growth can we ensure the attainment of the ultimate goal of our development programme, namely, a high standard of living for our people. Commerce and industry, being concerned in the main with development and distribution, can only develop and profit from existing resources, but cannot actually create things which did not exist before.

Most of the districts of our Harar Province are populated mainly by nomadic peoples. Now that we are in a position to anticipate an adequate water supply from the rivers and wells in

the region, the area will flourish and land will no longer lie fallow in the Province. If only the people of Ogaden, Esa and Adal could be educated in agricultural techniques. All this can be attained only by means of the wisdom which flows from the fountain of education, and while this Collège will serve the whole of our country, its being established in the Province of Harar is the result of careful planning and consideration on our part.

Even in this nuclear age, in spite of the revolutionary changes in man's way of life which science has brought about, the problem of further improving and perfecting agricultural methods continues to hold a position of high priority for the human race. It is hard to believe that a substitute can ever be found for the occupation of agriculture—a sacred task graciously conferred upon man by God to serve as a source of his well-being and the basis of his wealth.

Our country, Ethiopia, being blessed with an abundance of natural resources, need not be anxious about her own needs. However, it is our constant endeavor and our firm desire, that our people will produce not only enough to meet their own requirements, but that their production will enable them to share and exchange the fruits of their labour with other countries.

If only Ethiopia, with an assured wealth of natural resources, would look at what the barren Sahara Desert has been made to produce by the endeavors of trained scientists, she would realize that science is the source of wealth. We would therefore have our students and scholars accept as their primary duty the attainment of scientific knowledge through education.

We have placed our trust in this College to be the chief instrument for the attainment of this high goal, and we are confident that the students who have today received their diplomas from our hands, as well as those who follow them in the future, will, through their achievements furnish us with tangible evidence of the fulfillment of this, our purpose and our desire.

Agriculture and industry are indispensable one to the other. Only close cooperation between these two branches of knowledge can guarantee the fulfillments of our programme of economic development for our country.

This College, which holds a prominent place in the plans we have laid down for the prosperity and welfare of our beloved people and country, can look forward to receiving the same constant support which we have shown in the past.

It is with pleasure that we express on this occasion our gratitude to our great friend, The United States of America, for the generous and significant assistance which they have given to this institution as part of their great effort for the development of the spirit of cooperation and understanding among the nations of the world. We would request His Excellency, the Ambassador to convey our thanks to his Government.

If the late Dr. Bennett, who laid the plans for this institution and whose great desire and tireless efforts to achieve the establishment of an Agricultural and Mechanical College in this country are well-known to us, were with us today to see the fulfillment of his plans, how happy he would have been! With deep sorrow in our heart, we remember the words 'Man proposes, God disposes.' We pay a tribute to his memory in this hour.

We would like to express our sincere thanks to the director of the Point Four Programme in this country, the President and Staff of this College, and all of our officials who have laboured to bring this institution into being.

It is not enough for the children of Ethiopia to be recipients of education. They should never forget that the responsibility for passing on this knowledge to others and of handing it over to the next generation rests on them.

The Alemaya institution was originally conceived as an independent entity administered by a President with the advice and counsel of a Board of Trustees. Members of the Board were appointed by the Emperor from representative persons of broad experience and active interest in the fields of education or agricultural development. It was stipulated that the appointment of the president would be subject to the approval of the Emperor of Ethiopia. This procedure was followed throughout the period of contract operation.

Haile Selassie I University had been in process of development for about ten years when General Notice No. 284 (Charter for Haile Selassie I University) was issued February 28, 1961, as the official announcement of the plan for the establishment of a university system. On November 21, 1961, the Public Health College and Training Center, the University College of Addis Ababa, the Theological College, Building College, Engineering College, and the Imperial Ethiopian College of Agricultural and Mechanical Arts became member institutions of Haile Selassie I University. The Alemaya institution was designed as the College of Agriculture, HSIU.

It was determined on September 28, 1965, that the phase-out schedule for the contract would be completed at the close of the 1967-68 academic year. At that time it was also decided that the Office of President would be abolished July 1, 1966, and that in accordance with university policy the top administrative position would be that of a Dean. University officials announced that this position would be filled by an Ethiopian. Hence, the contractual role in the College of Agriculture changed from operational to advisory which necessitated an amendment (No. 11) to the contract. This was signed March 25, 1966. For the remaining two years contract staff gave particular attention to assisting the Ethiopian staff in meeting its responsibilities—by helping analyze prob-

lems and suggesting alternative courses of action—in short, to emphasize the basic steps in the decision making process. The usual teaching and research duties continued during that period.

Resident Teaching

In its academic program, the College of Agriculture has attempted to develop a balanced curriculum which stresses fundamental principles and concepts in the physical, biological and social sciences, but which at the same time recognizes the importance of practical applications. Practical training was provided both in the laboratory sections, which were a part of many courses, and in practical work experience, which was a requirement for all students but which did not carry academic credit. An attempt was also made to achieve a balance between those who felt that a degree in general agriculture should be the goal of the College and those who believed its graduates should be highly specialized. The background of the students and their probable future role in improving agriculture in a developing country were important considerations in planning the curriculum.

The tendency to proliferate new courses has been resisted. In any university there is pressure from staff members in the various departments to increase their course offerings. But if most of these are in fact approved and offered, it tends to lead to students' spending too much time on less important areas, which in turn may prevent them from getting the necessary background in the basic sciences and in the more important courses in other departments.

Initially it was necessary for all students to have essentially the same training in General Agriculture, but as resources permitted, departments were established which provided for majors in Agricultural Economics and Business, Agricultural Education and Extension, Agricultural Engineering Technology, Animal Science, Plant Sciences, and a two-year diploma program in Home Economics. A minimum of thirty credit hours was a requirement for a major and twelve for a minor.

The course offerings for the 1958-59 academic year and those for the 1967-68 year (excluding the Home Economics diploma program) on the following pages indicate the extent and nature of the development of the curriculum during the past ten years. No major changes have been made in the curriculum for the freshman and sophomore years except for the increased emphasis on mathematics. The offerings at the upper division level have more than doubled over the decade to provide for the five major areas included above.

DEVELOPMENT OF THE CURRICULUM LOWER DIVISION*

1958-59 Course Offerings:	1967-68 Course Offerings:
English I and II	English I and II
English III	Report Writing
Public Speaking	Humanities
French I and II	
Agric. Mathematics	General Mathematics
College Algebra	College Algebra
Physics	Calculus I and II
Meteorology	General Physics
	Engineering Physics
General Chemistry I, II	General Chemistry I and II
Organic Chemistry	Organic Chemistry
Botany	Botany
Zoology	Zoology
Bacteriology	Bacteriology
Entomology	Entomology
Agric. Economics	Economics I and II
Agric. Geography	General Accounting
Psychology	Sociology
	Psychology
Field Crops	Intro. Agric. Engineering
Pasture and Forage Crops	Intro. Plant Sciences
General Horticulture	Intro. Animal Science
Intro. Animal Husbandry	Plant Anatomy and Morphology
Farm Shop	
Physical Education I, II, III, IV	Physical Educ., I, II,
Social Development	Work Experience I, II, III, IV
	<i>Agricultural Economics Area</i>
Farm Management	Economic Geography
Marketing Farm Products	Agricultural Statistics
	Business Organization and Mgmt.
	Marketing Agric. Products
	Land Economics
	Economic Development
	Intermediate Economic Theory and Anal.
	Agricultural Cooperatives
	Finance and Credit
	Farm Management

* During the first two years all students are in the Arts and Sciences Department and follow the same basic course of study, with only slight variation in recent years, depending on the major the student intends to elect when he becomes a third-year student.

DEVELOPMENT OF THE CURRICULUM UPPER DIVISION†

1958-59 Course Offerings:

Teaching Methods

Agric. Engineering
Agric. Electricity
Farmstead Structures
Farm Machinery

Animal Anatomy and Physiology
Production of Meat Animals
Poultry Production and Mgmt.
Hatchery Management
Livestock Judging
Animal Nutrition
Poultry Feeding
Animal Diseases
Farm Meats

Agricultural Education Area

Agricultural Engineering Area

Animal Science Area

1967-68 Course Offerings:

Philosophy of Education
Educational Psychology
Methods of Teaching
Planning and Programming
Agric. Educ.
Teaching and Communication in
Extension
Program Building in Agric. .
Extension
Engineering Drawing I and II
Fluid Mechanics
Surveying
Rural Water Supply and Sanita-
tion
Agricultural Electricity
Agric. Engr. Shop Technology
Farm Power and Machinery
Statistics and Strength of Mate-
rials
Elem. Soil and Water Engineering.
Irrigation Engineering
Functional Planning and Environ-
mental Control
Farmstead Structures
Agricultural Structure Design
Engine Operation and Mainten-
ance
Conservation Engineering

Feeds and Feeding
Poultry Production
Animal Nutrition
Livestock Feeding and Feed
Processing
Animal Breeding
Animal Anatomy and Physiology
Animal Hygiene and Disease
Control
Beef Cattle and Draft Animal
Production
Dairy Cattle Mgmt. and Milk
Processing
Artificial Breeding

† The classification of courses as to upper or lower division has been changed in a few cases to make comparison more realistic.

DEVELOPMENT OF THE CURRICULUM UPPER DIVISION (Cont'd.)

1958-59 Course Offerings:

General Genetics
 Plant and Animal Breeding
 Plant Physiology
 Vegetable Production
 Coffee Production
 Coffee Processing and Mktg.
 Advanced Horticulture
 Soils and Plant Nutrition
 Principles of Plant Identification
 Cereal, Fiber and Oil Crops
 Crop Judging
 Forestry

1967-68 Course Offerings:

Hatchery Management
 Sheep, Goat, and Swine Prod.
 Parasitology

Plant Sciences Area

Introductory Soils
 Plant Pathology
 Plant Physiology
 Fruit Production
 Cereal, Fiber, and Oil Crops
 Principles of Plant Identification
 Soils and Plant Nutrition
 Principles of Statistics and Biometry
 Soils Management
 Forage and Pasture Crops
 Plant Breeding
 General Genetics
 Coffee and Spices
 Plant Propagation
 Forestry
 Vegetable Production
 Seed Technology

All Areas

Senior Seminar and Projects

Senior Seminar and Research
 Problem

Admissions requirements and procedures are of major importance, as they affect directly the quality and the number of incoming students. Each year through 1962, the College administered its own entrance examinations to twelfth year students in strategic locations throughout the Empire. After the College became a charter member of the Haile Selassie I University, the University Board of Admissions assumed responsibility for the major part of this program, employing the student's results on the Ethiopian School Leaving Examination as the principal basis for admission. The only exceptions to this were the agricultural secondary schools of Jimma and Ambo, where the College continued to handle admissions, based on the following considerations:

1. The student's four-year high school record
2. Evaluation of the student by members of the high school faculty
3. The student's performance on the College of Agriculture entrance examination. The Cooperative School and College Ability Tests (SCAT) published by the Educational Testing Service, Princeton, New Jersey,

have been used, supplemented by the algebra test prepared by the College of Agriculture Mathematics instructor.

At this point attention should be called to what has been a continuous problem—namely, getting enough qualified students to enter the College to utilize all facilities to full capacity. Lack of qualified students is a problem shared by all units of the University and has its roots in the limitations of the educational system as a whole. Attempts are being made to extend the elementary and secondary school programs; but progress is necessarily slow, and the day when a generous supply of well-qualified secondary school students apply for University entrance lies in the future.

This problem of insufficient numbers of students would have been considerably more serious except for the fact that Jimma Agricultural Technical School and the Ambo Agricultural High School have both served as major feeder schools. However, these two high schools will become post-secondary schools after the 1967-68 academic year, and the resulting gap will have to be made up by interesting graduates from other secondary schools in attending the College of Agriculture. The prospects for enrolling such students should improve as the total supply of qualified students from secondary schools increases, but it appears that an adequate solution will depend on the development of strong vocational agriculture departments in the better secondary schools. Progress in this direction has been disappointingly slow, considering the effort made by the College of Agriculture, but the Ministry of Education now appears to be interested in starting Vocational Agriculture Departments, and the College of Agriculture's new curriculum in Agricultural Education and Extension will eventually provide the teachers. Such a development should, in time, have a major impact on agricultural development, as well as on the problem of enrollment.

An educational institution's record for academic excellence depends primarily on the quality of its faculty and students and on the standards maintained in each class each day. These efforts to maintain high standards must be supported, however, by University requirements that demand a certain minimum level of performance of all its students who are awarded a degree. The Faculty Council for the University, through its Academic Standards Committee, has established such requirements for all faculties. In general, these follow closely the requirements previously enforced by the College of Agriculture. Instructors generally have followed the practice of giving frequent tests during the course so students would be aware of their academic performance early in the course while there was still time to take any remedial action that might be

necessary. Instructors also gave comprehensive final examinations during the period set aside for this purpose at the end of each semester. Final grades were recorded on the basis of *A*, *B*, *C*, *D*, or *F*, and a grade point average was calculated on the basis of four points for an *A*, three for *B*, two for *C*, one for *D*.

Statements of regulations are one thing, but understanding and enforcement are something else. At the College of Agriculture, a special effort has been made to help all students who have academic problems. Students on the borderline academically received an unofficial warning statement from the Dean's office. Also, at mid-term, all students who had an *F* or a *D* received a notice of their situation. At the same time, an effort was made to discover any special problems the student might have which could affect his academic performance, and the academic requirements for staying in College were explained to him. This forewarning and counselling has helped some students to raise their grades to acceptable levels, and those who eventually failed at least recognized that they had been treated fairly by the College and that the responsibility for their situation rested with themselves.

The average attrition rate has been a little more than 30 percent from all causes from the entering freshman class to the level of graduating senior, which has been substantially less than in other faculties of the Haile Selassie I University. This is not the place to discuss all the factors which may account for the lower attrition rate at the College of Agriculture, but an important factor is that its faculty members were close to their students, that they were actively interested in helping them to pursue their college curriculum successfully, and that they were readily available for consultation and needed assistance. In addition, the living facilities for students at the College of Agriculture were definitely superior to those on the Addis campus.

Transcripts and other academic records were maintained at the College of Agriculture, and when the College became a part of Haile Selassie I University, duplicate records were also kept by the HSIU Registrar in Addis Ababa from grades transmitted to him at the close of each semester. Such duplication is unavoidable in view of the distance and the poor communications between the College in Alemaya and the offices in Addis Ababa. In addition to academic records, each student's folder at Alemaya contains a copy of all significant correspondence written to or about him by any faculty member. It also contains a copy of his practical work evaluation, a record of any honors or disciplinary action, his health record, and a summary of his extra-curricular activities. This four-year accumulation of all pertinent information on each student has proved very useful in writing letters of recommendation

and in making students appreciate that all aspects of their college performance are being continually evaluated and made a part of their permanent record.

The library plays an essential role in the academic program, and the current excellent facilities have made a substantial contribution to raising the classroom accomplishments of the students. The library has been well operated by a part-time staff of wives and student help, except for 1963-64 when, fortunately, OSU was able to send a professional librarian from its staff for a one-year period to set up a system for handling the rapidly accumulating stock of books and periodicals. In 1967, a full-time Ethiopian librarian was employed, and wives of Contract and Ethiopian staff members continued to assist.

Until 1963, when the library building was completed, it was necessary to use a part of the dormitory lounge for this purpose. From this meager beginning, the library has grown to approximately 18,000 volumes, excluding textbooks. It subscribes to 240 professional journals and general periodicals. The library stacks are open to all students, with study tables conveniently located. Students have taken good care of the books and facilities, and the library is open until 11:00 p.m. each day for their convenience.

Work experience has been an integral part of the college program from the beginning. During the first two years, each student was required to work six hours weekly on a planned rotation among the subject matter departments to enable him to become more familiar with the disciplines and to provide a basis for selection of his major field of study. This was a part of the training program and the students were not paid.

During the last two years of college, students worked in the department which they had elected as their major field for as much as ten hours weekly. A small wage was paid for this work to provide for some of the personal needs of the students. The work experience program has contributed materially to the students' knowledge and breadth of understanding.

A comprehensive program of intramural activities has been sponsored by faculty and student and student organizations. These included a photography club, debating society, leather craft, chess, rover scouts, dramatics, community welfare as well as a sports program. The remoteness of the college from the metropolitan area has made the development of local activities and self-entertainment imperative.

A survey in 1952 failed to find within the Empire a single national with the equivalent of a bachelor of science degree in any phase of agriculture. Only a few had technical training to the diploma level.

With the 39 members of the graduating class of 1968, the number of college graduates totals 384. These graduates now hold positions of importance in all phases of government and private industry throughout the empire. They thus help provide the critical base of educated Ethiopians to man the technical services essential to developing Ethiopia's agricultural resources. Information as to the status of the 1968 graduates is not available. The following table indicates the employers of the 343 graduates for the 1957-1967 period:

Employer	No. of Graduates	Percent of Total
Ministry of Agriculture	99	28.86
Ministry of Education and Community Development	32	9.33
Other Governmental Ministries & Agencies	79	23.03
Haile Selassie I. University	59	17.20
Private Companies	35	10.21
All other agencies; foreign students; deceased	39	11.37
TOTAL	343	100.00

One hundred and thirty-six of these graduates have been or are presently taking advanced work in the United States. If they are now in the United States they have been classified according to their employer at the time they left Ethiopia.

The College of Agriculture has encouraged the enrollment of qualified students from other African countries. Sixteen students from Kenya, Tanzania, Ghana, Camerons, Gambia, Malawi, and Uganda have been graduated. Their academic performance has been good, and they have made an important contribution to the overall student body.

Research

Research started with the arrival of the staff in Ethiopia and has been a basic component of the Program. The site originally selected for the college at Bishoftu (now Debre Zeit) was also to include an experimental station. At the time of the location of the college at Alemaya it was agreed that the Central Experimental Station would be located at Debre Zeit and directed by the College of Agriculture. A grant of 200 acres was made to the College by the Imperial Ethiopian Government in 1953. The soil is of volcanic origin and is especially suited to the production of cereals, pulses, and oil seeds. The altitude is approximately 6200 feet above sea level. The station is suitably located to provide research information for the farmers of the vast central plateau region of Ethiopia, one of the largest farming regions in the country

and the most important from the standpoint of basic food crops. Research projects have included such areas as field crops, horticultural crops, poultry, animal nutrition, and farm mechanics.

The College at Alemaya has at its disposal a thousand acres of crop and pasture land for experimental and production purposes. Although the altitude of the Alemaya station (6500 feet) is not too different from that of Debre Zeit, the character of the soil and other factors which affect plant growth are quite different. The soils of the Chercher highlands are derived from disintegrated granite rock and are sandy as compared to the heavy clay soils of the Central Plateau region.

The principal objective of the research program was to improve the standard of living of the Ethiopian people through the application of scientific principles to the business of farming. In order to achieve this objective it was necessary to organize the work in such a manner as to most effectively use the funds, manpower, and facilities available. The American professors responsible for initiating the research projects were also busy with heavy teaching assignments and other collateral responsibilities incident to a developing institution. No Ethiopian professors were available during the early years of the program.

The approach to research, therefore, was bifurcate. The need to train Ethiopian research scientists was obvious. The level of training had to begin at the academic level of the available trainees, the secondary school level. In order to train students, teaching materials had to be developed which were pertinent to the agricultural situation of Ethiopia. There were virtually no research data to help in the preparation of these teaching aids. Even climatological records were fragmentary and unreliable.

Therefore, classwork, research, and practical work programs were integrated in such a way that professors and students worked side by side to tackle the job of learning together. Research projects were initiated in all major areas of agriculture, and these became the laboratories and teaching materials for instruction of the trainees.

In order to establish priorities for research projects, the research staff made many surveys. Selected students were encouraged to visit with farmers of the area in order to learn of particular problems facing agricultural production. Professors of the College traveled widely over Ethiopia and to neighboring African states to learn more about the problems and advances in agricultural development. Officials of government, business, and international agencies were consulted. Experts in many fields of specialization were invited to Ethiopia for consultation.

As Ethiopian scientists were trained, the program expanded with full responsibility for projects going to Ethiopians as they progressed through the various stages of advanced training. The compilation of



Central Experiment Station, College of Agriculture, Haile Selassie I University, Debre Zeit, Ethiopia

research projects listed in the Appendix indicates the scope of the research program.

Results of research have been published in the form of bulletins, miscellaneous publications, laboratory workbooks, technical articles for scientific journals, and special reports required by the Ethiopian Government and by AID. Following is a listing of publications.

HAILE SELASSIE I UNIVERSITY COLLEGE OF AGRICULTURE EXPERIMENT STATION BULLETINS

- | No. | Title, Author |
|-----|---|
| 1. | Soils of Ethiopia, "A Report on the Fertility Status of Some Soils of Ethiopia." H. F. Murphy. |
| 2. | Poultry Improvement and Production for Ethiopia. Poultry Department, IEC of A & M Arts. |
| 3. | Some Plant Diseases Occurring in Kaffa Province, Ethiopia. Robert B. Stewart. |
| 4. | Fertility and Other Data on Some Ethiopian Soils. H. F. Murphy. |
| 5. | Domestic Implements of Ethiopia—A Brief Survey of Hand Tools, Household and Farming Implements of Harar Province. Conn Price and Hailu Mengesha. |
| 6. | The Cultivated Sorghums of Ethiopia. Edward G. Damon. |
| 7. | An Improved Chika Poultry House. W. Wesley Hobbs and Jimmie D. Wolf. |
| 8. | The Sanitary Water Well, Sanitary and Structural Engineering Requirements in the Construction of the Hand Dug Sanitary Water Well. Conn Price, W. Wesley Hobbs, and Robert H. Ingersol. |
| 9. | Design and Load Bearing Capacities of 7 Meter Lightweight Trussed Rafter Constructed of Zigba Podocarpus Graciliar Lumber. W. Wesley Hobbs. |
| 10. | Sanitary Engineering Equipment in the Construction of the Reinforced Concrete Slab Pit Type Toilet. Conn Price and Robert H. Ingersol. |
| 11. | Housing Commercial Laying Hens in Ethiopia. W. Wesley Hobbs. |
| 12. | Commercial Poultry Production in Ethiopia. Jimmie D. Wolf. |
| 13. | Techniques for Restraint and Castration of Cattle. Anton A. Kammerlocher. |
| 14. | A Study of Useful Plants in Ethiopia. I. E. Siegenthaler. |
| 15. | Mule Power in Ethiopian Agriculture. Lloyd L. Wiggins and Conrad L. Evans. |
| 16. | Trial of Indigenous and Exotic Trees at Alemaya. Michel Afanasiev. |
| 17. | Protective Coatings for Chika Walls. W. Wesley Hobbs. |
| 18. | Making Quality Concrete for Agricultural and Home Structures. W. Wesley Hobbs. |
| 19. | Patterns for Livestock Improvement in Ethiopia. Milton E. Wells. |
| 20. | Fenugreek. Hugh F. Rouk and Hailu Mengesha. |
| 21. | Ethiopian Civet. Hugh F. Rouk and Hailu Mengesha. |

No.	Title, Author
22.	Developing Ethiopia's Agriculture. L. F. Miller.
23.	Some Common Agricultural Insects of Ethiopia and Their Control. Bob G. Hill.
24.	A Construction Guide for Intermediate Size Grain Storage Structures on Ethiopian Farms. W. Wesley Hobbs.
25.	Development of a Castor Bean Sheller for the Ethiopian Farmer. Shibberu Wolde Mariam.
26.	An Introduction to T'ef—A Nutritious Cereal Grain of Ethiopia. Hugh F. Rouk and Hailu Mengesha.
27.	How to Protect Stored Grain from Insects. Bob G. Hill.
28.	Wheat Research—Debre Zeit and Alemaya (Ethiopia) 1955-1962. Ruff L. Gentry.
29.	A Low Cost Family Size Metal Grain Storage Structure. W. Wesley Hobbs and Berhane Berhe.
30.	Host Index of Ethiopia Plant Diseases. Robert B. Stewart.
31.	The Design and Construction of a Reinforced Concrete "Tilt-up" Trench Silo. W. Wesley Hobbs.
32.	The Design and Construction of a 20 Metric Ton Capacity Corrugated Metal Grain Storage Bin. W. Wesley Hobbs and Zawdu Felleke.
33.	Construction and Sanitation Requirements for Producing Clean Milk. Milton Wells and Wesley Hobbs.
34.	Artificial Insemination of Ethiopian Livestock. Milton Wells.
35.	Organization and Operation of Three Ethiopian Case Farms. Leonard Miller and Telahun Makonnen.
36.	The Insect Pests of Vegetables in Harar Province. Bob Gene Hill
37.	Brooding Chicks with Electric Infra-red Heat Lamps. W. Wesley Hobbs.
38.	A Progress Report on Vegetable Variety Trials. Taye Bezuneh.
39.	Progress Report on Cereal and Oil Seed Research. Asrat Felleke.
40.	Selection and Use of Centrifugal Irrigation Pumps. Yack C. Moseley.
41.	The Design and Installation of Electrical Wiring Systems in Ethiopia. Wesley Hobbs and Leon Holland
42.	Farm Organization of Terre and Galmo Villages K. C. Davis, Ahmed Mohamed and W. A. Wayt.
43.	Organization and Operation of a Marketing Cooperative in Ethiopia. Victor F. Amann.
44.	The Fertility Status and Other Data on Some Soils of Ethiopia. H. F. Murphy.
45.	Families of Flowering Plants in Ethiopia. William C. Burger.
46.	A Credit Study of Alemaya Farmers Cooperative Society. Lakew Birke.
47.	Land Ownership in Hararge Province. Sileshi Wolde-Tsadik.
48.	Land Taxation in Hararge Province. Sileshi Wolde-Tsadik.
49.	Land Tenure in Bate, Alemaya Miketil-Woreda, Harar. Demissie Gebre Michael.
50.	Plant Diseases of Economic Importance. Dagnatchew Yirgou.
51.	An Annotated Check List of the Mammal Fauna of the Chercher Highlands of Ethiopia Present in the Museum of the College of Agriculture, HSIU. John K. Beadles, Robert H. Ingersol.

No.	Title, Author
52.	Development of College Dairy Herd and Dairy Crossbreeding Studies. D. G. Wagner, M. E. Wells, G. L. Holland, Teshome Wondafrash.
53.	Crossbreeding Studies with Native Ethiopian Beef Cattle Using Imported Semen from various Breeds. Donald G. Wagner, G. L. Holland, Tessera Mogess.
54.	Studies on the Value of Noog and High Wheat Bran Rations for Milk Production. D. G. Wagner, Berhanu Abegaz, Berhane Kiflewahid.
55.	Dairy Cattle Management in Ethiopia. Donald G. Wagner.
56.	Potential Returns from Commercial Farming Systems in Three Areas of Ethiopia. M. E. Quenemoen.
57.	Studies on the Value of Noog and High Wheat Bran Rations for Fattening Beef Cattle in Ethiopia. Donald G. Wagner, G. L. Holland, Tessera Mogess.
58.	The Economics of Irrigation With Small Pumps in the Chercher Highlands. M. E. Quenemoen, Darrell G. Watts, Yack C. Moseley.
59.	Studies on the Value of Noog Oil Meal as a Protein Concentrate for Chickens. William G. Lockhart.

**HAILE SELASSIE I UNIVERSITY
COLLEGE OF AGRICULTURE
EXPERIMENT STATION
MISCELLANEOUS PUBLICATIONS**

No.	Title, Author
1.	A Guide to Insect Collecting. Bob Gene Hill.
2.	A Small Nursery for Ethiopian Schools. G. Luther Schnur.
3.	Weather and Tree Planting at Alemaya. G. Luther Schnur and Adugna Zerihun.
4.	A Preliminary List of the Insect Reference Collections. Bob Gene Hill.
5.	The Care and Management of the Native Chickens of Ethiopia. Dan G. Bigbee.
6.	Heating Water with Solar Energy for Household Use in Ethiopia. W. Wesley Hobbs.
7.	The Design and Construction of a Solar Heater for the Distillation of Water. W. Wesley Hobbs.
8.	The Selection and Use of Electric Motors for Agricultural and Agricultural Industrial Purposes in Ethiopia. W. Wesley Hobbs.
9.	A Preliminary Survey of the Insects on Trees and Shrubs. Bob Gene Hill and Hadera Gebremedhin.
10.	A Preliminary Survey of the Insects on Ornamental Plants. Bob Gene Hill.
11.	A Poultry Development Program for Five Provinces in Ethiopia. Selashe Kebede.
12.	A Survey of Milk Production and Marketing Practices in Harar-Ethiopia. Milton Wells.
13.	A Proposed Grain Storage Programme for Ethiopia. W. Wesley Hobbs and Leonard F. Miller.
14.	A Report on Spice Development in Ethiopia. Zemedu Worku.

- | No. | Title, Author |
|-----|---|
| 15. | Housing Zoo Animals in Tropical and Sub-Tropical Climates. Robert Ingersol and W. Wesley Hobbs. |
| 16. | (Incomplete) |
| 17. | Mole Rat (Filfil) Control. Robert Ingersol |
| 18. | (Incomplete) |
| 19. | Celery and Celeryac. Leonard A. Yager and Haile Michel Kidane-Mariam. |
| 20. | Livestock Enterprise Operations on Four Ethiopian Farms. Raymond E. Page. |
| 21. | Planning and Budgeting Procedures for Developing Profitable Farms. M. E. Quenemoen. |
| 22. | Animal Hygiene and Disease Control in Ethiopia. Bruce G. Stringer. |
| 23. | An Annotated Check-list of the Animal Fauna Present in the Zoological Garden of the College of Agriculture, HSIU. John K. Beadles and Robert H. Ingersol. |
| 24. | Observations on Some Special Animal Disease Conditions in the Harar, Dire Dawa, and Debre Zeit Areas. Bruce G. Stringer. |
| 25. | Ticks and Tick-Borne Diseases of Livestock. Bruce G. Stringer. |
| 26. | Swine Production in Ethiopia. D. G. Wagner. |
| 27. | Sheep and Goat Production in Ethiopia. D. G. Wagner. |
| 28. | Elephants in Harar Province, Ethiopia. John K. Beadles. |
| 29. | Handbook of Weights and Measures, Conversion Tables, and Other Data Often Needed in Agriculture. Yack C. Moseley. |
| 30. | Poultry Industry Development in Ethiopia with Special Reference to Harar Province. W. C. Lockhart, Aklilu Askabe, Aberra Ayana. |
| 31. | The Effect of Forced Ventilation on Potato Storage. Yack C. Moseley. |

OTHER MISCELLANEOUS REPORTS AND BULLETINS

Agriculture in Ethiopia, Volumes I-XII

Our Ethiopian Adventure—Dr. Luther H. Brannon

Oklahoma State University in Ethiopia—A Progress Report, 1952-1962

Oklahoma State University in Ethiopia—1964

Oklahoma A & M in Ethiopia—Newsletters Numbers 1-8

Progress Report for the Central Experiment Station—October, 1962

Report to Ethiopia 1952-1961 by: Communications Media Center, Ethiopian-United States Cooperative Program

Agricultural Perspectives, April 1960—by Dr. Jack R. Harlan

Agricultural Contract Survey Team Report—September, 1960, by: Huffine, Miller, Turman, Holley

Report of Follow-Up Visit to Ethiopia—January 29, 1961, by: L. M. Henderson

This is Haile Selassie I University—1964

The Alemayan—Report similar to our college annuals published by Ethiopian students at College of Agriculture, Alemaya, Ethiopia

Suggestions for a Program in Home Economics for Ethiopia,
by: Katharine Holtzclaw and Evelyn Funk
Orientation Handbook—Material compiled by J. S. Vandiver
A Dictionary of Ethiopian Plant Names—Amare Getahun
How to Take Soil Samples for Testing—H. F. Murphy and
Aduzna Zerihun

These data, have been used in resident instruction by the college professors, by Agricultural Extension agents who worked directly with the farmers, by Ministries of the Ethiopian Government, by international organizations and by industry.

In addition many important projects by other agencies have been undertaken to expand the work started by the college research personnel. As an example—the systematic collection of germ plasma materials in coffee, wheat, sorghum, barley, millets by teams of international experts, is based on earlier work by the college research staff.

Extension and Public Service

Extension and public service activities started in 1952 with the initiation of a study of existing conditions preparatory to establishing an extension program under the direction of the Agricultural College.

On October 1, 1954, two Ethiopians who had graduated from the Ambo Agricultural School and had taught in the elementary schools for three years were employed as extension agents. They were stationed at Asella and Fitcha to establish demonstrations with cooperating farmers. The initial effort was sheep improvement with particular emphasis on wool quality. In addition to work with sheep, they gave some attention to gardening and poultry. Educational group meetings were held with farmers where improved seed, insecticides, and other materials were made available. Field demonstrations were established and farm tours conducted to acquaint local farmers with the results. Meanwhile, work with youth started with the organization of a 4-T Club at the Jimma school. The 4-T was the Ethiopian version of the U.S. 4-H and was organized along the same general methods of operation. Members undertook supervised projects and activities, gave team demonstrations, participated in meetings, and were involved in the usual range of activities found in youth agricultural projects.

During the next few years there was a steady growth in the scope and scale of extension activities. The basic organizational structure was created, administrative policies defined, and an operational program of coordinated educational services made available to farmers.

By 1963, seventy-seven extension posts had been established with a

total of 132 nationals servicing the various areas. Eight supervisory districts had been created, and decentralization had been effected so that each supervisor was residing in his particular area. The program of work had been divided into five operational phases: (1) Administration; (2) Supervision and Training; (3) Field Services; (4) Youth Activities; and (5) Information. A pre-service and in-service training program had been put into operation. Arrangements had been completed with the American University, Beirut, to provide a year of training for extension workers. Training meetings had short courses in extension methods and technical subject matter were being conducted on a regular, systematized basis. Provincial Governors were making requests for more agents in their areas. Some 2,500 farms of the country were being reached by extension through contacts with adult farmers and youth club members. Farmers were using improved practices in the production of livestock, poultry, coffee and corn. Agents were demonstrating new techniques in tools and machinery, insect and disease control. In short, Extension had progressed from two agents in 1954 to a well-organized, carefully planned educational arm of the College of Agriculture, staffed and operated by Ethiopians trained in the basic philosophies and methods of extension . . . to help people help themselves. The year 1963 is used because at that time, by decision of the Board of Trustees of Haile Selassie I University, administration of Extension was transferred from the College of Agriculture to the Ministry of Agriculture.

The College of Agriculture has continued to provide training in subject matter areas for extension agents. The facilities at Alemaya and Debre Zeit have been used for training meetings, conferences, and short courses. An annual feature at the College has been the annual field day at which time some six hundred farmers are guests. All of the experimental work in Plant Sciences, Animal Science, Agricultural Economics and Agricultural Engineering is on display for them to see. This event is well attended by extension personnel, most of whom have been enrolled as students either at the College or at Jimma.

The College has continued to conduct work in the public service area with farmers in the vicinity of the College. Work on small irrigation pumps with farmers have enabled them to produce vegetables which, in turn, were marketed through a vegetable marketing cooperative. Farmers have been given technical assistance in poultry production and high-quality eggs are being marketed at Djibouti. These activities have served a twofold purpose: first, farmers have been able to increase their output and improve their economic situation to a marked degree; second, it has provided an opportunity for the staff to test theories and principles under local conditions, thereby improving the quality of class-

room instruction. The improvement of attitudes of the local people toward the College has been a very important by-product of this association. Farmers now tend to regard the College as "their institution," and commercial operators come to the college from all over the country for advice and help on a wide range of agricultural problems.

An important new off-campus activity undertaken in 1968 was the agricultural fair initiated in cooperation with the Ministry of Agriculture during the traditional observance of St. Gabriel's Day at Kulubi. An area approximately 40x40 meters was fenced off in which all departments of the college developed displays for large crowds. Temporary buildings were constructed, livestock transported to the area, and power provided by bringing the College's own generator to the area. The major value in this particular was that people came from all over the Empire to observe this religious festival. It was an opportunity to present the work of the College to the people who do not attend the annual Field Day.

A poultry project has developed in the Debre Zeit area as a result of efforts of the Central Experiment Station Staff. Farmers have received high quality chicks and mixed feed from the station. Technical assistance has been provided in construction of farm facilities, and some supervision of farm operations have been available. This off-station activity has resulted in the weekly production of more than twelve hundred dozen quality eggs for the Addis Ababa market, with the project on the increase. Assistance provided by the station has also made possible the production of desirable beef for market. The station has also played a leading role in the production of spice and the establishment of a processing plant to handle the output. The public service activities of the College are influencing the lives of the people in a positive way.

Participant Training

The College began operation with a faculty that was entirely American in composition. From the beginning, one of the basic goals was to train Ethiopians to take over the complete operation of the College at the earliest possible moment. However, the training of staff replacements had to await the completion of undergraduate work. The first class of eleven finished at Alemaya in 1957. Four of this group were selected as participants (and future replacements) to travel to the US for graduate study in their areas of specialization. Two received degrees from the University of Nebraska; two, from Kansas State.

There has been a continuous program of AID supported participant

training to prepare Ethiopians for faculty positions. The Rockefeller Foundation has been of invaluable assistance through its support of a graduate program at the doctoral level. There has been an infusion of nationals into the faculty, slow in the beginning, but accelerating with each passing year. The staff is now predominantly Ethiopian and, when those currently in training rejoin the faculty, enough participants will have been trained to fully staff the institution. Thus the process of institutional building is something that evolves over time. The brick and mortar, concrete and steel that constitute the physical plants are cold and inanimate; an institution becomes live and dynamic only as its human resources become imbued with a national purpose consistent with the goals of the society.

Following is a summation of the participant training activities:

PARTICIPANTS CURRENTLY ON STAFF

Name	Degrees from: <i>Position in Ethiopia:</i>
Dr. Makonnen Kebret	MS, U. of Illinois; PhD, Cornell U. <i>Dean, College of Agriculture</i>
Dr. Melak H Mengesha	MS, U. of Nebraska; PhD, Purdue U. <i>Director of Research</i>
Dr. Dawit Deguefu	MS, Okla State U.; PhD, Okla. State U <i>Head of Plant Sciences</i>
Dr. Ephraim Mamo	DVM, Tuskegee <i>Assistant Professor</i>
Bantayahu Gelaw	MS, U. of Arizona <i>Lecturer, Plant Sciences</i>
Berhanu Wagaw	MS, Okla State U. <i>Lecturer, Animal Science</i>
Brhane Gebre Kidane	MS, U of Nebraska <i>Doctoral Program, U. of Minnesota, (AID)</i>
Demissie Gebre Michael	MS, Ohio State U. <i>Doctoral Program, U. of Wisconsin (AID)</i>
Haile Michael K. Mariam	MS, U. of California <i>Lecturer, Plant Sciences</i>
Lakew Birke	MS, Ohio State U. <i>Doctoral Program, Ohio State U. (AID)</i>
Mengistu Hullaka	MS, U of Minnesota <i>Lecturer, Plant Sciences</i>
Selashe Kebede	MS, U. of Rhode Island <i>Doctoral Program, Michigan State (Rockefeller Foundation)</i>
Shibberu Wolde Mariam	MS, Kansas State U. <i>Head, Agricultural Engineering</i>
Sileshi Wolde Tsadik	MS, Purdue U. <i>Doctoral Program, U. of Wisconsin (FAO)</i>
Taye Bezuneh	MS, U. of Hawaii <i>Doctoral Program, U. of Florida (Rockefeller Foundation)</i>

PARTICIPANTS CURRENTLY ON STAFF

Telahun Makonnen	MS, U. of Minnesota <i>Head, Agricultural Economics</i>
Tessafye Tessema	MS, U. of Nebraska <i>Assistant Professor, Plant Sciences</i>
Tessera Mogess	U. of Wisconsin <i>Technical Assistant, Animal Science</i>
Tessema Megenasa	MS, U. of Arizona <i>Doctoral Program, Cornell U. (AID)</i>
Zemedu Worku	MS, U. of Hawaii <i>Lecturer, Plant Sciences</i>
Seifu Weldamanuel	California Polytechnic Institute <i>Chief Mechanic</i>
Amare Getahoun	MS, Rutgers <i>Doctoral Program, U. of Florida</i>
George Antonatos	MS, Okla. State U. <i>Lecturer, Animal Science</i>
Joseph Kifle-mariam	MS, Okla. State U. <i>Lecturer, Agricultural Engineering</i>
Kurabatchew, W.	Kansas State U. <i>Lecturer, Agricultural Engineering</i>
Tadessa Ebba	MS, U. of Wisconsin <i>Lecturer, Plant Sciences</i>
Aberra Ayana	California Polytechnic Institute <i>Technical Supervisor</i>
Dembal Balcha	MS, Ohio State U. <i>Lecturer, Agricultural Economics</i>
Adugna Zerihun	Colorado State U. <i>Technical Supervisor, Forestry</i>
Teshome Wondafrash	MS, Okla. State U. <i>Technical Supervisor, Animal Science</i>
Tsegate Habte Mariam	Colorado State U. <i>DVM Program</i>
Ahmed Mohamed	U. of Minnesota <i>Technical Assistant, Agricultural Economics</i>
Haile Sebsibe	Purdue U. <i>Technical Asst., Agricultural Engineering</i>
Aregay Waktola	U. of Wisconsin <i>Agricultural Education and Extension</i>
Kahsai Mellese	U. of Wisconsin <i>Agricultural Economics</i>
Berhane Kiflewahid	Iowa State U. <i>Animal Science</i>
Zerai Araya	U. of Wisconsin <i>Forestry</i>
Dereje Ashagari	Okla. State U. <i>Plant Pathology</i>
Legesse Senbetu	U. of California <i>Physics</i>
Solomon Bekure	MS, Okla. State U. <i>Doctoral Program, Okla. State U. (AID)</i>
Hailu Mengesha	MS, Okla. State U. <i>Doctoral Program, U. of Hawaii (Rockefeller Foundation)</i>

PARTICIPANTS NO LONGER EMPLOYED BY COLLEGE OF AGRICULTURE

Name	Degrees from: <i>Position at departure:</i>
Aberra Demissie	BS, Purdue U. <i>Assistant, Plant Sciences</i>
Abraham Besrat	MS, Okla. State U. <i>Student, College of Agriculture</i>
Abraham Demere	MS, Michigan State U. <i>Administration</i>
Dr. Asrat Felleke	MS, U. of Nebraska <i>Lecture, Plant Sciences</i>
Assefa Bogale	MS, U. of Rhode Island <i>Assistant Livestock Manager, Debre Zeit</i>
Ayele Yeshewalul	MS, U. of Nebraska <i>BS, Alemaya, 1957</i>
Bekele Endeshaw	MS, Kansas State U. <i>BS, Alemaya, 1957</i>
Bekele Sissay	MS, U. of Arizona <i>Assistant Instructor, Plant Sciences</i>
Berhanu Disasa	Purdue U. <i>Graduate Assistant, College of Agriculture</i>
Berhane Berhe	MS, Okla. State U. <i>Graduate Assistant, College of Agriculture</i>
Gebrehiwet Zere	MS, Kansas State U. <i>Assistant Farm Manager</i>
Kebede Koomsa	MS, Purdue U. <i>Graduate Assistant, College of Agriculture</i>
Kiros Yohannes	U of Pennsylvania, U. of New Hampshire <i>Clerk, College of Agriculture</i>
Dr. Samu Negus Hailemariam	MS, U. of California <i>Student, College of Agriculture</i>
Shankute Tessema	MS, Kansas State U. <i>Graduate Assistant, Alemaya</i>
Zawku Felleke	MS, Michigan State U. <i>Graduate Assistant, College of Agriculture</i>

CONCLUSION

The 1968 graduation exercises were held on the campus at Alemaya for thirty-nine seniors on July 3. Haile Selassie I University President Lij Kassa Wolde Mariam expressed gratitude to Oklahoma State University for its assistance over the years. He also pointed out that the College was now administered by former graduates of the institution.

His Imperial Majesty addressed the graduates as follows:

Agriculture, the mainstay of the economy of the nation, has been the traditional occupation throughout the history of Ethiopia. But the present era requires modernization of agricultural methods. This college was founded eleven years ago to help in our plans and endeavours to raise the standard of living of our beloved people by introducing modern agricultural methods. It was established in Harar because of the ideal climatic and soil conditions prevailing in the region—the results have been encouraging.

We are pleased to note that graduates from this college are now occupying responsible positions and have distinguished themselves in their field.

We are happy to be here today to award degrees to the new graduates from this college—symbols of the fulfilments of our hope in this college, the administration of which has been transferred from foreigners to the former graduates of the college.

This is a source of joy for us—our efforts have borne fruit. This should also be a source of joy for the former foreign teaching staff members who had served with sincerity and diligence.

We believe if more skilled manpower is available, Ethiopia, because of her natural rich resources and geographical location cannot only produce enough for itself but can also produce a surplus for export. This can be achieved if you and the former graduates of this college dedicate themselves to this task.

Agriculture is the basis of industry but both should be developed as complementary sectors.

You graduates should be broadminded and farsighted lest your education fall short of its goal.

An idle body always withers but an active mind grows and

develops and that helps the growth and development of a nation.

May the Almighty assist all of you who have just received degrees from us to be of service to your country.

Thus, the 1968 graduation exercises brought to a successful termination a program that officially began May 16, 1952. This very brief report can only highlight a few of the major accomplishments. However, individual end-of-tour reports are on file which describe in detail the progress achieved in specific undertakings. Additionally, twelve volumes of the publication *Agriculture in Ethiopia* have been prepared. The number of experimental bulletins, leaflets, circulars, and miscellaneous publications exceeds 120. A storehouse of research data is now available upon which to build future agricultural developmental programs.

The essential components of a modern college physical plant have been designed, constructed, and put into operation. The present facilities can be expanded as required to accommodate an enlarged college program.

But the most significant contribution lies in the area of training people to carry on and expand the program that has been started. The College of Agriculture is only in its infancy. At the outset, the staff was entirely from the United States. At the close of the present academic year, this had changed to thirty-three Ethiopians and fourteen contract personnel. The Ethiopian staff members all completed the undergraduate program at Alemaya. They have received graduate training in their specialties at major US universities, and possesses the technical competence required to move the program forward. Others who will be equally well trained are scheduled to complete their graduate programs in the United States shortly and will be rejoining the faculty. So, the basic goal of training Ethiopians to assume responsibility for the direction and operation of the College has been realized.

Oklahoma State University is proud to have had a part in this cooperative educational endeavor. The progress that has been made is due to the dedicated team effort of hundreds of men and women who have given so much of themselves to this program. They will follow the future development of the Haile Selassie I University College of Agriculture with intense personal interest. They leave secure in the knowledge that it will be guided by willing and capable hands. It will have a major role in the development and utilization of the human and natural resources of a great nation.

APPENDICES

Appendix "A"

AGREEMENT FOR A COOPERATIVE AGRICULTURAL EDUCATION PROGRAM BETWEEN THE IMPERIAL ETHIOPIAN GOVERNMENT AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA

The Imperial Ethiopian Government and the Government of the United States of America have agreed as follows:

ARTICLE I

Pursuant to the request of the Imperial Ethiopian Government and in accordance with the General Agreement for Technical Cooperation between Ethiopia and the United States of America, signed at Addis Ababa on June 16, 1951, there shall be initiated a cooperative program in agricultural and mechanical arts education governed by the terms and conditions of said General Agreement, and designed to aid the efforts of the Ethiopian people to use their agricultural and other resources more effectively and thereby to improve their standard of living.

ARTICLE II

The objectives of this cooperative program in agricultural and mechanical arts education are:

1. To promote and strengthen friendship and understanding between the people of Ethiopia and the United States of America and to further their general welfare.
2. To aid the efforts of the people of Ethiopia to develop their agricultural and related resources, to improve their working and living conditions and to further their social and economic progress.
3. To this end, to facilitate the development of agricultural and mechanical arts education activities in Ethiopia through cooperative action, and,
4. To stimulate and increase the interchange between the two countries of knowledge, skills and techniques in the field of agricultural and mechanical arts education.

ARTICLE III

To carry out the cooperative program a special technical service designated as the Imperial Ethiopian Agricultural College Fund (hereinafter referred to as the Fund) shall be established as an independent agency of the Government of Ethiopia. The Director of the Fund shall be assigned by the United States, in accordance with Article VI (1) hereof. The Emperor of Ethiopia will appoint a Special Representative of Vice-Ministerial or higher rank to consult with the Director in all operations of the Fund.

ARTICLE IV

1. The Fund shall establish, direct and administer the Imperial Ethiopian College of Agriculture and Mechanical Arts in Ethiopia (hereinafter called the College), which will conduct instructions, lectures, demonstrations, research, experimentation, extension service and other education activities to promote the development and use of agricultural and mechanical techniques among the people of Ethiopia

2. The Director of the Fund, in agreement with the Special Representative shall determine the general policies and administrative procedure and the direction of activities and operations of the Fund, the incurrence of obligations, the purchase, inventory, control and disposition of property of the Fund; the appointment and discharge of officers and other personnel of the Fund and the terms and conditions of their employment; and all other administrative matters of the Fund.

3. The President of the College shall be appointed in accordance with the provisions of Article VI hereof, and shall plan, direct and be responsible for all operations and activities of the college, including the admission of students, establishment of curricula, conduct of examinations for the measurement of attainments in learning and conferring of suitable certificates, honors, diplomas and degrees of the college; the disbursement of and accounting for funds, the incurrence of obligations, the purchase, use, inventory, control and disposition of property of the college; the appointment and discharge of personnel of the College and the terms and conditions of their employment, and all other administrative matters; such operations and activities to be in accordance with plans of operation approved by the Director of the Fund and the Special Representative.

4. The Fund shall direct and administer such other projects to promote the objectives of the cooperative program as may be hereafter provided for in operational agreements between the Director and the Special Representative, which shall define in writing the kind of work to be done, the allocation of funds therefore, and such other matters as the Director and the Special Representative shall desire to include.

5. All contracts and other instruments of the Fund relating to the operations previously agreed upon by the Director and the Special Representative shall be executed in the name of the Fund and signed by the Director. The books and records of the Fund relating to the cooperative agricultural education program shall be open at all times for inspection and audit by authorized representatives of Ethiopia and the United States. The Director shall render an annual report of its activities to Ethiopia and the United States, and other reports at such intervals as may be agreed upon by the parties hereto.

6. It is contemplated that the operations to be undertaken in accordance with this Agreement may include assistance to, and cooperation with, national, departmental and local governmental agencies in Ethiopia, as well as with organizations of a public or private character.

ARTICLE V

There is hereby established the Imperial Ethiopian College of Agriculture and Mechanical Arts Board of Trustees, which shall consult with and advise the President of the College on matters of general policy in connection with the activities of the College and shall recommend to the President policies which will promote the effectiveness of the College in training and assisting the Ethiopian people in the improvement of agricultural techniques and rural life. Members of the Board shall be appointed by the Emperor of Ethiopia from among representative persons of broad experience and active interest in the fields of education or agricultural development. The Special Representative shall be the Chairman of the Board. The advice and recommendations of the Board shall be given full consideration by the President of the College in directing its curriculum and activities.

ARTICLE VI

The parties hereto shall make the following contributions to the Fund for use in accordance with the terms of this Agreement.

1. The United States, through the Technical Cooperation Administration of the Department of State (hereinafter referred to as TCA), will furnish either through its own agencies or instrumentalities, or through persons or agencies designated to be acceptable to Ethiopia, qualified persons subject to the approval of the Emperor of Ethiopia, to act as Director of the Fund and to be appointed President of the College respectively and such other technical, administrative and teaching personnel of the Fund and of the College, acceptable to Ethiopia, as the Director and the Special Representative shall approve on the basis of operational programs submitted by the President; and, in accordance with the laws and regulations of the United States, will pay the salaries and allowances of such persons, the costs of transportation for them and their families and for household goods and personal effects to Ethiopia and return. The funds to pay these expenses shall be administered by TCA and shall not be deposited to the credit of the Fund.

2. In addition, the United States through the TCA shall deposit to the credit of the Fund for expenditure by the Fund under the terms and conditions of this Agreement the sum of \$400,000.00 (Four hundred thousand dollars) in currency of the United States of America.

3. The Imperial Ethiopian Government will transfer to the College for administration by the Fund at least twenty (20) gashas of suitable land located at places to be agreed upon by the Director and the Special Representative.

4. In addition the Imperial Ethiopian Government will deposit to the credit of the Fund, for expenditure by the Fund under the terms and conditions of this Agreement, \$1,000,000.00 (One Million Dollars) in currency of Ethiopia.

5. Each deposit required by this Section to be made by one of the parties hereto shall be available for withdrawal or expenditure only after the corresponding deposit due from the other party has been made. Moneys deposited by the other party shall be returned to the contributor on request.

ARTICLE VII

1. It is understood that, subject to the availability of appropriations and provided that the progress of the College is satisfactory to both Governments, the Ethiopian and United States Governments intend to make during the next ten-year period

such future contributions to the College as shall be hereafter mutually agreed upon.

2. The Imperial Ethiopian Government, in addition to the cash contribution provided for in Article VI hereof, may make available, at its own expense, pursuant to agreement between the Special Representative and the Director, specialists and other necessary personnel to collaborate with the Fund; such office space, office equipment, furnishings and such other facilities, materials, equipment, supplies and services as it can conveniently provide; and the general assistance of the governmental agencies of Ethiopia.

3. By agreement between the Director and the Special Representative, contributions of funds, properties, services and facilities by third parties in addition to the funds, properties, services and facilities required to be contributed under this Agreement, may be accepted for use in carrying out the cooperative program in agricultural and mechanical arts education.

ARTICLE VIII

1. Such of the funds deposited by TCA to the credit of the Fund as are converted to Ethiopian currency shall be converted at the highest rate which, at the time conversion is made, is available to the United States for its diplomatic and other official expenditure in Ethiopia.

2. Subject to the provisions of Article VI (5) hereof, the balances of all funds deposited to the credit of the Fund pursuant to this Agreement shall continue to be available for the cooperative agricultural education program during the existence of this Agreement, without regard to annual periods or fiscal years of either of the parties. All materials, equipment and supplies acquired for the Fund shall become the property of the Fund and shall be used in the furtherance of this Agreement.

3. Interest received on moneys of the Fund, revenue from the sales of produce or livestock or from the rendering of services and any other increment of assets of the Fund, of whatever nature or source, shall be devoted to the carrying out of the program and shall not be credited against the contributions of the respective governments.

ARTICLE IX

1. All rights and privileges which are generally enjoyed by all other governmental divisions and agencies of the Imperial Ethiopian Government or by their personnel shall accrue to the Fund and to all its personnel to the same extent to which they are available to all such other governmental divisions and agencies or to their personnel.

2. The rights and privileges referred to in this Article IX shall also accrue to the TCA with respect to those of its operations which are related to, and its property which is to be used for, and its personnel which is employed in connection with, the cooperative agricultural education program in Ethiopia.

3. All personnel, who are citizens of the United States and who are not Ethiopian Subjects, provided to the Fund by the United States, shall be granted the same tax and customs exemptions as are granted to diplomatic personnel of the United States in Ethiopia.

ARTICLE X

The Governments of Ethiopia and the United States recognize that it is in their mutual interest that full publicity be given to the objectives and progress of the coop-

erative agricultural education program and of the actions taken in furtherance of that program, in order to strengthen the sense of common effort which is essential to the achievement of the objectives of the program. The Special Representative and the Director of Technical Cooperation will encourage the dissemination of such information and will make it available to the media of public information.

ARTICLE XI

Any right, privilege, power, or duty conferred by this Agreement upon either the Special Representative or the Director may be delegated by either of them to any of his assistants, provided that each such delegation be satisfactory to the other party to this Agreement. Whether or not such delegates are named, the Special Representative and the Director shall retain the right to refer any matter directly to one another for discussion and decision.

ARTICLE XII

1. This Agreement shall enter into force upon the day on which it is signed and shall remain in force for three years therefrom unless previously terminated by sixty days notice in writing by either party to the other party. This Agreement may be extended by mutual agreement of the two parties.

2. Any moneys of the Fund which remain unexpended or unobligated upon the termination of this Agreement shall be returned to the two parties in the proportion of the respective contribution to the Fund made by each party. All property being administered by the Fund at the termination of this Agreement and not yet vested for whatever reason in the College shall thereupon devolve upon the College.

3. The Special Representative shall take the necessary steps to obtain such governmental action as may be required to carry out the terms of this Agreement.

ARTICLE XIII

Whenever in the opinion of the Government of the United States of America such action would be necessary to prevent interference with the objectives of the assistance program, the Imperial Ethiopian Government will deposit, segregate or assure title to all funds allocated to or derived from any program of assistance undertaken by the Government of the United States of America so that the same shall not be subject to garnishment, attachment, seizure or other legal process by any person, firm, agency, corporation, organization or government.

IN WITNESS WHEREOF, the undersigned, duly authorized thereto, have signed the present Agreement.

DONE, at Addis Ababa in the Amharic and the English languages, both of which texts are authentic, this 15th day of May 1952.

FOR THE IMPERIAL ETHIOPIAN GOVERNMENT:

/s/ Ato Ahilou Abte Wold

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

/s/ J. Rives Childs

Appendix "B"

AGREEMENT BETWEEN THE TECHNICAL COOPERATION ADMINISTRATION AND OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

MEMORANDUM OF AGREEMENT made this 16th day of May, 1952, between the Technical Cooperation Administration, of the United States Department of State (hereinafter referred to as "TCA"), and the Oklahoma Agricultural and Mechanical College, of Stillwater, Oklahoma, acting by and through the Board of Regents for the Oklahoma Agricultural and Mechanical College (hereinafter referred to as the "College").

WHEREAS, the Government of the United States of America, pursuant to the Act for International Development, (Title IV, Public Law 535, 81st Congress, 2nd Session), and to the request of the Government of Ethiopia and the provisions of the Agreement for a Cooperative Agricultural Education Program with the Ethiopian Empire, is prepared to cooperate with the Government of Ethiopia in a program of activities designed to provide for the people of Ethiopia assistance in the establishment and operation of a College of Agriculture and a country-wide system of agricultural extension services and agricultural research and experiment stations, and other projects and operations in related fields, and

WHEREAS, the Act declares that it is the policy of the United States of America to seek the most effective utilization of public and private personnel and facilities in furthering the economic development of underdeveloped areas; and

WHEREAS, the TCA has determined that the College is especially competent to carry out on behalf of the TCA in Ethiopia the undertakings assumed by the Government of the United States in the above stated fields and the College has indicated its willingness to accept responsibility for these undertakings:

NOW, THEREFORE, THE TCA AND THE COLLEGE MUTUALLY AGREE THAT:

ARTICLE I

A. The College will carry out on behalf of the TCA in Ethiopia the undertakings assumed by the Government of the United States that are set forth in the Agreement for a Cooperative Agricultural Education Program between the Ethiopian Empire and the United States of America dated May 15, 1952, in the manner and to the extent provided in the present agreement and as may hereafter be mutually agreed upon between the parties hereto in supplemental agreements.

- B. In carrying out its obligations under this Agreement, the College will:
- 1) Give assistance to the Government of Ethiopia in the establishment and operation of a college of agriculture;
 - 2) Give assistance to the Government of Ethiopia in the establishment and operation of a country-wide system of agricultural extension services to the people of rural areas;

- 3) Give assistance to the Government of Ethiopia in the establishment and operation of agricultural research and experiment stations;
- 4) Administer such other specific projects and operations, and give such other assistance to the Government of Ethiopia in related fields pertaining to the economic development of Ethiopia, as the TCA may request and the College may accept.

C. The operations undertaken by the College pursuant to this Agreement shall be performed under the supervision and direction of the TCA Director of Technical Cooperation in Ethiopia.

ARTICLE II

A. In the discharge of the obligations assumed by it in this Agreement, the College shall be responsible for recruiting, training, and maintaining in Ethiopia a competent corps of administrative, technical and teaching personnel, adequate to carry out the operations provided for herein, and shall pay all salaries, expenses, and travel to Ethiopia and return as required for such personnel. The College shall be responsible for the professional competence of such personnel, and for investigating and satisfying itself with respect to character, moral fitness, loyalty to the United States, and adaptability to the conditions and culture patterns which will be encountered in Ethiopia. The College agrees to replace any person sent to Ethiopia under this Agreement when requested to do so by the TCA or the Government of Ethiopia. The College will provide the necessary orientation and training programs for such personnel and for their assignment to duties under this program. The College will provide the necessary administrative services incident to transporting such personnel and their families to Ethiopia and return. The College will be responsible for the technical guidance and direction of such personnel, both from the College at Stillwater, Oklahoma, and the College of Agriculture to be established in Ethiopia.

B. In carrying out its undertakings under this Article, the College will prepare and submit to the TCA for approval a budget and a table of organization, which shall contain a description of the positions to be filled, the salary ceilings established therefor, and estimates of the expenditures to be made by the College under this Agreement. Those documents may be supplemented and revised, from time to time, as needed, with the approval of TCA.

ARTICLE III

The College will appoint a qualified person acceptable to the TCA and the Government of Ethiopia, who shall serve as President of the College of Agriculture in Ethiopia, and who shall be immediately responsible, on behalf of the College, for carrying out in Ethiopia the provisions of this Agreement in accordance with the Agreement for a Cooperative Agricultural Education Program in Ethiopia. The person appointed under this Article shall serve as the principal representative of the College in Ethiopia.

ARTICLE IV

A. TCA will pay to the College for the services to be performed by it under this Agreement, for the first year following the execution hereof, the sum of \$270,000, to be paid in three monthly installments of \$30,000 each, on or about the end of each month, the first installment of which will be paid on or about June 30, 1952 date, and thereafter in quarterly installments of \$60,000 each, pay-

able on or about November 30, 1952, Feb. 28, 1953, and May 31, 1953. The amount and terms of the payment to the College for the services to be performed by it under this Agreement in years following the first year shall be agreed upon between the parties at the end of each twelve-month period after the effective date of this Agreement. The accounts of the College relating to the activities performed pursuant to this Agreement shall be open to and subject to audit by representatives of the Department of State at any reasonable time. If, in fact, the total of all costs of the services performed by the College pursuant to this Agreement shall be less than the total amount set forth in this article, the College agrees to return to the TCA that portion of the total sum herein provided which is unused and unobligated on May 16, 1955, or to apply such unused and unobligated funds to operations pursuant to other agreements which may be entered into between the TCA and the College.

B. It is understood and agreed between the parties that the payments to the College provided for in this Agreement shall be used only to pay the costs of performing the services required of the College under this Agreement. The funds necessary to finance program operations in Ethiopia will be provided by TCA and the Government of Ethiopia in accordance with the provisions of the Agreement for a Cooperative Agricultural Education Program between the Ethiopian Empire and the United States of America and such other agreements between the two Governments as may be hereafter concluded. The College will transmit quarterly to the TCA a financial and progress report of its activities pursuant to this Agreement

ARTICLE V

In the performance of work under this Agreement, the College agrees not to discriminate against any employee or applicant for employment because of race, creed, color, or national origin; and further agrees to insert the foregoing provision in all sub-contracts hereunder except sub-contracts for standard commercial supplies or for raw materials.

ARTICLE VI

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Agreement if made with a corporation for its general benefit.

ARTICLE VII

The College warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the College for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this Agreement without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE VIII

This Agreement shall enter into force when signed by both parties and shall remain in force for a period of three years from the effective date hereof or until

prior termination by either party. Such termination shall be effective sixty (60) days after one party's receipt of the other's notice in writing of intention to terminate.

IN WITNESS WHEREOF, The parties have executed this Agreement as of the day and year above first written.

FOR THE OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

s/ P. E. Harrill

FOR THE TECHNICAL COOPERATION ADMINISTRATION, UNITED STATES DEPARTMENT OF STATE

s/ Stanley Andrews

Appendix "C"

OPERATIONAL AGREEMENT FOR AN ETHIOPIAN AGRICULTURAL SECONDARY SCHOOL PROJECT

between

The Director of the Imperial Ethiopian Agricultural College
Fund and

The Special Representative of His Imperial Majesty

ARTICLE I

Purpose

The purpose of this Agreement is to set forth, within the terms of Article IV, paragraph 4 of the Agreement for a Cooperative program in Agricultural and Mechanical Arts Education signed at Addis Ababa on May 15, 1952, between the Imperial Government of Ethiopia and the Government of the United States of America, a plan for the development and operation of two agricultural secondary schools in Ethiopia, for the present, and such additional schools of the same type to be determined hereafter, and in connection with the foregoing, to provide interim facilities for beginning the Agricultural College program.

ARTICLE II

Program

There shall be established under the supervision and administration of the Ministry of Education of the Imperial Government of Ethiopia two agricultural secondary schools, one to be located at Jimma and the other in the Gudir-Ambo vicinity.

Each school shall offer courses of study for the training of agricultural technicians. The Ministry of Education, with the advice and assistance of the Ministry of Agriculture and of the President and staff of the Imperial Agricultural College, shall develop and approve the curricula for the schools and direct the educational program

ARTICLE III

Contributions and Finances

The Imperial Government of Ethiopia shall make available for the purposes of this program all existing buildings, equipment, machinery, tools, teaching materials, land and facilities at the Jimma site now under the supervision of the Ministry of Education, and as soon as required at least two additional gashas of nearby land for practical work and experimentation in agriculture. The Imperial Government shall similarly make available all buildings, equipment, machinery, tools, teaching materials, land and facilities which now constitute the Agricultural School at Ambo and approximately 4 gashas of land together with the existing buildings located at Gudir.

At the request of and with the approval of the Ministry of Education, the government of the United States of America shall provide a director for each agricultural secondary school and such additional teaching staff as may be mutually agreed upon. The government of the United States shall pay the salaries and allowances of such personnel, including the cost of their international travel.

There shall be established under the Imperial Ethiopian Agricultural College Fund a special joint account which will be set aside and used exclusively for the purposes of establishing and operating the two schools as outlined in this agreement.

In addition to the obligations which it agrees to assume in preceding paragraphs of this agreement, the government of the United States shall deposit to the credit of the above-mentioned special joint account the sum of \$185,000 (One Hundred-Eighty-five Thousand Dollars) in currency of the United States of America. In addition to the obligations which it agrees to assume in preceding paragraphs the Government of Ethiopia shall deposit to the credit of the special joint account the sum of \$100,000 (One Hundred Thousand Dollars) in currency of Ethiopia, at such times and in such installments as shall be mutually agreed upon.

Annual budgets for the two schools, and quarterly or other periodic allocations of moneys out of the special joint account herein provided for, shall be approved by the Special Representative and by the Director of the Imperial Agricultural College Fund, or by their duly authorized representative, in accordance with the terms of the Agricultural College Agreement governing the operation of the Fund.

ARTICLE IV

Limitations

This Agreement will be effective for the period of the duration of the Agreement for a Cooperative Program in Agricultural and Mechanical Arts Education of May 15, 1952, or until sixty days after either Government has informed the other in writing of its intention to terminate this Agreement, whichever is earlier, and it is understood that the United States and Ethiopian governments intend to make such further contributions as may be mutually agreed upon for future operating needs; subject, however, to availability of appropriations for this purpose for the period subsequent to June 30, 1952.

IN WITNESS WHEREOF, the undersigned, duly authorized thereto, have signed the present Agreement.

DONE at Addis Ababa this 24th day of June, 1952.

FOR THE GOVERNMENT OF THE
UNITED STATES

s/ *Marcus J. Gordon*
Director of the Imperial
Agricultural College Fund

FOR THE IMPERIAL ETHIOPIAN
GOVERNMENT

s/ *Ato Akaleworq Abte Wold*
Special Representative

Appendix "D"

AMENDMENT TO THE OPERATIONAL AGREEMENT FOR AN ETHIOPIAN AGRICULTURAL SECONDARY SCHOOL PROJECT

The Agreement signed at Addis Ababa on June 24, 1952, between the Director of the Imperial Ethiopian Agricultural College Fund and the Special Representative of His Imperial Majesty, which provided for the establishment and operation of two or more agricultural secondary schools in Ethiopia, is hereby amended as follows:

1. The schools hereafter shall be named "Agricultural Technical Schools".
2. The Jimma Agricultural Technical School shall be expanded to provide facilities for approximately one hundred fifty students during the coming year.
3. The second Agricultural Technical School shall be established at Bishoftu, rather than in the Gudir-Ambo vicinity when the two Governments have established an adequate joint fund for the purpose.
4. In addition to the obligations which it previously has agreed to assume, the Government of the United States shall deposit to the Special Joint account, established by the above-mentioned Operational Agreement, the sum of \$100,000 (One Hundred Thousand Dollars) in currency of the United States of America.
5. In addition to the obligations which it previously has agreed to assume, the Imperial Ethiopian Government shall deposit to the credit of the Special Joint Account the sum of \$250,000 (Two Hundred Fifty Thousand Dollars) in the currency of Ethiopia.
6. These deposits shall be made in such installments and at such times as the Director and the Special Representative shall agree.

DONE at Addis Ababa this 26th day of June nineteen hundred and fifty-three.

FOR THE GOVERNMENT OF THE
UNITED STATES OF AMERICA

s/ Marcus J. Gordon

U.S. Director of Technical
Cooperation In Ethiopia

FOR THE IMPERIAL ETHIOPIAN
GOVERNMENT

s/ Ato Akalework Habtewold

Special Representative
Of His Imperial Majesty

Appendix "E"

AMENDMENT NO. 11 to the Contract between THE UNITED STATES OF AMERICA and THE OKLAHOMA STATE UNIVERSITY.

THIS AMENDMENT is made and entered into between the Government of the United States of America, represented by the Contracting Officer executing this Amendment, and the Oklahoma State University (the Contractor), an educational institution chartered by the State of Oklahoma, with its principal office in Stillwater, Oklahoma.

WHEREAS, the parties hereto entered into a contract, effective October 1, 1958 and amended said contract on June 25, 1959, October 5, 1959, June 14, 1960, September 30, 1960, July 7, 1961, May 31, 1962, October 29, 1962, January 9, 1964, September 4, 1964, and May 14, 1965; and

WHEREAS, the Contractor has assisted the Imperial Ethiopian Government in the process of the establishment and operation of the Haile Selassie I University College of Agriculture (formerly the Imperial Ethiopian College of Agriculture and Mechanical Arts) at Alemaya and its program of instruction, research, and extension including the college research station at Debre Zeit (formerly Bishoftu), and the Jimma Agricultural Technical School at Jimma, Ethiopia, and

WHEREAS, this process of establishment and operation has developed to the point that the Imperial Ethiopian Government, through the Board of Governors of Haile Selassie I University as administrators of all units of the University assigned to it, desires to designate an Ethiopian as Dean of the College effective July 1, 1960, and the said Dean shall thereafter assume the authority and responsibility of the position in College operations, and

WHEREAS, the parties now desire to further amend said contract.

NOW, THEREFORE, the parties hereto mutually agree that said contract shall be and it is hereby amended as follows:

1. Basic Contract, Article I, is deleted and the following is substituted therefor:

I. SCOPE

The Contractor agrees to use its best efforts to render technical advice and assistance to the Cooperating Country for the purpose of developing and using its agricultural and other resources more effectively through a program of agricultural education. The Contractor, under this program, shall aid and assist the Imperial Ethiopian Government through Haile Selassie I University in the further development of the new College of Agriculture (hereinafter called "the College"), as more specifically provided for in Appendix B, "Operational Plan", attached hereto and made a part hereof. The current work program will be subject to review from time to time as considered necessary by USAID or the Contractor.

2. Basic Contract, Article IV, as amended, is further amended by substituting "September 30, 1968" for "September 30, 1967."

3. Appendix B, Operational Plan, is deleted in its entirety and the following is substituted therefor:

I. Objectives

The basic objective of the College of Agriculture is to develop a program that will make the maximum contribution to the development of the Agricultural sector of the national economy. This can best be accomplished by:

1. Provision of a well-balanced curriculum of instruction including agricultural science, and related subjects.

2. Continued emphasis on comprehensive program of research that will provide a sound basis for developmental projects and also provide solutions to current problems

3. Agricultural extension, directed toward the dissemination through out the country of the results of research and college teaching in order that all the population may benefit.

4. Public service directed toward furnishing technical advice on agriculture and related problems to citizens of Ethiopia.

II. Scope of Work

The Contractor, under existing agreements between the United States of America and the Imperial Ethiopian Government, will assist in the

further development of a program of agricultural education. Such assistance, given in cooperation with the Board and the Officers of the University, shall be provided to the College in the areas of administration, teaching, and research.

1. **Training.** In assisting the further development of the College, the Contractor shall continue to train Ethiopian staff to enable them to better meet their assigned responsibilities.

2. **Teaching.** The Contractor will give technical advice and assistance to the Government of Ethiopia in the continued development of effective curriculums in agriculture for the College. These curriculums will make provisions to qualify students, upon completion of the required courses, for a Bachelor of Science degree in Agriculture. The Contractor will employ and assign instructional personnel and advisors in the various fields of agriculture and allied subjects.

It is expected that Ethiopians will be appointed as Heads of the various departments within the College; however, in the event the Dean of the College determines that it is inadvisable to appoint an Ethiopian as Head or Acting Head of a Department, the Contractor may designate a contract staff member to serve as Chairman on an interim basis if so requested by the Dean. The scope of duties of the Chairman would be the provision of technical leadership to and the coordination of departmental activities.

3. **Agricultural Research.** The Contractor will give technical advice and assistance to the College in developing an effective agricultural research program.

4. **Physical Plant.** The Contractor will provide such architectural advice and assistance as the University may deem necessary for the College Building Program.

III. Contract Staff

	10-1-65 to 9-30-66	10-1-66 to 9-30-67	10-1-67 to 9-30-68
A. Total Overseas Positions			
(1) Full Time	30	20	17
(2) Part Time	9	6	5
B. Campus Personnel			
Man Years of Direct Assignments	5	4	4
C. Total Estimated Man Years	44	30	26

The total number of employees or the number of employees in any category shall not exceed the number of positions authorized above without the previous approval of USAID.

In addition to the positions authorized above, the Contractor may utilize the services of non-supervisory personnel in the Architect's Office of the Oklahoma State University insofar as may be necessary, and with the prior approval of the Director, USAID may employ short-term consultant staff members, as necessary to further the objectives of the contract, subject to the availability of obligated funds in the approved budget, Appendix G hereof.

4. Appendix D, Revision No. 2 is amended by the addition of the following:

XXIV. Tours of Duty

In the event personnel to be employed for duty in Ethiopia under the provisions of this contract cannot be secured for a normal tour of duty, they may be employed for a one-year tour of duty, with the prior approval of the USAID Director.

XXV. Rest and Recuperation Travel

The Contractor shall be reimbursed for the cost of travel performed by staff members and dependents for purposes of rest and recuperation on the same basis as authorized Mission employees, provided, however, that no reimbursement will be made unless written approval has been obtained from the Mission Director, prior to such travel.

Except as expressly hereby amended, said contract as heretofore amended, is in all respects ratified, confirmed, and continued in full force and effect in accordance with its terms.

IN WITNESS WHEREOF, the parties hereto have executed this AMENDMENT on the day and year last specified below.

OKLAHOMA STATE UNIVERSITY
OF AGRICULTURE AND
APPLIED SCIENCE
s/ *Oliver S. Willham*
President
March 25, 1966

UNITED STATES OF AMERICA
s/ *W. H. Meinecke*
Contracting Officer and Director,
United States AID Mission to Ethiopia
March 15, 1966

Appendix "F"

OKLAHOMA STATE UNIVERSITY STAFF MEMBERS WHO HAVE SERVED IN ETHIOPIA 1952 - 1968

Name	Period of Service	Title
1 Abbott, William S.	1954, 1957, 1960, 1962, 1965, 1968	Coordinator of International Programs
2 Adams, Otis S.	1956-1958	Instructor, Animal Science, Alemaya
3 Afanasiev, Michel	1964-1968	Administrative Officer
4 Amann, Victor F.	1958-1961 1962-1966	Professor of Forestry, Alemaya Assistant Professor, Head of Department of Agricultural Economics and Business, Alemaya
5 Anderson, Edgar	1957	Consultant, Botany
6 Andrews, Henry N.	1961	Lecturer and Consultant
7 Angerer, Clarence L.	1952-1956	President, Imperial Ethiopian College of Agriculture and Mechanical Arts
8 Arnold, Daniel M.	1959-1963	Director of Extension
9 Ashabranner, Brent K.	1955-1957	Materials Production Specialist
10 Atherton, James C.	1955-1957	Land Resettlement Specialist
11 Barham, Grover M.	1962-1964	Instructor, Mathematics, Physical Education, Jimma
12 Barnum, Marvin R.	1960-1962	Instructor, Science, Jimma
13 Basham, Charles W.	1959-1961	Instructor, Horticulture, Alemaya
14 Baumann, W. Elmo	1952	Consultant, Soils
15 Beadles, J. Kenneth	1966-1968	Assistant Professor, Zoology, Alemaya
16 Beck, William J.	1953-1957	Extension
17 Bell, Raymond R.	1955-1957	Well Driller
18 Bennett, Henry G.	1950	President, Oklahoma A&M College
19 Berger, Billie D.	1955-1956	Asst. to the O.S.U. Architect
20 Bernal, Anselmo E.	1954-1956	Arts and Crafts
21 Biard, Milton J.	1958-1961	Extension
22 Bigbee, Dan G.	1962-1966	Asst Prof., Poultry Science, Alemaya
23 Bills, Chaplin E.	1952, 1954, 1955	Assistant to the O.S.U. Architect
24 Blair, Billy J.	1954-1956	Assistant to the O.S.U. Architect
25 Bolton, Dale L.	1954-1956	Instructor, Science, Jimma
26 Bolton, Floyd E.	1963-1965	Instructor, Agronomy, Jimma

Name	Period of Service	Title
27 Bradfield, Prentis W.	1954-1957	Well Driller
28 Brandt, Henry W.	1953-1955	Accountant
29 Brannon, Luther H.	1952-1956	Director, O.S.U. Ethiopian Program
	1964-1968	
30 Burger, William C.	1961-1965	Assistant Professor, Botany, Alemaya
31 Burley, Ray H.	1955-1957	Information Specialist
32 Campbell, Jack D.	1959-1961	Instructor, English, Jimma
33 Canaday, Ewing	1957-1959	Information Specialist
34 Champion, James H.	1954-1958	Extension
35 Chandler, James B.	1955-1957	Linguist
36 Cheseldine, Charles C.	1958-1967	Associate Prof., English, Alemaya
37 Clyma, Wayne	1964-1966	Asst. Prof., Agricultural Engineering, Alemaya
38 Craig, Lee C.	1957-1959	Director, Extension Service
39 Damon, Edward G.	1958-1960	Instructor, Plant Sciences, Jimma
40 Darlington, W. W.	1956-1958	Asst. Prof., Science, Jimma
41 Darlow, Albert E.	1952	Consultant, Animal Science
	1964	Consultant, Extension
42 Davis, K. C.	1963-1965	Asso. Prof. and Head, Agricultural Economics Dept., Alemaya
43 Davis, Russell G.	1955-1957	Educational Research Specialist
44 Davis, William D.	1953-1957	Extension
45 DeCory, Lance	1954-1956	Sanitary Engineer
46 Delliquadri, Lawrence M.	1953-1957	Cartographer
47 Dietrich, John F.	1953-1956	Arts and Crafts
48 Douglas, Loyd	1967-1968	Prof., English, Alemaya
49 Dye, Eddie L.	1967-1968	Prof., Agricultural Education, Alemaya
50 Ebert, Frederick E.	1954-1955	Well Driller
51 Edington, Everett S.	1965	Consultant
52 Elliott, Dean A.	1953-1956	Farm Mechanics
	1957-1959	Assistant Professor, Farm Mechanics, Alemaya
53 Elliott, James N.	1961-1965	Instructor, English, Jimma
54 Evans, Conrad L.	1956-1964	Instructor, Plant Sciences, Jimma
	1964-1968	Head, Physical Plant and Services, Alemaya
55 Flanders, Roger L.	1954-1955	Chief Engineer, Water and Sewage Survey of Addis Ababa
56 Frey, Martin R.	1963-1965	Assistant Professor, Veterinary Medicine, Alemaya
57 Funk, Evelyn	1957	Consultant, Home Economics
58 Gentry, Ruff L.	1961-1965	Asst. Prof. Plant Sciences, Alemaya
59 Gibson, William G.	1958-1962	Instructor, Farm Mechanics, Alemaya
60 Glass, Bryan P.	1962	Consultant, Zoology
61 Glenn, John C.	1959-1961	Asst. Prof., Animal Science, Alemaya
62 Harlan, Jack	1960	Consultant in Agronomy
63 Hartley, Robert I.	1965	Member, O.S.U. Board of Regents
64 Hedger, Hugh K.	1955-1959	Instructor, Plant Sciences, Alemaya
65 Hedrick, James E.	1961-1965	Information Specialist
66 Henderson, Lavell	1961	Consultant, Biochemistry
67 Herron, Jack C.	1952-1954	Instructor, Animal Science, Jimma
68 Hill, Bob Gene	1957-1965	Asst. Prof. and Head, Dept. of Arts and Sciences, Alemaya
69 Hobbs, W. Wesley	1960-1966	Asso. Prof. and Head, Dept. of Agricultural Engineering Technology, Alemaya
70 Hoff, William E.	1962-1964	Asst. Prof., Mathematics, Alemaya

Name	Period of Service	Title
71 Holland, Gerald L	1960-1968	Asso. Prof. and Head, Animal Science, Alemaya
72 Holley, J. Andrew	1955 1960	Consultant on Education Consultant in Organization and Administration
73 Horn, Jesse O.	1953-1957	Instructor, Plant Sciences, Jimma
74 Huffine, Wayne W.	1960	Consultant in Agronomy
75 Hyden, Alsie G.	1958-1960	Instructor, Mathematics, Jimma
76 Ingersol, Robert H	1959-1966	Head and Asst. Prof., Dept. of Arts and Sciences, Alemaya
77 Jackson, Ben R.	1954-1959	Vice Dean, IEC of A&M, Alemaya
78 Jacob, John M., Jr.	1961-1963	Asst to the O.S.U. Architect
79 James, Harry E.	1954-1956	Instructor, Science, Jimma
80 Jeffrey, Dorse B.	1952-1954	Extension
81 Johns, Forrest L.	1963-1965	Asst. to the O.S.U. Architect
82 Jones, Paul L.	1964-1966	Instructor, Jimma
83 Jones, Randall K.	1957	Principal Representative of Oklahoma A&M College in Ethiopia
84 Kamm, Robert B.	1967	President, Oklahoma State University
85 Kammerlocher, Anton A.	1961-1963	Asst. Prof., Veterinary Medicine, Alemaya
86 Keahey, Kenneth K.	1954-1960	Dean, Imperial Ethiopian College of A&M Arts, Alemaya
87 Kern, Weldon	1962	Member of Board of Regents
88 Kindell, Clyde R.	1958-1960 1960-1966	Director, Jimma President, HSIU College of Agriculture
89 Knowles, Louis G.	1955-1957	Well Driller
90 Kubicek, Frank Jr.	1956-1964	Head, Physical Plant and Services, Alemaya
91 Laase, Gerald R.	1965-1967	Asst. Prof. Plant Sciences, Alemaya
92 Landry, Joe W.	1961-1968	Asst. Prof., Science, Alemaya
93 Lee, Robert E.	1960-1961	Information Specialist
94 Lewis, Morris L.	1955-1958	Cartographer
95 Lindsey, James K.	1954-1955	Sanitary Engineer
96 Little, Evert T.	1952-1956	Director, Jimma
97 Lockhart, William G.	1966-1968	Asso. Prof., Poultry Science, Alemaya
98 Lohmann, Melvin R.	1963	Consultant, Engineering
99 Loomis, Robert H.	1952-1954	Instructor, Science, Jimma
100 Lord, Mrs. Julia F.	1955	Remedial Education Specialist
101 Loveless, Owen R.	1955-1957	Linguist
102 Marshall, Carl E.	1953	Statistician
103 McCrary, John D.	1952-1956	Instructor, Farm Mechanics, Jimma
104 McNallen, John L.	1954-1956	Well Driller
105 Meisner, Robert G.	1960-1964	Director of Instruction and Research, Jimma
106 Meissner, Louis A.	1956-1961	Instructor, Plant Sciences, Jimma
107 Mercer, Henry Ford	1958-1959	Extension
108 Milburn, Daniel J	1957-1959	Associate Professor, English, Jimma
109 Miller, Leonard F.	1960-1965	Dean of College of Agriculture, Alemaya
	1966-1968	Professor, Agricultural Economics and Chief of Party, Alemaya
110 Mitchell, Mary L.	1952-1957	Associate Director, Her Majesty's Handicraft School
111 Mitchell, Willie D.	1952-1954	Instructor, Math, Jimma
112 Montgomery, Robert L	1959-1962	Extension
113 Morrison, Ed	1952	Consultant, Administration

Name	Period of Service	Title
114 Moseley, Yack C.	1962-1968	Asst. Prof., Agricultural Engineering, Alemaya
115 Moten, John E.	1962-1964	Extension Specialist
116 Murphy, Clifton N.	1954-1956	Veterinarian
117 Murphy, Henry F.	1955-1958 1962-1965	Professor, Plant Sciences, Alemaya
118 Murray, James W.	1952-1954	Instructor, Social Science, Jimma
119 Musgrave, Stanley D.	1965	Consultant on Dairy Science
120 Myers, Adolph	1953-1955	Consultant in English Instruction
121 Nall, Roy T.	1962	Member of Board of Regents
122 Nicholson, Bonnie	1957-1964	Principal Representative of Oklahoma State University in Ethiopia
123 Niehaus, Merle H.	1959-1961	Instructor, Plant Sciences, Alemaya
124 Page, Raymond E.	1965-1967	Associate Professor, Agricultural Economics, Alemaya
125 Parcher, Loris A.	1955-1959	President, Imperial Ethiopian College of Agriculture and Mechanical Arts
126 Pickel, Chester A.	1955-1957	Director, Trade School, Asmara, Eritrea
127 Pogue, James H.	1964-1965	Instructor, Mathematics and Physical Education, Jimma
128 Pope, Leon S.	1965	Consultant on Animal Science
129 Prentice, Louis R.	1958-1960	Instructor, Plant Sciences, Jimma
130 Price, Conn	1959-1963	Instructor, Farm Mechanics, Alemaya
131 Proctor, Richard O.	1957-1959	Instructor, Science, Alemaya
132 Pyron, J. Travis	1954-1957	Extension
133 Quenemoen, Merle E.	1966-1968	Associate Professor, Agricultural Economics, Alemaya
134 Ridgeway, Wilbert O.	1952-1957	Entomologist
135 Roberts, Harold N.	1953-1958	Director, Trade School, Addis Ababa
136 Robertson, Ralph M., Jr.	1955-1957	Assistant to the O.S.U. Architect
137 Roney, Maurice W.	1953-1955	Assistant Director, Technical School, Addis Ababa
138 Ross, O. Burr	1967	Vice President, Oklahoma State University
139 Rouk, Hugh F.	1952-1958 1959-1967	Director, Jimma Director of Research
140 Sarthou, Charles L.	1953-1955	Associate Professor, Plant Sciences,
141 Searce, Joe L.	1954-1959	Assistant to the O.S.U. Architect
142 Schilz, Gordon B.	1953-1957	Director, Geography Institute
143 Schlehuber, Alva M.	1965	Consultant on Agronomy
144 Schmedemann, Ivan W.	1959-1961	Instructor, Agricultural Economics, Alemaya
145 Schnur, George L.	1962-1964	Associate Professor, Forestry, Alemaya
146 Schroeder, Ervin W.	1962	Consultant in Agricultural Engineering
147 Schultenover, Bernard L.	1964-1968	Assistant Professor, Mathematics, Alemaya
148 Shinpoch, John R.	1962-1964	Instructor, Science, Jimma
149 Shryock, Gerald D.	1959-1961	Instructor, Science, Alemaya
150 Siegenthaler, Irvin E.	1955-1963	Instructor, Plant Sciences, Jimma
151 Skinner, Ralph V.	1953-1964	Administrative Officer
152 Smlth, Edward L.	1963-1965	Superintendent, Central Agricultural Research Station, and Assistant Professor, Agronomy
153 Staten, Hi W.	1952-1954	Professor, Head of Agronomy

154 Stewart, Robert B.	1954-1956 1959-1961	Instructor, Plant Sciences, Jimma Associate Professor, Head, Plant Sciences, Alemaya
155 Stipe, Oran	1962-1964	Extension, Asmara, Eritrea
156 Stratton, John B.	1962-1963	Librarian
157 Stringer, Bruce G.	1965-1968	Assistant Professor, Veterinary Medicine, Alemaya
158 Taylor, James L.	1955-1957	Well Driller
159 Thies, Siegbert A.	1961-1963	Farm Manager, Debre Zeit
160 Thomas, Glenn V.	1958-1962	Assistant Professor, Soils, Alemaya
161 Thomas, John R.	1958-1961	Assistant to the O.S.U. Architect
162 Thorne, James J.	1954-1955	Engineer Inspector
163 Tillman, Allen D.	1962	Consultant
164 Triplett, Clyde M.	1961-1963	Instructor, Animal Science, Jimma
165 Turman, Elbert J.	1960	Consultant in Animal Husbandry
166 Turner, W. Dick	1953-1962	Instructor, Farm Mechanics, Jimma
167 Vance, Alfred W.	1956-1962	Assistant Professor, Mathematics, Alemaya
168 Vines, Charles A	1964	Consultant on Agricultural Exten- sion
169 Wagner, Donald G.	1965-1968	Asst. Professor, Animal Science, Alemaya
170 Warkentin, Lowell D.	1961-1963	Extension Specialist
171 Warren, Alex G.	1964-1966	Director, Jimma
172 Watts, Darrell G.	1966-1968	Assistant Professor, Agricultural Engineering, Alemaya
173 Wayt, William A.	1961-1963	Associate Professor and Head, Agricultural Economics Depart- ment, Alemaya
174 Webb, Billie B.	1956-1961	Farm Manager, Debre Zeit
175 Wells, Milton E.	1961-1965	Assistant Professor, Animal Science, Alemaya
176 Whitenack, Delbert L.	1954-1956 1956-1960	Instructor, Animal Science, Jimma Instructor, Animal Sci., Alemaya
177 Wiggins, Lloyd A	1956-1961	Instructor, Animal Science, Jimma
178 Willham, Oliver S	1955, 1957, 1961 1962, 1964, 1965	President, Oklahoma State Univ.
179 Williams, David V.	1955-1957	Well Driller
180 Williams, Harold Gene	1953-1955	Instructor, Plant Sciences, Jimma
181 Wilson, Bodie	1953-1957	Director, Agriculture Improvement Center
182 Wilson, Charles A.	1956-1958	Instructor, Plant Sciences, Jimma
183 Wolf, Jimmie D.	1958-1962	Instructor, Poultry Science, Ale- maya
184 Wright, James K.	1957	Associate Architect
185 Yager, Leonard A	1961-1966	Assistant Professor and Head of Plant Sciences Dept., Alemaya

Appendix "G"

IMPERIAL ETHIOPIAN COLLEGE OF AGRICULTURE, HSIU RESEARCH PROJECTS

No.	Title
1	Land Tenure Systems and Landlord-tenant Relations Among the Members of the Alemaya Farmers' Cooperative
2	Varietal Identification and Classification of <i>Eragrostis tef</i> (Zucc.) Trotter

- 3 A Survey of the Financial Position and Credit Situation of the Members of the Alemaya Farmers' Cooperative Association
- 4 Ethiopian Collections of Wheat and Barley—Germplasm Maintenance, Evaluation, and Identification
- 5 Tractor Performance Evaluation
- 6 Hydrology of Lake Alemaya
- 7 Comparison of Manure, Commercial Fertilizer, and Grass-Legume Association on the Yield, Quality, and Green Feed Period of Pastures to the Effects of Heavy Grazing as Compared to Controlled Grazing
- 8 Introduction and Use of Small Portable Pumps for Irrigation
- 9 Land Classification and Land Use in Harerghe Province
- 10 The Design and Construction of a Prototype of a Small Commercial Feed Formulation Plant for Ethiopian Conditions
- 11 The Design and Construction of 200 and 300 Quintal Size Galvanized Corrugated Metal Grain Storage Tanks
- 12 Food Consumption by Households in the Alemaya, Harar, and Dire Dawa Region
- 13 The Design, Construction and Performance of a Reinforced Concrete "Tilt-Up" Silo in Ethiopia
- 14 Design, Installation and Operation of Demonstrational Irrigation Field
- 15 Infiltration Rates of Soils in the Alemaya Area
- 16 Studies on the Indigenous Chickens of Ethiopia
- 17 Determination of the Estimated Cost of Initiating a Commercial Poultry Enterprise in Ethiopia, and Estimated Net Income from One Years' Production
- 18 Farm Management Studies of Case Farms
- 19 Determining the Strength Characteristics of the Gauges of Galvanized Corrugated Metal Roofing Sheets Commercially Available in Ethiopia
- 20 Development of Family Size Grain Storage Structures of Galvanized Metal
- 21 A Study of the Reproductive Systems of Domestic and Wild Life in Harar Province
- 22 Evaluation of Antihelmintics for Sheep Parasites Under Local Conditions
- 23 Evaluation of Drugs Effective Against Streptothricosis
- 24 Animal Disease Survey
- 25 Utilization of Solar Energy for Heating Water for Household Use in Ethiopia
- 26 Establishing Load Bearing Capacities of 7 and 8 Meters Zigba Rigid Frames for Agricultural Buildings
- 27 Concrete Post Construction
- 28 Protective Coatings for Mud Block and Chika Structures
- 29 Hide Curing and Storage Building
- 30 Establishing Load Bearing Capacities of 7-Meter Trussed Rafters Constructed of Zigba Lumber
- 31 Development of Durable Mud Blocks for Structural Use in Farmstead Buildings
- 32 Wind Generation of Electric Power for Home Lighting
- 33 Chika Poultry Mating House
- 34 Establishing Safe Sewage Disposal Structures
- 35 Establishing Safe Public Water Wells
- 36 Improvement of Hand Operated Thresher
- 37 Use of Hand Pumps for Irrigation
- 38 Construction of a Windmill as a Source of Power for Pumping Water
- 39 Agricultural Resource Study of Selected Sample Areas in the Blue Nile Basin
- 40 The development of an improved egg-laying breed of chickens (single comb white Leghorns) and a dual-purpose breed (Rhode Island Red) by a program of selective breeding
- 41 Feed trial to determine the feeding value of Neug, *Guzota Abyssinica* (L.) Cass., Oil cake as a protein supplement for poultry rations
- 42 Testing vitamin and antibiotic supplements for poultry rations in Ethiopia
- 43 Fattening of weaning calves to a marketable weight
- 44 Fertility tests on various crops
- 45 Investigations of various soil conservation methods
- 46 Selection of indigenous and introduced crops
- 47 Studies on Ethiopian Flora

- 48 Identifying and cataloging the plant diseases of Ethiopia
- 49 A search for a new and plentiful source of tannins in Ethiopia
- 50 Development of Agricultural Cooperative Societies in Ethiopia
- 51 Economics of the production and marketing of chat in Ethiopia
- 52 Collection and assembly of yield, production cost, and price data of selected agricultural products in Ethiopia
- 53 Variety testing of the major field crops grown in Ethiopia
- 54 Rate and date-of-seeding experiments on the more important field crops grown in Ethiopia
- 55 Improvement of corn (*Zea mays* L.) through utilization of hybrid vigor
- 56 Construction of simple, inexpensive storage bins
- 57 Collection and preservation of animals of Ethiopia for museum and study purposes
- 58 Stocking of Lake Alemaya with fishes suitable for food
- 59 Embryonic study of various Cyprinidae of Ethiopia
- 60 Studies on the control of insect pests of Ethiopia
- 61 Investigating uses of wild plants indigenous to Ethiopia
- 62 The development of an improved breed type strain of Zebu cattle by a program of upgrading and selective breeding
- 63 Vegetable variety and adaptability trials
- 64 Broom manufacturing machine
- 65 Fruit adaptation trials
- 66 Improved Methods of Curing Hides and Skins
- 67 Hides and Skins
- 68 Studies of chat from the agronomical, taxonomical, phytopathological points of view
- 69 Chemical analysis of chat
- 70 Construction of volume tables for some Ethiopian timber species
- 71 Trial of some indigenous and exotic species of timber in Harar Province, Ethiopia

DEBRE ZEIT EXPERIMENT STATION RESEARCH PROJECTS

No.	Title
1	Development of Malting Barley Varieties for Ethiopia
2	Collection, Classification, and Maintenance of Native Selection of Field Crops (Barley, Wheat, Tef, Neug, etc.)
3	Developing Hop Varieties Suitable for Production in Ethiopia
4	Adaptation Studies on Papaya (selected for improved uniformity of flavor and shipping quality)
5	Variety Trials of Oilseed Crops (Flax, Neug, Castor Beans, Safflower and Sunflower)
6	Variety Trials of Cereal Crops (Tef, Wheat, Barley, Sorghums, Corn, Oats, and Daghousa)
7	Effect of Colchicine on Tef Plant
8	Preliminary Study on the Natural Variability of <i>Ensete edule</i>

Appendix "H"

FISCAL SUMMARY EXPENDITURES BY PROJECTS

1952-1968

1 Imperial Ethiopian College	\$ 6,749,256.72
2 Agricultural Program other than College	304,669.25
3 Jimma Agricultural Technical School	2,098,188.32
4 Language Education Program	591,494.32
5 Arts and Crafts	53,943.00
6 Technical Education	36,864.38
7 Water Resources Study	268,466.81
8 Public Administration	21,738.02
9 Architectural and Engineering Assistance	387,751.13
10 Eritrea Program	64,158.89
11 Contract Administration	1,398,478.50
	<hr/>
	\$11,975,009.34
Less: Refund of Sabbatical Leave Fund	(159,229.51)
Add: Prior years Overhead Expense	74,963.64
	<hr/>
	\$11,890,743.47

EXPENDITURES BY FISCAL YEARS

1952-53	\$ 268,104.07
1953-54	\$ 473,044.26
1954-55	781,904.91
1955-56	916,501.03
1956-57	855,296.23
1957-58	665,565.25
1958-59	731,707.41
1959-60	757,573.46
1960-61	809,914.25
1961-62	853,482.87
1962-63	913,791.25
1963-64	922,467.24
1964-65	938,432.05
1965-66	694,761.67
1966-67	641,260.11
1967-68	506,838.18
1968-69*	244,365.10
	<hr/>
	\$11,975,009.34
Less: Refund Sabbatical Leave Fund	(159,229.51)
Add: Prior years Overhead Expense	74,963.64
	<hr/>
	\$11,890,743.47

*NOTE. 1968-69 figure is estimated expense from 7/1/68 to Completion of Contract.

Appendix "I"

GRADUATES — HSIU COLLEGE OF AGRICULTURE

1957

- Abebe Mengesha — Ministry of Agriculture, Provincial Agricultural Director, Harar Province
- Abebe Zelleke — Awash Valley Authority, Agricultural Liaison Officer
- * Assefa Gebre Wold — Co-Director, Imperial Laboratory and Pasteur Institute
- * Ayele Yeshewalul — General Manager, IEG Livestock and Meat Board
- * Bekele Endeshaw — Assistant Minister, Ministry of Commerce and Industry
- * Joseph Bushen — Ministry of Public Health, Malaria Eradication Service, Chief Entomology Division
- * Dr. Makonnen Kebret — HSIU, College of Agriculture, Dean and Assistant Professor of Agricultural Education
- * Mathewos Teguneh — Ministry of Agriculture, General Manager, Department of Agricultural Economics
- * Dr. Melak H. Mengesha — HSIU, College of Agriculture, Director of Research
- * Shibberu Wolde Mariam — HSIU, College of Agriculture, Lecturer, Agricultural Engineering Department
- * Tesfaye Meshesha — Deceased

1958

- * Dr. Abebe Demisse — Ministry of Agriculture, Veterinary Officer, Shoa Province (Adami Tulu)
- Abebe Hailu — Manager, Palace Farm, Debre Zeit
- * Abraham Besrat — HSIU, College of Agriculture, Formerly Director of Administration and Dean of Student Affairs (in U.S. studying for Ph.D. under FAO)
- * Dr. Assefa Woldegiorgis — Ministry of Agriculture, Director, Veterinary Department
- * Atsbha Gebre-Tsadik — Ministry of Agriculture, Instructor, Ambo Agricultural School
- * Dr. Dawit Deguefu — HSIU, College of Agriculture, Assistant Professor, Head, Department of Plant Science
- * Bayou Hapte-Giorgis — Ministry of Agriculture, Insect and Pest Control Division, Dire Dawa
- * Getachew Hapte Selassie — Ministry of Planning and Development, Agricultural Expert
- Gizaw Demisse — Imperial Highway Authority, Soils Laboratory
- Hailu Getu — Mitchell Gotts Company, Tendaho Plantation
- * Haile Mariam Lemma — HSIU, College of Agriculture, Associate Head, Physical Plants
- Kassahun Teferra — Mayor of Awasa, Sidamo Province
- * Phesseha Abebe — Ministry of Interior, Chief Agriculturalist
- * Dr. Samu-Negus Haile Mariam — IEG Institute of Agricultural Research, Research Officer, Holetta
- Tadesse Kebede — Private Farming, Gojeb

*Have received, or are receiving advanced training in the United States.

- * Tesfaye Chichaibelu — Ministry of Agriculture, Manager, Arba Nosa Livestock Station
- * Yeshewadar Teferra — IEG Livestock and Meat Board, Assistant to General Manager

1959

- * Arega Worku — IEG Grain Corporation, Silos Manager
- * Dr. Asrat Feleke — Ministry of Agriculture, Agronomist, Plant Production and Protection Department
- Asseragdaow Haile — IEG Grain Corporation, Branch Manager, Nazreth
- * Ataro Adare — Ministry of Agriculture, Instructor, Jimma Agricultural and Technical School
- * Awgichew Kassa — Ministry of Agriculture, Director, Agricultural Extension Service
- * Bekele Gebre Tsadik — IEG Central Statistics Office
- * Bekele Sissay — HSIU, National University Service, Supervisor and Research Technician
- * Bekele Gared — District Manager, Singer Sewing Machine Company
- * Bisrat Makonnen — Ministry of Community Development, Chief, Awasa Farm
- * Gebrechiewet Zere — Ministry of Agriculture, Director and Project Manager, Regional Livestock Development Project
- * Getahun Woldegiorgis — Ministry of Agriculture, Director, Planning Unit
- * Hailelul Getahun — Ministry of Land Reform
- * Haile Michael Gemechu — Ministry of Agriculture, Extension Service, Director, Rural Youth Program
- Melesse Endalamaw — Ministry of Community Development, Agro-Industrial Department
- Metafaria Garedew — HVA Wonji Sugar Estates
- * Negatu Lakew — Ministry of Land Reform, Land Registration Department
- Sahle Mariam Hapte Mariam — Deceased
- * Selashie Kebede — HSIU, College of Agriculture, Lecturer, Animal Science Department
- * Solomon Mahteme Selassie — IEG National Coffee Board
- Tadesse Kesela — Ministry of Agriculture, Entomologist, Plant Production and Protection Department
- Tadesse Moghes — Ministry of Land Reform, Director Land Tenure Department
- Temesgen Tesfaye — Ministry of Agriculture, Farm Manager, Jimma Agricultural and Technical School
- Terrefe Assrat — Ministry of Agriculture, Director, Veterinary Department
- Tesfaye Adam — Ministry of Agriculture, Provincial Agricultural Director, Jimma

1960

- Abebe Aboye — Ministry of Agriculture, Education Assistant, Education Division and Technical Assistance Board
- Abebe Saifu — Ministry of Land Reform, Gore, Illubabor Province
- * Amare Getahun — HSIU, College of Agriculture, Lecturer, Plant Sciences Dept.
- * Assefa Bogale — Ministry of Agriculture, Manager Poultry Department
- Debele Gebissa — Ministry of Community Development, Manpower Section, Labor Department

*Have received, or are receiving advanced training in the United States

- * Getachew Haile — Ministry of Agriculture, Chief Training Section, Agricultural Extension Service
- Getachew Teklehaimanot — HVA Wonji Sugar Estates, Section Manager, Metahara
- * Hailu Mengesha — HSIU, College of Agriculture
- Joseph Muletta — Ministry of Community Development, Cooperatives Department
- Kefle Hapte Mariam — Ministry of Agriculture, Gode Farm
- * Lulseged Asfaw — Ministry of Land Reform, Assistant Land Tenure Expert
- * Melaku Worede — HVA Wonji Sugar Estate
- Mitiku Wako — IEG Grain Corporation, Executive Officer
- * Dr. Samuel Atnafu — Ministry of Agriculture, Animal Health Assistants School, Debre Zeit
- * Shankute Tessema — IEG Institute of Agricultural Research, Research Officer, Holetta
- * Sileshi Wolde Tsadik — HSIU, College of Agriculture, Lecturer, Agricultural Economics Department
- * Taye Bezueneh — HSIU, College of Agriculture, Lecturer, Plant Sciences Department
- Tadesse Abebe — HVA Wonji Sugar Estates, Section Manager, Wonji
- * Tesfaye Tessema — HSIU, College of Agriculture, Assistant Professor, Plant Sciences Department, Debre Zeit
- Teshome Agared — Development Bank of Ethiopia, Loan Officer, Headquarters
- * Tsagga Amlak Worku — Ministry of Agriculture, Agricultural Extension Supervisor (Advanced Study in U.S. for Ph D., Rockefeller Foundation)
- Worku Makonnen — IEG National Coffee Board
- * Yohannes Negash — Office of African Unity, Bangue, Central African Republic

1961

- Abraham Haile — Manager Private Farm
- * Adugna Zerihun — HISU, College of Agriculture, Forestry Technician, Plant Sciences Department
- Alemayehu Wodageneh — Ministry of Agriculture, Plant Production and Protection Department
- Alemu Abebe — Ministry of Agriculture, Provincial Agricultural Officer, Gondar
- Assefa Mergia — IEG Institute of Agricultural Research, Farm Manager, Melka Werer
- * Asnake-Getachew — IEG National Coffee Board, Executive Secretary
- Assefa Teferra — Ministry of Public Works, Water Resources Department
- Assrate Metiku — Ministry of Agriculture, Private Secretary to Minister
- * Astatke Haile — Ministry of Agriculture, Instructor, Jimma Agricultural and Technical School
- * Bekele Worku — IEG Institute of Agricultural Research, Administrative Officer
- Belay Kassa — Deceased
- Berhane Selassie Dori — Awash Valley Authority, Property Chief
- * Berhanu Wagaw — HSIU, College of Agriculture, Lecturer, Animal Science Department, Debre Zeit
- * Beyene Chichaibelu — Ministry of Agriculture, Director, Planning Unit
- * Berhane Gebre Kidan — HSIU, College of Agriculture, Lecturer, Plant Sciences Department

*Have received, or are receiving advanced training in the United States.

- Dawit Zekiros — Ministry of Agriculture, Ambo Agricultural School (Advanced Study Denmark)
- * Demisse Gebre Michael — HSIU, College of Agriculture, Assistant Professor, Head Department of Agricultural Economics
- Fana Wolde Giorigis — Kalamazoo Spice Company
- Fassil Demissew — Ministry of Agriculture, Animal Production Department (Advanced Study Eastern Europe)
- Genzebu Gebre Amlak — Unemployed
- * Haile Yesus Zewge — Ministry of Planning and Development, Secretary to the Minister
- * Haile Teferra — Ministry of Agriculture
- Haptemariam Tsehay — Ministry of Public Health, Malaria Eradication Service, Zone Chief, Mekele
- Innate Gameda — Ministry of Agriculture, Provincial Agricultural Officer, Wollega
- Joseph Wubib — Ministry of Public Health, Malaria Eradication Service
- * Kebede Koomsa — Ministry of Land Reform, Land Administration Division
- Kefle Gehbru — Awash Valley Authority (Advance Study Poland)
- * Lakew Birke — HSIU, College of Agriculture
- Mandefro Gebre — HVA Wonji Sugar Estates, Section Manager, Wonji
- * Megersa Wakijira — Ministry of Planning and Development
- * Melaku Asfaw — Farm Manager, Error Gota Fruit Farm, Harar
- Melke Denekew — Ministry of Education, Teacher Training Institute, Debre Berhan
- Mesfin Redie — Ministry of Agriculture, Provincial Agricultural Officer, Sidamo
- Peter Mziray — Tanzanian, Ministry of Agriculture
- * Randolph E. Larsen — Ghanian
- Shiferaw Bekele — Ethiopian Shipping Company, Addis Ababa
- * Shitaye Gebremedhine — IEG Institute of Agricultural Research, Research Office, (Entomologist) Holetta
- Tekelemariam Zemichael — Ministry of Planning and Development, Agriculture Expert
- * Tessema Megenasa — HSIU, College of Agriculture, Assistant Professor, Plant Sciences Department
- Woodeneh Taddesse — IEG Grain Corporation, Executive Officer
- Zelalem Bayih — Development Bank of Ethiopia, Branch Manager, Gore
- * Zemedu Worku — HSIU, College of Agriculture, Lecturer, Plant Sciences Department, Debre Zeit
- * Zewge Gebre Mariam — IEG National Coffee Board

1962

- * Abraha Hagos — Ministry of Agriculture, Plant Production and Protection Department
- * Adane Feyessa — Ministry of Agriculture, Provincial Extension Supervisor
- Ahmed Abdullahi — Ministry of Agriculture, Pest Control Department
- * Ahmed Mohammed — HSIU, College of Agriculture, Technical Assistant Cooperatives Department of Agricultural Economics
- Akalewold Asfaw — Deceased
- * Aklitu Kidane Mariam — Development Bank of Ethiopia, Agricultural Loan Officer

*Have received, or are receiving advanced training in the United States

- * Asrate Wendem Agegnehu — IEG National Coffee Board, Information Officer
- * Bantayehu Gelaw — HSIU, College of Agriculture, Agronomy Lecturer, Plant Sciences Department
- * Berhane Berhe — IEG Institute of Agricultural Research, Research Officer, Holetta
Berhane Hapte Mariam — Ministry of Public Health, Malaria Eradication Service, Zone Chief, Jimma
- * Berhanu Disasa — Office of Central Statistics, Addis Ababa
Daniel Beyene — Development Bank of Ethiopia, Loan Officer, Headquarters
- * Festus Ogada — Kenyan
- * Fesseha Ezaz — American Embassy — Agricultural Attache's Office
Gebre-Ab Woldetsadik — Ministry of Public Health, Malaria Eradication Service, Zone Chief, Gondar
- * Gebre Selassie Mebrahtu — Ministry of Agriculture, Statistics Department
- * Haile Michael Kidane Mariam — HSIU, College of Agriculture, Horticulture Lecturer, Plant Sciences Department
Hailu Yadete — Awash Valley Authority (Advanced Study Europe, did not return to Ethiopia)
Issay Essaias — HVA Wonji Sugar Estates (Advanced Study Holland)
- * Joseph Keflemariam — HSIU, College of Agriculture, Lecturer, Agricultural Engineering Department
- * Ketema Desta — Ministry of Agriculture, Statistics Department
- * Kindeye Hailu — Ministry of Agriculture, Provincial Agricultural Director, Wollo
- * Lakew Gebeyehou — Ministry of Education, Supervisor Science Education
- * Mahateme Selassie Wolde-Tsadick — Ministry of Agriculture, Director, Quarantine and Inspection Service, Veterinary Department
Mamo Desta — Awash Valley Authority, Land and Conservation Chief
- * Sebsibe Abebie — Ministry of Public Health, Malaria Eradication Service, Instructor, Nazareth
Taffesse Haile — HVA Wonji Sugar Estates, Section Manager, Wonji
- * Telahun Abebe — Ministry of Public Health, Entomologist, Malaria Eradication Service
- * Tessera Mogess — HSIU, College of Agriculture, Dairy Technician, Animal Science Department
- * Tito W. Gatchechah — Kenyan
Zewdu Kimassaw — Haile Selassie First Prize Trust, Assistant Manager, Agriculture Department

1963

- Abate Ketema — Ministry of Agriculture, Veterinary Inspector, Chandris, Dire Dawa
- * Abebe Haile — Ministry of Education, Principal, Comprehensive Secondary School, Nazareth
- * Aberra Ayana — HSIU, College of Agriculture, Poultry Breeding Technician, Department of Animal Science
Aberra Berhanu — Ministry of Education, Agro-Mechanics Instructor, Bahar Dar Technical Institute (Advanced Study USSR)
- * Abraham Woldu — Ministry of Education, Instructor, Teacher Training Institute
- * Alemu Mengistu — Ministry of Agriculture, Provincial Extension Supervisor
- * Asfaw Zelleke — Ministry of Agriculture, Agricultural Extension Service

*Have received, or are receiving advanced training in the United States.

- Asrat Yigletou — Ministry of Community Development, Inspection Section, Labor Department
- Berhane Gebre — Ministry of Agriculture, Locust Control Department
- Berhanu Tolessa — HSIU, University College, Medical School Laboratory
- Beyene Haile — HVA Wonji Sugar Estates, Section Manager, Shoa
- Dub Gelma — Ministry of Agriculture, Statistics Department (Advanced Study Europe)
- * Dub Liben — Office of Central Statistics, National Income Statistician
- * Dr. Ephraim Mamo — HSIU, College of Agriculture, Veterinary Lecturer, Animal Sciences Department
- Ephraim Zaude — HVA Wonji Sugar Estates, Section Manager, Wonji
- Etana Hambissa — Ministry of Agriculture, Instructor, Ambo Agricultural School
- Gabreselassie Kahesay — Ministry of Agriculture, Plant Protection Department
- * George Antonatos — HSIU, College of Agriculture, Dairy Processing Lecturer, Animal Science Department
- Germai Tesfai — Deputy Member of Ethiopian Parliament
- * Girma Bekele — Ministry of Agriculture, Science Instructor, Jimma Agricultural and Technical School
- * Lemma Gebreselassie — HSIU, University College, Curator, Herbarium, Faculty of Sciences
- Mamaru Haregwein — Ministry of Agriculture, Animal Health Assistants School, Debre Zeit
- * Mengistu Hulluka — HSIU, College of Agriculture, Lecturer Forestry and Plant Pathology, Plant Sciences Department
- Mohamed Hersi — Somalia, Ministry of Agriculture
- * Mulu Bezabeh — Ministry of Information
- Romano Bundala — Tanzanian (Advanced Study Canada)
- * Seme Debela — IEG Institute of Agricultural Research, Research Officer, (Agronomy) Holetta
- * Solomon Bekure — HSIU, College of Agriculture, Department of Agricultural Economics
- * Sora Adi — Ministry of Agriculture, Provincial Extension Supervisor
- * Telahun Damtew — Ministry of Land Reform, Assistant Economist, Land Tenure Department
- * Telahun Makonnen — HSIU, College of Agriculture, Lecturer, Agricultural Economics Department
- Woldemariam Abe — Ministry of Agriculture, Farm Manager, Plant Production Department
- Wuketu Mela — Ministry of Finance
- * Yemanu Tekie — Ministry of Agriculture, Plant Sciences Instructor, Jimma Agricultural and Technical School
- * Zewdu Felleke — Ministry of Land Reform, Settlement Expert
- Yonas Tabor — Ministry of Community Development, Cooperatives Department

1964

- Abebe Tafessa — Haile Selassie I University, Addis Ababa
- Ahmed Abdullahi — Ministry of Agriculture, Animal Disease Control Supervisor, Shola
- Ahmed Maruf — A. Besse and Company, Addis Ababa

*Have received, or are receiving advanced training in the United States

- * Aklu Girgre — Ministry of Agriculture, Statistics Division
- Amde Yesus Dafla — IEG Institute of Agricultural Research, Research Assistant, Melka Werer
- Arega Ayele — Ministry of Agriculture, Ambo Agricultural School
- Asfaw Telaye — Ministry of Agriculture, Instructor, Jimma Agricultural and Technical School
- * Assefa Ketema — Ministry of Public Health, Malaria Eradication Service, Zone Chief, Gondar
- Asseged Yemenu — HVA Wonji Sugar Estates (Advanced Study Holland)
- Assrat Teferra — Ministry of Interior, Asmara (Advanced Study Germany)
- * Awetahegne Alemayehu — Ministry of Agriculture, Provincial Extension Supervisor
- Aynew Dagnachew — Ethio Cement Factory, Addis Ababa
- Bayou Belaineh — Ministry of Agriculture, Locust Control, Asmara
- * Bekele Shiferaw — Ministry of Education, Instructor, Bahar Dar Technical School
- Debebe Agonafer — Awash Valley Authority, Analysis Section, Economist
- Defar Tafesse — Ministry of Agriculture, Provincial Extension Supervisor, Harar
- * Dembel Balcha — HSIU, College of Agriculture, Business Manager, Debre Zeit Experiment Station
- Dide Liben — Ministry of Agriculture, Veterinary Department (Advanced Study France)
- Fekadu Wakjira — Ministry of Land Reform, Assistant Economist, Land Tenure Department
- Feseha Woude — Ministry of Community Development, Cooperatives Department (Advanced Study Sweden)
- * Feseha Berhe — Ministry of Agriculture, Statistics Department
- Feseha Gebre Ab — Ministry of Agriculture, Animal Disease Control Supervisor, Gondar
- Haile Gebre Selassie — Unknown
- Hailu Abatena — Ministry of Agriculture, Instructor, Ambo Agricultural School (Advanced Study India)
- * Issac Abdi — Ministry of Education, Asmara
- Kenfe Getaneh — HVA Wonji Sugar Estates (Advanced Study Holland)
- * Kifle Yohannes Zewde — Ministry of Public Health, Malaria Eradication Service Zone Chief, Dessie
- Kinde Wassie — Ministry of Education, HSI Secondary School, Gondar
- * KurabatoheW Wondimagegnehu — HSIU, College of Agriculture, Lecturer Agricultural Engineering Department
- Manna Ghebei — Ministry of Education, Asmara
- Menase Zewde — Ministry of Agriculture, Animal Disease Control Supervisor, Shola
- Redaegzi Gebremedhin — Development Director, Provincial Government, Tigre Province
- Seyoum Solomon — IEG Institute of Agricultural Research, Farm Mgr., Holetta
- Sime Hailemariam — Mitchell Cotts Company (Advanced Study England)
- * Tadesse Ebba — HSIU, College of Agriculture, Lecturer, Genetics and Breeding, Plant Sciences Department
- * Tamrat Zerihoun — Ministry of Agriculture, Provincial Extension Supervisor
- Tekeste Makonnen — Ministry of Public Health, Malaria Eradication Service
- Tesfai Kiflu — Unknown

*Have received, or are receiving advanced training in the United States.

- * Tesfaye Zemo — Ministry of Agriculture, Veterinarian, Livestock Development Project
- * Tsegaye Asfaw — Ministry of Public Health, Malaria Eradication Service, Zone Chief, Dire Dawa
- * Teshome Wondafrash — HSIU, College of Agriculture, Dairy Processing Technician, Animal Science Department
- * Tsegaye Hapte Mariam — HSIU, College of Agriculture, Animal Science Department
- Yilma Beyene — HSIU, College of Agriculture (Advanced Study Abroad)
- Zamed Agegnhu Desta — Shell Company Red Sea Ltd., Addis Ababa
- Zekarias Yefru — Ministry of Agriculture, Animal Disease Control Supervisor

1966

- * Abaye Tedla — IEG Livestock and Meat Board
- Ahmed Karrar — Ministry of Education, Prince Makonnen School, Addis Ababa
- Akalu Negewo — Ministry of Land Reform, Field Investigator, Land Tenure Department
- Alemu Sida — Ministry of Agriculture, Provincial Extension Supervisor, Wollega
- Almaw Negassa — SIDA, Assela Development Project, Assistant, Crop Production Department
- Andu Habteyohannes — HVA Wonji Sugar Estates, Junior Section Manager, Metehera
- Araya Sileshi — Ministry of Land Reform, Field Investigator, Land Tenure Department
- Arega Yiman — Ministry of Community Development, District Officer, Haiké District, Wollo Province
- Aregai Habtu — (Advanced Study Europe)
- Artin Kevorkian — HVA Wonji Sugar Estates, Junior Section Manager, Wonji
- Assefa Yilala — Ministry of Education, Prince Makonnen School
- Asserat Degefou — Ministry of Agriculture, Seed Multiplication Center, Gojam
- Belete Dessalegne — Awash Valley Authority, Settlement Officer
- Demissie Damte — IEG Institute of Agricultural Research, Assistant Agronomist, Baco
- Dereje Haile Giorgis — Unknown
- Emanuel K. Mariam — Ministry of Agriculture, Provincial Extension Supervisor, Tigre Province
- Eshetu Areda — Ministry of Agriculture, Extension Department, Acting Information Officer
- Fekere Gebrekal — Ministry of Education, Bahar Dar Technical School
- Geremew Haile — IEG Institute of Agricultural Research, Assistant Agronomist, Baco
- Girma Belaineh — Ministry of Agriculture, Extension Department, Supervisor Fertilizer Demonstration Project
- Girma Eshete — Ministry of Land Reform
- Gregory Akoh Niba — Camerouns
- * Hailu Sebsibe — HSIU, College of Agriculture, Technical Assistant, Agricultural Engineering Department
- Hailu Tsehaye — Ministry of Agriculture, Provincial Extension Supervisor, Arussi Province

*Have received, or are receiving advanced training in the United States

- Ibrahim M. Drammeh — Ghambian (Advanced Study Israel)
- Jame Mave — Ministry of Land Reform, Provincial Administrator, Hararge Province
- Jami Issa — HSIU, College of Agriculture, Technical Supervisor Horticulture and Agronomy, Plant Sciences Department
- John O. Kokwaro — Kenyan
- * Kahsai Melesse — HSIU, College of Agriculture, Agricultural Education Dept.
- Kedir Ali — Ministry of Agriculture, Forestry Department
- Lissanework Berhane Meskel — SIDA, Assela Development Project, Assistant, Animal Production Department
- Mesfin Mebraiu — Development Bank of Ethiopia, Loan Officer, Asmara
- Minwiyelet Tsega — Ministry of Agriculture Provincial Extension Supervisor, Begimider and Semien Provinces
- Mulugeta Bedada — Ministry of Agriculture, Provincial Extension Supervisor, Kaffa Province
- Mulugeta Tsigie — HVA Wonji Sugar Estates (Advanced Study Holland)
- Samra Ephrem — (Advanced Study Yugoslavia)
- Samuel Haroui — Development Bank of Ethiopia, Loan Officer, Headquarters
- * Seifu Haije Michael — Ministry of Land Reform
- Solomon Tesfa — HSIU, College of Agriculture, Technical Assistant, Debre Zeit
- Tecele Ghebreiesus — Ministry of Community Development, Awasa Training Center
- Teferi Makonnen — SIDA, Assela Development Project, Assistant, Crop Production Department
- Telahun Haile — Ministry of Education, Instructor, Teacher Training Institute
- Tesfaledet Berhe — HVA Wonji Sugar Estates, Junior Section Manager, Shoa
- Tesfu Mesfun — (Advanced Study Abroad)
- Tewelde B. Gebretsadik — Ministry of Agriculture, Provincial Extension Supervisor, Sidamo Province
- Tewoldebrehan Woldemichael — IEG Grain Corporation
- Wilson Kueben Opile — Kenyan
- Wolde-Senbet Gudeta — (Advanced Study India)
- Wosenyeleh Abebe — (Advanced Study India)
- Yilma Mengiste — Tedia Desta and Company, Administrative Assistant
- Yilma Siyoum — Ministry of Education, General Wingate School
- Zerai Mengistu — (Advanced Study Abroad)
- Zeremariam Woldeselassie — Ministry of Education, Prince Makonnen School
- Zewdie Abate — (Advanced Study Israel)
- * Zewdu Omer — HSIU, College of Agriculture, Technical Assistant, Plant Sciences Department

1967

- Aberra Ashinay — Ministry of Education, Instructor, General Wingate School
- Aberra Disasa — IEG Coffee Board, District Officer, Wollega
- Amare Retta — IEG Institute of Agricultural Research, Research Assistant, Melka Werer
- Andom Kiflemariam — Ministry of Agriculture, Livestock Department
- * Aregay Waktola — HSIU, College of Agriculture, Agricultural Education
- Abraham Wubishet — Ministry of Agriculture, Livestock Department
- Amanuel Negassi — Ministry of Agriculture, Livestock Department, Animal Health Assistants School, Debre Zeit

*Have received, or are receiving advanced training in the United States.

- Aschenaki Taferre — Ministry of Land Reform and Administration
 Bayable Kiros — HVA, Wonji Sugar Estates
- * Berhane Kiflewahid — HSIU, College of Agriculture, Dept. of Animal Science
- * Dereje Ashagari — HSIU, College of Agriculture, Department of Plant Sciences
- Elias Habteselassie — HSIU, Student, Law School
- Ephriam Ze-Michael — Ministry of Agriculture, Shola Dairy, Addis Ababa
- Eyasus Gebreizabhair — IEG Institute of Agricultural Research, Research Assistant
 (Coffee Processing), Jimma
- Gelana Kejela — IEG Livestock and Meat Board, Information Officer
- Getachew Haile Leul — IEG Coffee Board, Assistant Economist
- * Getahun Tabor — Ministry of Agriculture
- Girma Demissie — HVA, Wonji Sugar Estates
- Girma Berhanu — Ministry of Agriculture, Livestock Department
- Girma Tadessa — IEG Grain Corporation
- Gideon Abraham — HSIU, College of Agriculture, Technical Supervisor, Farm
 Management, Debre Zeit
- Goitom Ghebru — HVA, Wonji Sugar Estates
- Gugsa Indeshaw — HSIU, College of Agriculture, Technical Supervisor, Plant
 Sciences, Debre Zeit
- Hadera Gebremedhin — IEG Institute of Agricultural Research, Research Assistant,
 Melka Werer
- Haddis Mogus — Ministry of Community Development, District Officer, Sabata
- Iskender S. Luigi — Ageca Company, Addis Ababa (Agricultural Chemicals)
- * Kesete Daniel — Ministry of Land Reform and Administration
- Kidane Tsighe — Ministry of Land Reform and Administration, Jimma
- Mesfin Abebe — HSIU, College of Agriculture, Plant Sciences Department
- Mesfin Makonnen — Ministry of Agriculture
- Mulugeta Assefa — HSIU, College of Agriculture, Plant Sciences Department
- Mustafa Mohamed Iman — IEG Livestock and Meat Board
- Rugnath Samji Divecha — Tanzanian
- Shewarega Berhanu — Ministry of Education
- Sissay Gebre Giorgis — Ministry of Agriculture, Provincial Extension Supervisor,
 Shoa
- Solomon Tilahun — Awash Valley Authority
- Tamene Teferra — Ministry of Public Works, Water Resources Department
- Terrefe Bekele — Ministry of Education, Sidamo
- Tesfa-Michael Tesfa-Yohannes — HSIU, Faculty of Science
- Teshome Woldeesemayat — Ministry of Land Reform and Administration
- Tegenu Yifru — Ministry of Land Reform and Administration
- Tesfaye Tadesse — Ministry of Land Reform and Administration
- Thomas Morwabe Sagwe — Kenyan
- Worke Gabre — Ministry of Education
- Worke Wubneh — Ministry of Land Reform and Administration
- Yemane Tekle Mariam — Ministry of Community Development
- Yoseph Befecadu — Not placed at this date
- Yoseph Demissie — Addis Ababa Bank
- * Zerai Araya — HSIU, College of Agriculture, Plant Sciences Department, Forestry

*Have received, or are receiving advanced training in the United States.

1968

(Data on Present Assignments not available)

Abdulahi Hasen	Habte Mariam Neghassie
Afeworky Asghedom	Makonnen Asres
Alemu Zewdie	Negatu Molla
Amdemariam G. Michael	Sintayehu Gebermariam
Asebe Selassie Negatu	Solomon Bellete
Asfaw Wordofa	Solomon Tuwafe
Ata Ibrahim	Tadesse Kibreab
Belete Mahteme Selassie	Tefera Taye
Berhane Abrehe	Teffera Gebre Meskel
Berhanu Abegaz	Tesfai Teclé
Biru Abebe	Tesfaye Gebre Meskel
Bisrat Gebrekal	Tsegaye Asmelash
Dejene Mekonnen	Van Minassian
Fekadu Ebba	Weldemicael Berhe
Getachew Bekele	Yaicob Licke
Getachew Janbery	Yeshitila Worku
Getanche Yemane	Yilma Teklemariam
Girma Bisrat	Yohannes Negassa
Gizaw Negussie	Zekarias Ghebremedhen
	Zenebe Kebede