

THE IMPORTANCE OF FORTY SELECTED FACTORS FOR ESTABLISHING
AGRICULTURAL TEACHER EDUCATION PROGRAMS IN THE
NORTHERN STATES OF NIGERIA

by

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CHAPTER I

INTRODUCTION

BRIEF GENERAL SURVEY OF NIGERIA

General Background Information in Relation to Africa and the Commonwealth

The Federal Republic of Nigeria is the largest single political/geographical unit along the west coast of Africa.

Nigeria takes its name from the River Niger which flows through it to the sea.

The country lies between latitudes $4^{\circ}20'$ and $14^{\circ}00'N$, and longitude $2^{\circ}20'$ and $14^{\circ}30'E$, so that it is entirely within the tropical zone, extending northward from the coastline for over 650 miles; its greatest length from east to west is over 700 miles.

Out of the fifty-two countries on the Continent of Africa, Nigeria is the fourteenth largest and, with its area of 356,669 square miles, it is about the size of Oklahoma and Texas put together or four times the size of Great Britain. But in population, Nigeria has more than twice as many people as any other country on the African mainland.

Nigeria is bounded on the north by the Republic of Niger and the Sahara Desert, on the west by Dahomey and on the east by the United Republic of Cameroon. In the northeast, it has a shoreline of about 120 miles on Lake Chad. The Atlantic Ocean known along the west coast as the Gulf of Guinea, the Bight of Benin and the Bight of Biafra, washes the southern coast line for some 500 miles.

History

Nigeria is one of the five English speaking countries in West Africa, having been ruled by Britain in her colonial past for 99 years; the others are Gambia, Liberia, Sierra Leone and Ghana. It gained independence on the 1st of October, 1960, and seven days later, Nigeria became the 99th member of the United Nations Organization; it is a member of the British Commonwealth of Nations, and in 1962 was the host and founder member of the Organization of African Unity (OAU).

Military rule was established on the 16th of January, 1966, and today the Republic comprises nineteen states, carved by the military authorities out of the former four regions, at the wish of Nigerians. (See Map B)

Physical Features (See Map C)

The River Niger, which is the third longest river in Africa together with its chief tributary, the Benue, is Nigeria's most prominent physical feature.

The Niger rises from the Futa Jalon highlands on the borders of Sierra Leone and runs through Nigeria from Northwest to South, a distance of about 730 miles. Before it empties into the Atlantic, it breaks into a network of creeks and waterways which form the Niger Delta.

The Benue has its source in the Cameroon Mountains bordering Adamawa in Gongola State in the northeast of Nigeria. The Benue, on its course, receives the waters of the Katsina Ala and Gongola rivers while the Niger receives those of the Sokoto, Kaduna and Anambra.

A lake with an area of 483 square miles has been created on the River Niger by the construction of the Kainji hydroelectric dam. This dam, which is also used to control the flow of the flood water in the Niger, has now

made the river navigable from the Escra-Vos lighthouse to Niamey in the Niger Republic, a distance of over 1,000 miles.

The second great drainage system of Nigeria is that which flows north and east from the Central Plateau into the Yobe river, which eventually loses itself in Lake Chad.

From the Delta area of the River Niger, low-lying land stretches west and east to form the coastal plain. In the west, the plain slopes up to the plateau of Yoruba land which reaches 2,000 feet at its maximum.

East of the Niger, and south of the lower Benue, the plain is broken by the Udi Hills and farther east, it rises to the Cameroon Highlands.

The Northern Plateau, which rises from the lowland area by a steep escarpment, averages about 2,000 feet in height, although the Shore Hills around Jos rise between 5,000 and 6,000 feet.

Climate

The climate of Nigeria is tropical, with some variation mainly due to differences in latitude, topography and vegetation between the south and the north, resulting in subtropical further inland.

There are two well-marked seasons - a dry and a rainy season. In general, the dry season extends from November to April or May in the north, and December to February or March in the south, when the Harmattan, a dust-laden northeast wind, blows down from the Sahara. The wet season is from April or May to October in the north and February or March to November in the south, when the prevailing southwest monsoon wind blows from the Atlantic Ocean, bringing relatively high rainfall to the coast for most of the year, decreasing rapidly as it travels inland.

Although the southern states generally have warm climate with relatively high humidity for almost all the year round, cooler conditions with a lower humidity exist in the northwest of the eastern parts of the country and north of Enugu in Anambra State.

Most of the Northern States have a hot, dry climate but temperatures drop during January and February due to the cooling effects of the Harmattan. Normally the Plateau area is also cooler throughout the year than the rest of the northern states.

Temperatures on the coast vary from 70°F (21.1°C) to 90°F (32.2°C) with high humidity throughout the year. In the north, the climate is drier and extremes of temperatures are more common from October to April, reaching sometimes as high as 110°F (43.3°C) during the day and as low as 40°F (4.4°C) on occasions at night, with humidity sometimes almost nil.

Average rainfall varies from 120 inches a year in the coast, to 80-90 inches in the Lagos area, and 20-30 inches in the far north.

Vegetation

The vegetation of Nigeria can be broadly divided into two easily recognizable zones, each stretching across the country from east to west: the rain forest and the grass savannah zones. As shown on Map G, these two zones can be subdivided into:

1. Mangrove swamp forest, made up of
 - (a) Seaward or salt water belt and
 - (b) Landward or fresh water belt
2. Rain forest
3. Deciduous or high land rain forest

4. Savannah made up of

- (a) Guinea Savannah
- (b) Sudan Savannah

Population

The population is estimated to be 79.8 million and it grows at a 2.7 percent rate annually with a density of 224 per square mile.

Education

Brief history. The Western type of education was brought to Nigeria about 1842 by Christian missionaries who located their stations and established schools around the southern coastal areas.

The plan was to spread Christian religion and establish schools from the coast to the north of the country. Unfortunately, the north was less open to the influence of the early missionaries. This was because there were already very strong Islamic institutions which resulted from early contacts with centers of learning in North Africa such as Timbuktu, Jenne and Gower. In fact, Perham¹ said:

When we turned to the north, it is to a widely different situation..... They wanted none of our instruction. They were satisfied with their 25,000 Koranic schools where in court yards or under trees, little boys in shrill repetition learned a few arabic texts...

In 1903 a Department of Education was established for Nigeria; and for the north in 1910.

¹M. Perham, Native Administration in Nigeria, London, Oxford University Press, 1937, p. 283.

The first government initiated school was opened in the north in 1909. A teacher training college for future expansion of primary schools was also opened the same year.

At the moment, the literacy rate as a percent of the total population in Nigeria is 25 percent. The projected number of primary school pupils to be in school as percent of the age group under the current UPE (Universal Primary Education) program, 1976-1981 plan period, is 80 percent.

Educational systems, organization and administration are not quite uniform throughout Nigeria. In general, however, the basic stages or structures which are simplified from an extract in "Statistics of Educational Systems in Nigeria", 1970, include:

1. Kindergarten - Two years - not strictly part of the school system; found only in some towns and cities.
2. Primary schools - Six years.
3. Secondary schools - Five years.
4. Technical and vocational schools - Three to five years.
5. Teacher training colleges - Three to five years.
6. Universities - Three to five years.

There is a gap between the levels of western education in the southern states compared with the northern parts of Nigeria as a result of the north's late "take-off" previously discussed. This gap is still wide but the north is making every effort to narrow it down by encouraging education at all levels.

Economy

Agriculture and its importance to the Nigerian economy. Nigeria is an agricultural country; about 75.3 percent of the total land area can be brought under cultivation. The arable land can grow almost all types of tropical and

subtropical crops. Forty percent of the total population or about 80 percent of the labor force are employed in primary production and related activities with only approximately 10 percent of the labor force in commerce, industry and service. Seventy-two to 82 percent of Nigerians live in rural communities.

According to Glenn L. Johnson et al.,² "Seventy percent of the population is still employed in agriculture which contributes an average of 50 percent of the GNP and is the second largest foreign exchange earner after oil."

The growth of GDP is 2.9 percent annually and per capita income is only \$522.6, while life expectancy at birth is 48 years.

Nigeria is singularly fortunate among African countries in having the most agriculturally diversified economy. The main agricultural products in the country include:

1. Cereals: Maize, millet, acha, sorghum, rice, wheat, kaffir, corn.
2. Grain Legumes: Cow peas, yam beans, soya beans, green peas, green gram, lentils, sword beans, lima beans, ground nuts.
3. Roots and Tubers: Cassava, yams, coco yams, sweet potato, Irish potato.
4. Oil Seeds and Nuts: Benniseed, dika nuts, walnuts, sheanut, kolanuts, cashew nuts, melon seed, coconut.
5. Fruits and Vegetables: Okra, pumpkin, onions, leafy vegetables, pineapple, avocado pear, banana, sweet orange, mango, plantain, lime, lemons, grapefruit, pepper, tomato.
6. Industrial Crops: Cotton, kenaf, tobacco, sugarcane, gmelina, eucalyptus.

²Glenn L. Johnson et al., Strategies and Recommendations for Nigerian Rural Development 1969/1985, Consortium for the Study of Nigerian Rural Development (CSNRD33), July 1969, p. 2.

7. Tree Crops: Cocoa, palm products, copra, coffee, tea, rubber.

8. Livestock and Fisheries: Cattle, sheep, goats, pigs, camels, horses, donkeys, asses, poultry, rabbits, fish.

9. Forest Products: Logs, lumber, ropes, poles, firewood, gum, game animals and snails.

Items (1 - 9) above were taken directly from "Agricultural Development in Nigeria, 1973-1985". The Federal Ministry of Agriculture and Natural Resources Joint Planning Committee, Lagos, 1974. Coxton Press (West Africa) limited, Ibadan.

The major export crops are: cocoa, palm produce, rubber and ground nuts. The food crops for local consumption include: rice, maize, millet, guinea corn, yam and cassava.

Mining

Production of petroleum in Nigeria rose to a figure of 85 million tons a year by January 1972 and earned for the country ₦419.6 million in 1971. Other minerals for export are tin and columbite; coal and limestone are consumed locally. There are deposits of marble, lignite, gypsum, wolfram and iron ore.

The manufacturing industry is growing and this can be judged by the rise in its index (100 in 1963; 164.5 in 1966 and 250.2 in 1970). Unemployment still remains high in the country particularly in the urban areas where as much as eight to thirty-five percent are unemployed.

Need for Personnel Training Program

One of the ways to accomplish a lasting rural transformation is to make sure there are more progressive farmers in many locations. However, there

cannot be rapid progress in agriculture unless there are adequate numbers of trained agricultural extension workers as well as those needed for agriculturally related industries and services.

Despite the overwhelming importance of agriculture in the economies of Nigeria, methods of farming still remain traditional with the use of simple tools which involve intensive labor and consequently very low productivity.

In his Ph.D. dissertation, O. C. Onazi³ wrote with particular reference to the northern states of Nigeria and said:

Farming is regarded as a way of life rather than a business. Most farming is done by illiterate farmers living under very poor village conditions.

In 1974, a Mission sent to Nigeria by the World Bank reported that:

Despite the growing importance of other sectors, agriculture, including forestry and fishing which accounted for about 50 percent of GDP at factor cost in 1970-71, will remain a key factor in Nigeria's economic development as the largest employer of labor (about 72 percent of labor force in 1970-71), the principal source of food and raw materials for the increasing population and a significant, albeit relatively declining, earner of foreign exchange. The acceleration of agricultural growth and the provision of additional employment opportunities in the sector is, therefore, crucial to the country's future progress.

There are comparable opportunities for growth in the sector, based primarily on the existence of expanding foreign and, particularly, domestic markets for Nigeria's agricultural output; the abundance of land and human resources whose diverse productive capacities are presently underutilized; and the availability of improved technology which, if exploited, could increase productivity substantially. The constraints, on the other hand, are several: low producer incentive; transport and distribution bottlenecks; inadequate machinery for planning, coordinating and implementing a national policy for rural and agricultural development; insufficient qualified

³O. C. Onazi, "Comparative Analysis of the Training Needs of Potential Agricultural Extension Workers, and Principal Problems of Extension in the Northern States of Nigeria". (Doctor's Dissertation, Kansas State University 1973).

manpower; and shortages of improved seeds, fertilizers, chemicals, credit and other farm inputs.⁴

School leavers in Nigeria in search of jobs in urban areas constitute a sizeable amount of migrants in cities such as Lagos, Ibadan, Kano and Port Harcourt et cetera. The situation is likely to get worse with the present rate of expansion of primary and secondary schools because education in Nigeria, as of now, seems to be a license for escaping from living in the rural areas.

According to Reuben K. Udo⁵:

Post basic education in Nigeria by which is meant education above primary school level, can be considered to be training for urban jobs since educated Nigerians rarely take to farming and since there are few other jobs available to them in rural areas.

I. H. S. Scot⁶, thought about the situation and said:

If the present tendency persists, the number of those who seek clerical employment may indeed increase to such an extent that the market for their employment may be glutted. The solution appears rather to be in the real IMPROVEMENT in the conditions of the present farming, so that it pays to be a farmer. Moreover, it is evident that some restrictions must be placed on the facilities for training for the purely clerical callings. In both these directions, those responsible for education have their part to play.

The importance of agriculture to the economic development of Nigeria cannot be too strongly emphasized as can be seen from the cited references:

⁴Report of a Mission sent to Nigeria by the World Bank. Nigeria: Options For Long Term Development, (Baltimore and London: The Johns Hopkins University Press, 1974), p. 5.

⁵Reuben K. Udo, Migration and Urbanization in Nigeria in Caldwell, John Charles and Addo, N. O., eds., Population Growth and Socioeconomic Change in West Africa. (New York and London: The Population Council Inc., Columbia University Press, 1975), p. 301.

⁶I. H. S. Scot, Educational Policy and Problems in African Colonies, Year Book of Education, 1940.

It provides funds for recurrent and capital expenditures and means of livelihood for the great majority of the people. It also provides resources for developmental programs.

From the references too, it becomes clear that the major constraints to Nigeria's agricultural development are: shortage of manpower; failure in the educational system to sufficiently motivate students toward agriculture as a profession; almost complete illiteracy among farmers who cannot properly cope with or comprehend the present day scientific farming methods now available through research and extension service. Therefore, to improve Nigeria's economic picture, the education system and policies must be aimed at reversing the migration of youth from rural to urban areas, and making agriculture an attractive and lucrative business.

Although it is desirable to have sufficient trained personnel for the various sectors of agriculture and agriculturally related programs and services, it must be remembered that the task of motivating farmers to accept profitable farming decisions could prove quite difficult because of the technical know-how involved. If this could be done, however, it would significantly facilitate rapid advancement towards a dynamic agriculture.

In the Northern States of Nigeria, for example, a large proportion of relatively semi-trained agriculturalists are being used in the agricultural extension services; they have been trained at the agricultural schools.

The importance of training at the nondegree levels in the Northern States of Nigeria cannot be too strongly emphasized. For example, I. S. Audu⁷

⁷I. S. Audu, Opening Address to the Annual Schools' Conference. Proceedings of the 2nd Working Conference on Intermediate Agriculture and Live-stock Services Training Programs of Ahmadu Bello University, Zaria, October 28 - 30, 1970.

stressed the value of the training at the schools of agriculture in Nigeria with particular reference to the Northern States when he said:

Nigeria will continue to rely on these middle-echelon personnel to bear the brunt of the agricultural development programs, well into the 1980s. The truth of the matter is, we just cannot train enough degree holders in the fields of agriculture and veterinary medicine to meet the needs of development.

The objective of the ministries of agriculture as of now is to have one trained extension worker to every 1000 farm families, but the existing "ratio is at least, 1:2000 and as high as 1:5000 in some places," Rowat⁸. In the developed countries of the world, such as the U.S.A., the ratio of extension agents to farm families is at most 1:500. The high rate in Nigeria standing at 1:5000 in some areas, particularly in the Northern States, is a clear indication that there are urgent needs for establishing more agricultural schools and needs for developing and expanding the existing ones.

The only three northern regional agricultural schools existing before the creation of states in Nigeria in 1966 became university owned and operated schools in 1968. These are the schools of agriculture in Samaru and Kabba and the Livestock Services Training at Mando Road in Kaduna. These three schools cannot meet the training needs of the new states. Each state has therefore embarked upon establishing its own agricultural schools to step up the number of much needed trained personnel. Presently, nine of the ten Northern States are operating their own schools. The only one remaining state is in the process of establishing its agricultural school within the near future.

⁸R. Rowat, "Report to the Federal and Regional Governments of Nigeria on the Development of Education and Training in the Field of Agriculture and Related Subjects", (Rome: FAO, 1965) p. 7.

In view of the fact that agriculture is so important to the economic development of Nigeria including the Northern States, those ten states will do themselves a great service if they develop a strong agricultural education program because it could lead to the training of sufficient numbers of agricultural teachers in the states, adequately equipped with the knowledge, technique and experience which are important prerequisites for training effective agricultural personnel who aid farmers with necessary information and service for increased agricultural output.

Since there is continuing expansion in the number of facilities of agricultural schools or colleges, it is necessary to develop professional agricultural teachers required to meet the demands for the scope of agricultural education in the states' changing and complex societies.

Apart from the general background information given about Nigeria as a country, this study specifically focuses attention on the northern part of the country and refers to "the Northern States" to mean the ten states located there as per Map H.

Purpose of the Study

The purposes of this study are as follows:

1. To identify the factors needed for agricultural education programs in the Northern States of Nigeria.
2. To determine the relative importance of selected factors for the training of intermediate level agricultural teachers in the Northern States.

Significance of the Study

At present, schools of agriculture in the Northern States are growing in number while the older established schools are increasing in enrollment and

subject matter areas in order to meet the manpower needs of the states.

The study is therefore a timely and useful instrument to the planners and policy making officials of both the ministries of agriculture and education in the development of agricultural education in the states. The study could alleviate the shortages of qualified agricultural education teachers, and help to establish a higher priority for agricultural education in the educational system of the states.

The information obtained would serve as a basis and a guide for instituting appropriate training priorities for agricultural education throughout the states. In general, it is hoped the study would improve agricultural training for the benefit of the states, and the teachers as individuals.

Finally, the study would contribute to the knowledge in the field of agricultural education.

Limitations of the Study

Lack of records, and communication difficulties with Nigeria proved to be two major constraints. The study is therefore based on:

1. The investigator's eleven years experience as an agricultural teacher in two schools of agriculture in the Northern States.
2. Consultations with Nigerian agriculturalists currently studying at Kansas State for specific information needed from their own state of origin and other states they might have worked in before.
3. Consultations with agricultural teacher educators at Kansas State.
4. Consultations with faculty/administrators from the College of Agriculture, Kansas State University, with experience on Nigeria.

5. Records at the International Agricultural Programs' Office, Waters Hall, Kansas State University. The records included: (a) Nigerian Contract Terminal Reporter (b) International Agricultural Programs Records.

6. A review of relevant literature, particularly in the area of research already done for use in the United States and those for some developing countries; masters reports and dissertations.

Assumptions

1. The study will motivate agricultural teacher educators as well as agricultural teachers so as to restructure and improve agricultural curricula in the primary and secondary schools, teacher training colleges, agricultural schools and universities.

2. It will provide necessary background information needed by ministries of agriculture, education and agricultural teacher educators for planning, developing and evaluating more effective agricultural educational curricula for agricultural teachers through pre-service and in-service programs.

3. It will permit the ministries of agriculture and education to work more closely together for the preparation of potential professional agricultural teachers in the states.

4. The consultants, the relevant research, and the investigator's years of experience as an agricultural teacher are very useful and valid sources of information for this study.

5. The recommendations based on these sources of information, which represent characteristics of typical agricultural education programs, will be applicable and can be used as a basis and a guide for developing the training programs for professional agricultural teachers in the Northern States.

6. The recommendations will definitely help to improve the opportunities for the development of professional agriculture teachers, particularly at the intermediate preparatory level of the states' educational system.

Definition of Terms

1. Development - Lasting changes in structure, function or organization, leading to increase in size, capacity, efficiency or degree of maturity by means of extended learning.

2. Professional - One who has acquired a learned skill and conforms to ethical standards of the profession in which he practices the skills.

3. Agricultural teachers - Teachers who teach agriculture.

4. Northern States of Nigeria - The ten states located in the northern part of Nigeria. They are: Bouchi, Benue, Bornu, Gongola, Kaduna, Kano, Kwara, Niger, Plateau and Sokoto.

5. Formal education - Conventional training provided in an orderly, logical, planned and systematic manner.

6. An agricultural country - A country in which a large amount of agricultural commodities is or can be produced.

7. Small holders - Small land owners.

8. Rural transformation - The quality of life acquired through instruction and training that improves the physical, mental, moral and social standards of persons living in rural communities.

9. Agricultural related industries - Off-farm agricultural business.

10. A dynamic agriculture - A strongly motivating, stimulating and paying agriculture.

11. Nigerian agricultural teacher educators - All persons in Nigeria who have agricultural teaching qualifications, engaged in teaching and/or are responsible for the training of agricultural education majors.

12. Semi-trained agriculturalists - Ministry of agriculture staff who receive formal training below a diploma or a degree in agriculture.

13. Creation of states - Nigeria was divided into 19 states in 1976.

14. Agricultural schools - Non degree offering educational institutions that emphasize the teaching of agriculture and agricultural related subjects.

15. Economic development of Nigeria - The process by which Nigeria increases the efficiency with which it provides desired goods and services, thereby increasing per capita levels of living and general well-being.

16. Instrument - The means by which a person obtains quantitative and qualitative information which helps to make necessary improvement.

17. Ministries of agriculture and education - Government departments which are responsible for the policies, development, organization and administration of agricultural and educational programs respectively.

18. Agricultural education majors - Graduates whose college curriculum specially prepares them to be teachers of vocational agriculture and to be able to carry out other duties and responsibilities related to agricultural industry.

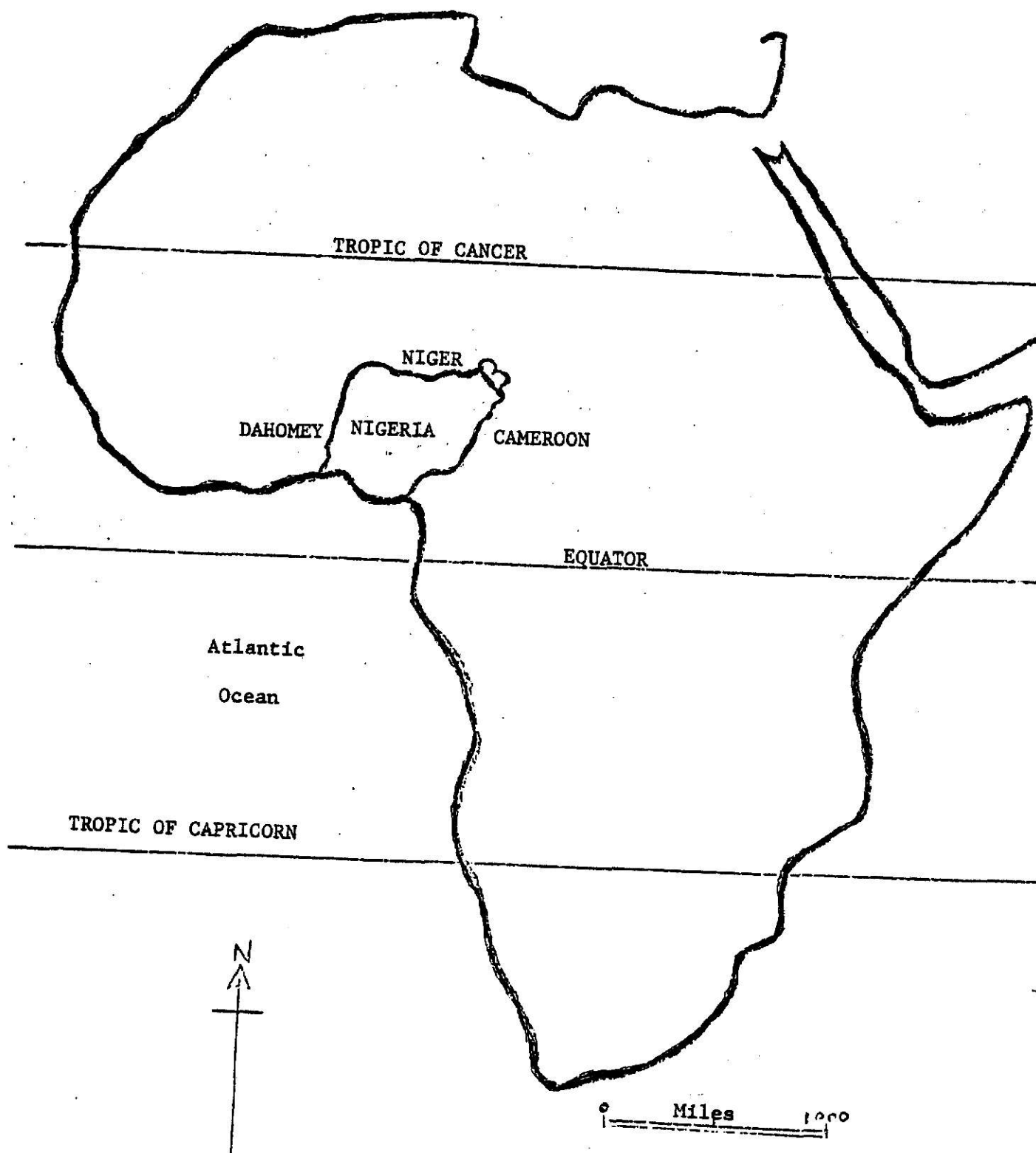
19. Agricultural education related graduates - Graduates that obtain degree(s) from the department of agricultural education without necessarily having to be certified as agricultural education majors.

20. Simple tools - Hand tools such as hoes, cutlasses, shovels, spades, forks, diggers and rakes.

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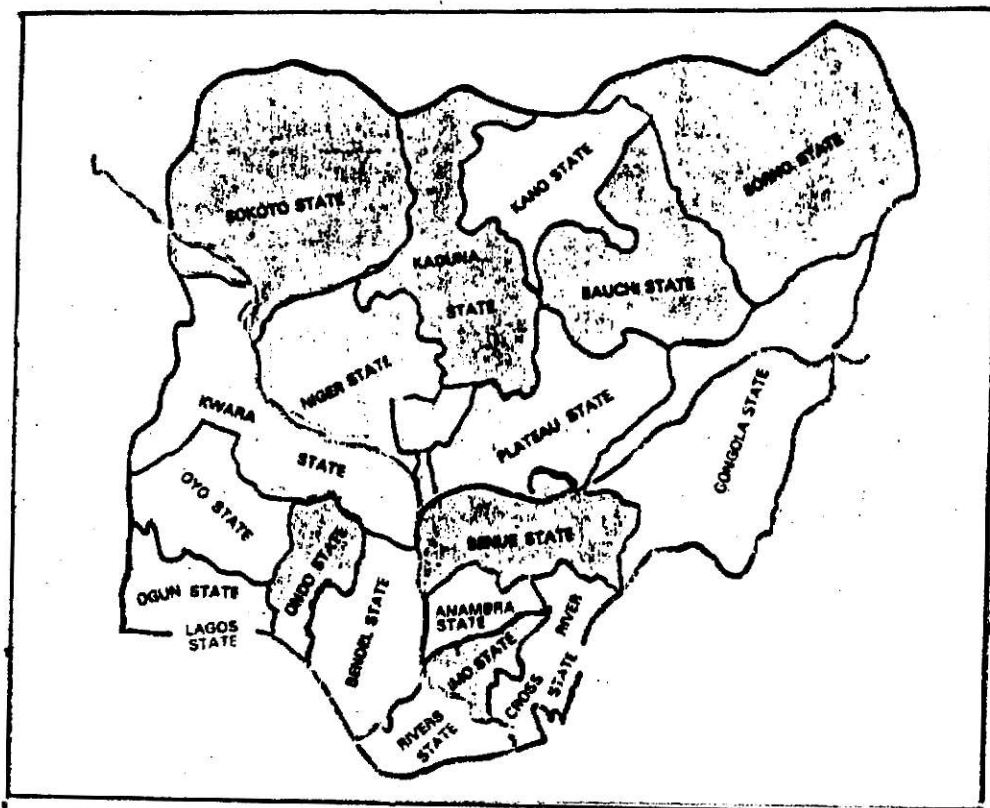
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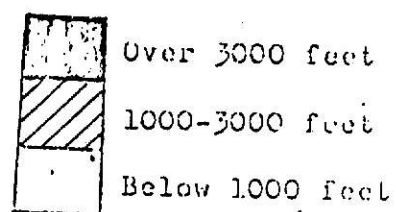
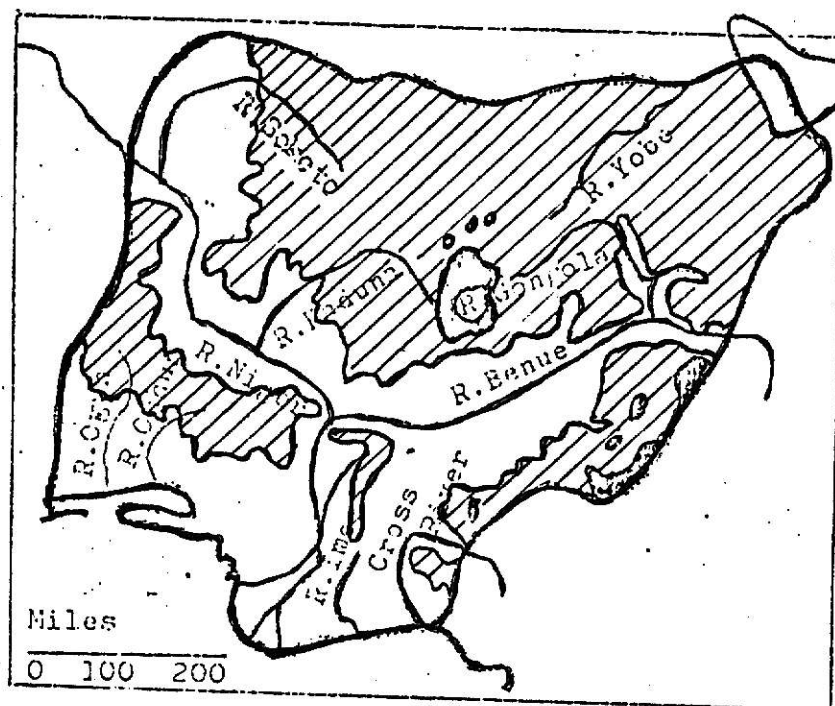
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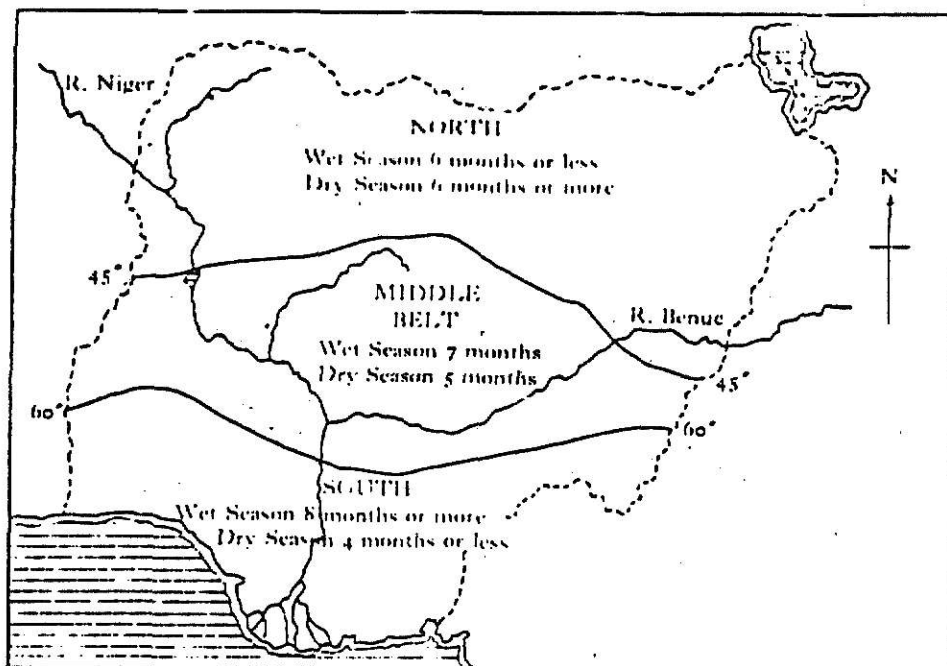
MAP B**MAP OF NIGERIA SHOWING NINETEEN STATES
STRUCTURE**

MAP C

PHYSICAL FEATURES



MAP D

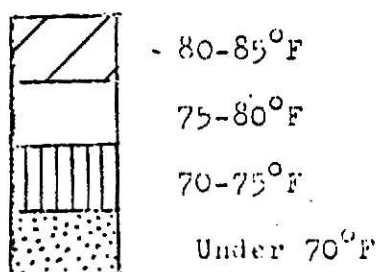
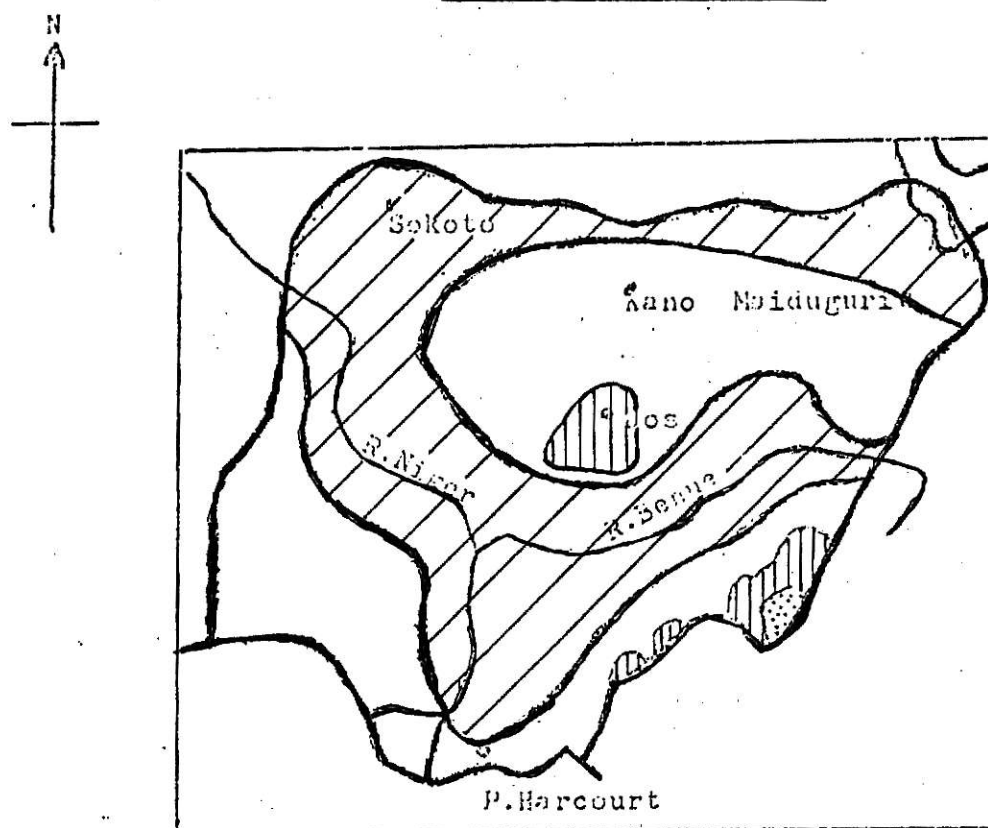


Nigeria: Climatic Zoning

This map shows the two distinct climatic regions described on pages 3 and 4. The Middle belt area with a climate which is neither typical of the type in the North nor of the type in the South is shown.

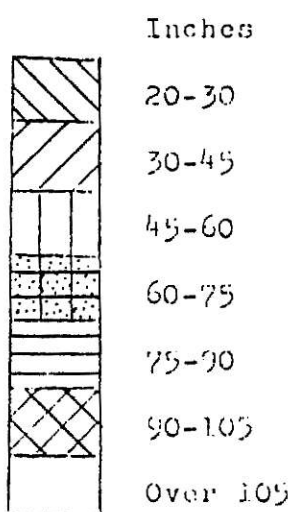
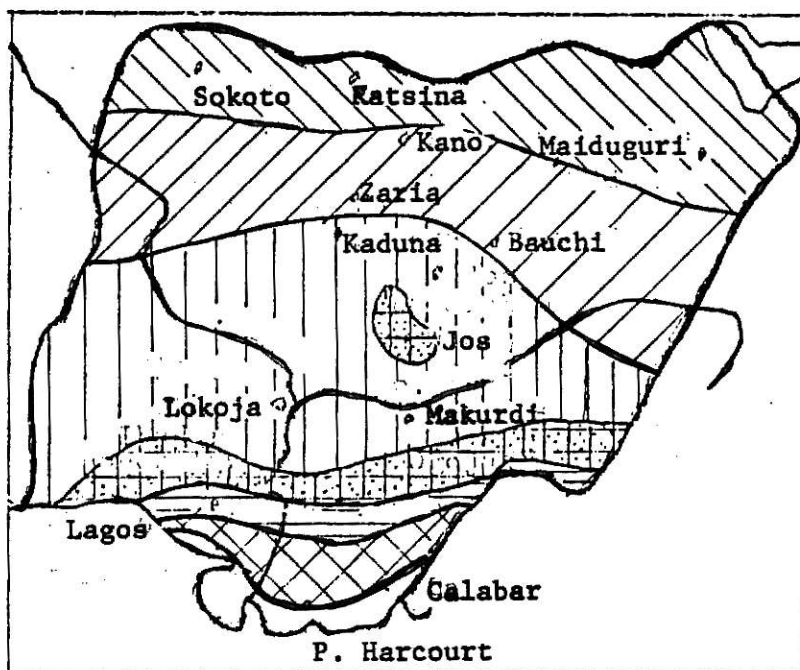
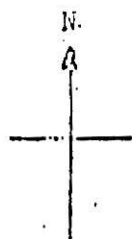
Before the extreme effects associated with the Northern and the Southern climatic belts (dryness, and heavy rainfall respectively) get to the Middle belt, they are 'diluted' due to the long distance which the prevailing winds travel inland.

MAP E

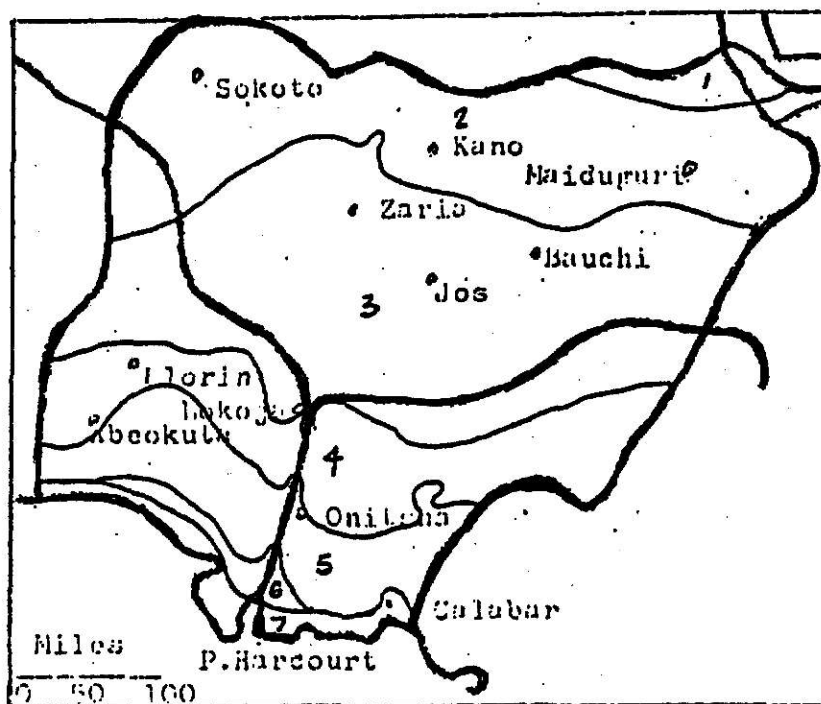
MEAN ANNUAL TEMPERATURE

From the above map, it can be seen that physical features are largely responsible for variations in temperature, for example, Jos is cooler than Kano because it is on a plateau while Kano is not.

MAP F

MEAN ANNUAL RAINFALL

MAP G

NATURAL VEGETATION

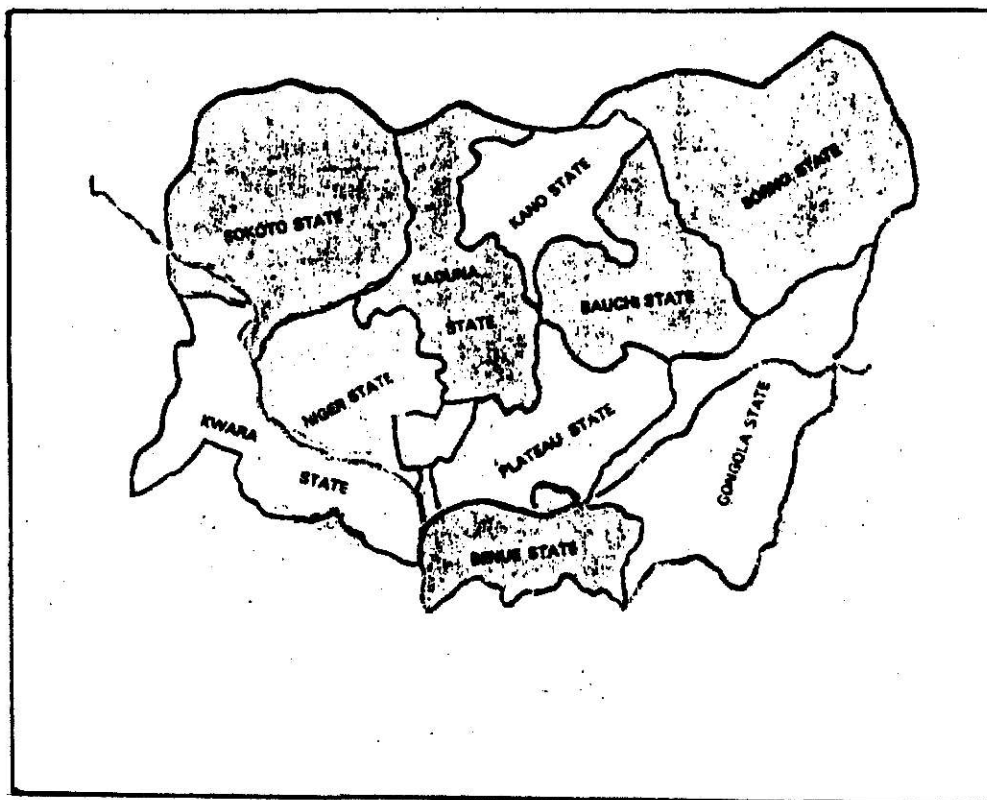
- | | |
|---|--|
| 1 | Thorn bush |
| 2 | Sudan Savannah |
| 3 | Guinea Savannah |
| 4 | Deciduous or highland rain forest |
| 5 | Rain forest |
| 6 | Mangrove Swamp Forest - Fresh Water Belt |
| 7 | Mangrove Swamp Forest - Salt Water Belt |

N.B. In the map above, some important towns found in each of the Natural Vegetation belts are marked.

MAP H

MAP OF NIGERIA SHOWING NORTHERN STATES

STRUCTURE



CHAPTER II

REVIEW OF RELEVANT LITERATURE

With the help of a computer operator at the Farrell Library, Kansas State University, a computer search and intensive library research revealed that there was nothing written directly on "The importance of forty selected factors for establishing agricultural teacher education programs in the Northern States of Nigeria.

Since relevant literature regarding the study by Nigerians and/or for the Nigerian situation was limited, the investigator, through the process of elimination, based the report mainly on selected close works, publications and records (both for Nigeria and three countries - Brazil, Denmark and the United States). In addition, the investigator made use of personal interviews, responses to questionnaires, and his own eleven years teaching experience in two Northern States' agricultural schools. All these sources of information proved very important and helpful in conceptualizing the framework for the study.

The most relevant works done for Nigeria were those of Dr. Anazodo Anthony Okoye, O. N. Agusiobo and Doctors Mayer and Onazi.

Okoye's thesis submitted to Purdue University in 1966 was titled, "A Proposed Program of Agricultural Education for Nigeria." A copy of this thesis was obtained.

One of Okoye's proposals which this investigator considered most appropriate was the identification of the need for initiating "teacher training programs in agricultural education for primary, secondary and post-secondary young adults" in Nigeria.

⁹Anazodo Anthony Okoye, A Proposed Program of Agricultural Education for Nigeria (Ph.D. thesis submitted to Purdue University, 1966).

The second publication considered relevant to the study was an article which O. N. Agusiobo¹⁰ wrote in the West African Journal of Education, titled, "The Implications of Vocational Education Programs for the Nigerian School Systems", where he said: "The demand for graduate teachers in agricultural science, business education, home economics and technical education in Nigerian secondary schools is so pressing that at the present rate of progress, meeting this demand is not feasible within the foreseeable future."

In another statement, Mayer and Onazi¹¹ specifically brought to light the progress so far made and the hope for developing agricultural education in Nigeria when they said that: "A B.Sc. degree in Agricultural education has been introduced in one of the Nigerian universities and a second university is planning offerings in agricultural education. The Nigerian Association of Agricultural Education was established recently and shows promise as a means of developing agricultural education as a profession in the country. Both of these developments will help to foster teacher education in agriculture in the near future."

It is the considered opinion of the investigator that the development of agricultural education in Nigeria has suffered a gross and an unparalleled oversight and remains neglected even when policy makers and top men and women in and outside the country continue to describe agriculture as the backbone of the

¹⁰O. N. Agusiobo, Implications of Vocational Education Programs for the Nigerian School System, in West African Journal of Education, Vol. XVII, No. 1, Feb. 1973, pp. 51-61.

¹¹Leon A. Mayer and O. C. Onazi, Occupational Education in Agriculture in Nigeria in Agricultural Education, Vol. 49, No. 6, Dec. 1976.

country's economy, after oil; no real and practical support has been given to this order of priorities. In support of this point of view Aluko¹² said:

Nigerian education designed to cater for some of the most enterprising people in the world is unfortunately geared toward meeting the needs for staff in commerce, the civil service and teaching, hardly toward agriculture, technology, home economics and industry.

O. N. Agusiobo referred to this same situation in the light of the whole Nigeria when he said:

The need for defining vocational education concepts is reflected in the over supply of certain categories of professionals and the shortage with regard to other categories.

This leads to a valid suspicion that there is still an unhealthy concentration in our institutions in arts and social sciences.

This lack of balance is partly due to the fact that the curriculum in Nigerian schools and universities have not often progressed far enough away from models of a colonial era. For not only are local needs not sufficiently reflected in the subjects taught, high priorities in admissions still go to general education, science, arts and medicine as was originally the case.

By general education, Agusiobo, quoting Good's definition, meant "A broad type of education aimed at developing attitudes, abilities and behavior considered desirable by society but not necessarily preparing the learner for specific types of vocational or avocational pursuits."

In a review of teacher education programs in Nigeria, the first teacher training institution was established according to Ogunsola¹³, "October 1909

¹²S. A. Aluko, Higher Education and National Development, The Educator, 7th issue, May, 1966.

¹³A. F. Ogunsola, Teacher Education Programs in Nigeria, in West African Journal of Education, Volume XIX, Number 2, June 1975.

at Nassarawa, Kano." Ogunsola continued that "Government established Katsina Teachers College in 1928" and quoted Vivan Jones who said: "The aim of the original college was to produce high quality teachers to staff the provincial schools of the north." Continuing his writing on the same subject, Ogunsola also said: "It is daily becoming increasingly clear that no nation can rise above the quality of its teachers."

The purpose of teacher education should seek to help the individual teacher to grow and develop as a person, provide him with the skills and professional abilities to motivate children to learn and help him in acquiring the: right types of understandings, concepts, values and attitudes necessary, not only to survive in the schools but also in the society in which he lives."

During the September 1969 National Curriculum Conference, the federal guiding philosophy for teacher education program was expressed as follows: "As on other educational level, the conference believes that teacher education in Nigeria must recognize the worth of the individual prospective teacher, give him an equal opportunity to learn and provide within his intellectual horizon selected fundamental experiences that will enhance his job as a teacher."

These references clearly and firmly indicate the importance of having to train teachers for their responsibilities and rightly so. When the first government initiated primary school was established in Kano, northern Nigeria, in 1909, a teacher training college for its development and expansion was immediately established. The establishment of secondary schools also saw the corresponding development and establishment of teacher training colleges to train those to teach in the growing and expanding schools.

The first agricultural school in the Northern States, however, was established in 1931 at Zaria; the second one was at Kabba in 1964; the third, a former veterinary school, became the livestock services training school in 1968 at Mando Road in Kaduna. In addition to these three older schools in the present Northern States, a fourth school - an irrigation agronomy school - was opened at Bakura in 1974. These four agricultural schools are now university owned and operated but located in some of the states. Today, nine of the ten Northern States operate at least a state school of agriculture, a number of farm training centers and a number of farm institutes. The remaining one state is planning to establish its own school of agriculture in addition to its farm training centers and institutes already in operation. (See Tables 1 and 2, Pages 44 and 45)

By contrast, the first agricultural school has existed for almost fifty years (unlike any of the general schools) without any provision to establish even a single agricultural teacher training college for its development and expansion.

The investigator feels time is over due for establishing agricultural teachers' colleges to train not only teachers to teach in the regular agricultural institutions but also teachers who are so much needed in both the primary and secondary schools for agricultural instruction.

A number of Nigerians seem to recognize the necessity for establishing agricultural teacher training schools. These people seem to have a very high hope that the recently established single agricultural education university faculty in Nigeria and possibly one or two more that are planned will train enough graduates to solve the problem of lack of agricultural teachers. However,

it is the opinion of the researcher that one university will not be able to provide a sufficient number of needed teachers. Before putting our hope on the university agricultural graduate teachers to fill all the positions where they are needed, we must ask: a) How many graduate agricultural teachers can a faculty of agricultural education admit within an academic year? b) How many of those admitted go to graduation? c) How many graduate agricultural teachers can Nigeria afford to teach in primary and secondary schools considering our present level and rate of development? d) How many Nigerian graduates are morally, socially and psychologically prepared to 'step down' to teach agriculture in primary and even secondary schools, many of which are located in rural areas?

Unless we can satisfactorily answer these four basic questions, the investigator feels that a more realistic, practicable and economical approach to solving agricultural teacher shortage in Nigeria, particularly the Northern States, is by establishing post secondary agricultural teacher training colleges to train intermediate level agricultural teachers who are very much needed in the primary, secondary schools and agricultural institutions throughout the Northern States.

If this is done, it will promote agricultural education in at least two directions: the trained agricultural teachers from the proposed ATTC, especially the smartest ones (usually the top ten percent), could be selected to continue advanced professional training courses up to and even beyond the B.S. degree level to really prepare them professionally. These teachers carry upward with them some fairly well developed professional spirit which would be further developed as they interact with other trainees, instructors, et cetera,

and/or as they pass through appropriate learning/teaching experiences at the advanced professional level studies.

Those posted to teach in primary schools, secondary schools, farm training centers, farm institutes and even the regular schools of agriculture after graduating from ATTC, also have a wonderful opportunity downwards to acquire useful and necessary professional teaching experience. They too should have the opportunity to further their education as professional agricultural teachers.

Training intermediate level agricultural teachers as proposed in this report has definite advantages:

1. It suitably prepares many young people over a comparatively short period of time, reasonably equipped to teach agriculture at lower levels.
2. It provides requisite qualifications for advanced professional teacher training in agriculture.
3. ATTC graduates are likely to be able to adjust to working in rural schools considering their type of training which does not only provide them with the knowledge, skills, standards and experiences but also the understanding, appreciation, perception, the right attitudes and love for the people and teaching agriculture.
4. The provision for advanced level training will induce the right caliber of many young men and attract them into teaching agriculture as a profession (other factors remaining equal).

Using intermediate level agriculturalists with the background described above to teach as proposed, will definitely help to diffuse agricultural information at these important stages of education; the youth so taught, would appreciate more of the country's natural life and wealth. This is particularly

important because desirable attitudes, knowledge, abilities and appreciation of agricultural facets are best taught usually during the receptive early school years.

The elementary school therefore, in my opinion, is the appropriate level to introduce agriculture, especially since about 80 percent of the rural children do not attend school beyond this level.

In my opinion too, agriculture should be taught at both primary and secondary levels as "terminal" courses for those who cannot go further, to fit into the world of work for their livelihood; and as "transitional" for those who have opportunity for further studies to do so.

The primary school graduates could elect to take further courses in agriculture in the farm institutes and farm training centers with their minds suitably prepared to respect and love agriculture; the secondary school graduates could proceed with further studies in agriculture at the colleges of agriculture and/or ATTCs to qualify as intermediate level agricultural teachers, and workers in the other agricultural occupations.

The ATTC graduates who go on to universities may spend one to two years with transfer credits to obtain B.S. agricultural education carrying with them professionalism acquired through the relevant teaching-learning processes.

Proposing "specialization" as a necessary way education in Nigeria should be organized, Okeke¹⁴ said:

The truth of the matter is that school subjects shape the future choice of careers and professions of those who pass through the portals of learning. Let this fact guide educators in the structuring of school curriculum directed towards the critical areas of problems.

¹⁴A. N. Okeke, Op Cit., p. 148.

...over 90 percent of those studied indicated in a clear and unequivocal manner that what they learned at school conditioned their choice of areas of specialization later in life in pursuing higher education and in their choice of work, occupation and profession.

In view of possible physical and other unforeseen limitations to teaching agriculture in primary schools, teaching emphasis should be laid on philosophies which would provide the pupils of primary school age with some understanding of the agricultural industry and to develop their attitudes, abilities and appreciation of the role and contributions of the agricultural sector to the total economy of their own area and the nation. They should be developed and made to acquire an elementary knowledge of how plants and animals grow and reproduce.

In places where, due to physical limitations, farms and other agricultural projects cannot be handled effectively within the school facilities, agriculture should still be taught, but as a co-curriculum activity. In this case, pupils' interests should be generated and pupils encouraged to start small scale farming or other agricultural projects in their homes and/or on their father's farms with a close follow up from agricultural extension staff in the area. Teaching agriculture this way will definitely prepare individuals to appreciate agriculture as a means of livelihood and provide valuable leadership in the farming families and the country at large. For its success however, there must be close cooperation between the ministries of education and agriculture.

If we are to teach agriculture to dispel the wrong impressions pupils now have about farming, and to develop faith in the modern scientific farming methods as well as making young people like the different agricultural occupations, schools must be provided with trained and keen agricultural teachers trained for this purpose.

The content of instruction in general agriculture in primary schools should include:

1. The future farmers of Nigeria/young farmers club.
2. Agricultural occupations.
3. Country living.
4. Nature study.
5. Climate and its relation to farming.
6. Qualities and characteristics necessary for being a successful farmer.
7. Sanitation and nutrition.
8. Simple farm tools.
9. School gardening and farm crop production where practicable.
10. Conservation of natural resources.
11. Control of water and soil erosions where applicable.
12. Common types and breeds of domestic animals and poultry.
13. Marketing of farm produce.

In the secondary schools, agricultural teaching should emphasize the development and understanding of concepts which have applications in the broad field of agriculture. Students should have ample opportunities to demonstrate basic agricultural skills well enough to make agricultural experience at secondary school "terminal" and "transitional"-- terminal for those who cannot go beyond to be able to find what to do to make a living, and transitional so that those who have opportunity to study further could do so.

In the university, students of agriculture should be given a sound grasp of the physical, biological and social sciences which relate to agriculture. Students should be taught to develop a feeling for the rural people, an

appreciation of their problems and the desire to work with rural problems in a variety of ways with the ultimate goal of making intimate contact with the farmers.

Where feasible, agricultural faculties should design courses for students who intend to specialize in teaching agriculture. The simplest thing to do is to group agricultural education and agricultural extension into two departments within the faculty of agriculture.

All categories of agricultural students should be oriented so that in the course of time some of them can be selfemployed scientific farmers.

Agriculture should be made attractive, meaningful and remunerative. If this is done, it will be surprising to find that a good percentage of our population growing at about 2.7 percent annually will turn to the land as a means of livelihood, producing, among other things, enough food crops for many years to come from our vast arable land which is still largely untapped. In addition, the government will, hopefully, remove the desire to escape from agriculture which, up to now, is the main motive of our youth entering schools.

To the best of the investigator's knowledge, no research has been done on the problem of how to teach agriculture and to make it interesting and convincing to Nigerians. The need for such research is a matter of urgency and cannot be too strongly emphasized.

Every effort should be made to establish agricultural education departments as described above to stand as a profession in its own right offering career prospects to attract students, the desired caliber of researchers, and agricultural teacher educators at university level.

To attract the best men technically and temperamentally to agricultural teaching, and to be able to keep them, however, measures should be taken to improve the position, the prospects and the efficiency of staff assigned to the teaching posts.

There is special and urgent need too for interdepartmental cooperation between agriculture and education. If the two ministries in particular work in close cooperation more than ever before, they have a real chance of evolving a scheme of education which will be able to retain the interests of primary pupils and secondary school students in agriculture.

More and more attention should be paid to teacher in-service training courses for all categories of teachers to up-date trained teachers and equip subject matter teachers with means and teaching methods.

Those to teach in agricultural schools should ideally be professional teachers such as graduates of ATTC and/or other higher professional institutions. They should have some farming background or should have limitless interest in learning to be agricultural teachers through pre- and/or in-service teacher training programs. The teachers should feel duty committed to do nothing short of inspiring their students and others around them through their actions and practical demonstrations of the love and interests they have in agriculture. Their ultimate goal should be to help to mold the minds of their students through a thorough orientation so that those who want to may stick to the land later in life as self employed farmers while the rest who love to live and work with farmers as local authority or government extension agents or teach could do so.

The last 50 years has seen agricultural revolution in the United States. During this period, agricultural research and teaching have helped American

farmers to be self sufficient in food production. Today an American farmer is capable of producing food enough to feed himself and 55 others. According to Roberts¹⁵,

Success in farming presently requires knowledge and skill far beyond the requirements of the first two decades of the present century.

He also added that:

The science of agriculture includes not only the on-farm production of crops..... Other non-farm occupations requiring knowledge and skill in agricultural subjects are those concerned with agricultural research and teaching. Many facets of this expanding area of non farm agricultural occupations require persons with background of training and experience.

One important lesson to learn from Roberts is that teaching of agriculture is both an art and science and like all forms of arts and sciences the skill to perform satisfactorily, the right attitude needed, and the professional ethics must be learned if a person hopes to become a good agricultural teacher.

Making a special case for the need to train agricultural teachers, Roberts said:

The continuous changes in agriculture makes it necessary for all agriculturalists to engage in a constant study of agricultural problems and processes. Schools and classes in vocational agriculture have been established throughout the nation to provide teachers and facilities for this study.

If a teacher is to succeed in his responsibility, something must be done to train him. According to Roberts,

The success of a local program of vocational agriculture is in a large measure dependent upon the technical, professional and general education of the teacher. The many technological changes that are constantly occurring in agriculture require that a teacher of vocational agriculture possesses a high degree of technical knowledge and skill required both in school and through experience.

¹⁵Roy W. Roberts, Vocational and Practical Arts Education, 3rd Ed. 1971.

Not only is it desirable that agricultural teachers must be given sound and relevant professional training, they need to have some reasonable amount of farm experience. For example Roberts emphasized this point by saying:

Preferably, the teacher (of agriculture) should be farm reared and should have participated in the activities of the farm throughout his elementary and high school courses.

Describing what agricultural education in terms of professional teacher development is all about Roberts said:

Teachers of vocational agriculture need knowledge, skills and attitudes in methods and techniques of teaching. These courses in professional education are given concurrently with the technical courses. Professional education courses are concerned with teaching techniques, materials and methods of instruction, supervised agricultural experience programs and other duties and responsibilities of teachers.

In the United States vocational agricultural education came into being following the passage of the Smith-Hughes Act in 1917.

This Act was designed to stimulate the development of schools and classes in vocational agriculture in the public secondary schools and area schools and in communities served by these schools.

The point here is that Nigeria stands a good chance to benefit from the United States experience in the development of agricultural education through primary and high school levels. What is required is to enact appropriate legislation for teaching agriculture throughout primary and secondary schools using experts in the ministries of agriculture and education to do the detail planning of the program.

The need to use experts to plan programs of agricultural education mentioned above cannot be too strongly emphasized; that would help to remove the sort of problem Mayer and Onazi envisaged when they said:

The one most crucial problem in the future development of vocational technical agriculture in Nigeria is the need to overcome the strong tendency to use an academically oriented approach to curriculum development and teaching in institutions offering occupational education in agriculture.

According to O. N. Agusiobo:

Teachers in vocational education need to have an educational background which will enable them to understand human behavior and especially how the individual learns and also to be competent in the subject matter taught through occupational experience. To meet the needs of primary and secondary education, Nigerian universities should provide through their course offerings graduate teachers in agriculture.

There are thirteen universities in Nigeria. One of the universities, Nsuka University, (See Table 3, Page 46) offers an agricultural education degree. This university is located in one of the eastern states of Nigeria; even if this university had an open admission policy whereby qualified candidates could apply for admission and would be admitted on first-come-first-served basis, it is quite inconceivable that it will be able to meet the training needs for agricultural teachers in Nigeria. In research recently conducted the investigator was shocked to discover that since the inception of agricultural education within the department of agriculture in this university in 1960, no one from the Northern States has been admitted into the department even for B.S. agricultural education. During the same research the investigator discovered that the first person to graduate in a field relevant to agricultural education from the Northern States obtained an M.S. in 1971 from the department of agricultural education, Kansas State University. As can be seen from Table 4, Page 47, the Northern States governments are awake to the problem of shortage of agricultural teachers in the area. The governments have been able to train twenty-two graduates in different areas of agricultural

education attempting to improve the qualities of teachers of agriculture. Out of these trained teachers, one has been retired and one died, leaving a total of twenty in the whole of the Northern States today. (Refer to Table 4, Page 47), to see the number of agricultural education graduates in the Northern States 1970-1980; Table 5, Page 48 for Northern States distribution of agricultural education graduates per state 1970-1980; Table 6, Page 49, for the register of agricultural education or agricultural education related graduates in the Northern States 1970-1980.

Interestingly enough, nineteen out of the twenty-two agricultural education graduates, or 86 percent of the graduates, trained at Kansas State University's agricultural education department. This might be due to the long contact some of the faculty had with the Northern States for various projects, particularly the Kansas State faculty teaching assignments with the Ahmadu Bello University in Zaria. Another important factor was the influence of some former students from Kansas State University now holding important positions in the Northern States. Because of their own experience they might have influenced the governments of their states to send prospective teachers to Kansas State University for good quality teacher education programs.

The review of literature has presented diversified views of Nigerians concerning agricultural education programs in Nigeria and helped to expose the imbalance between agricultural teacher preparations compared to those of the general education teachers.

None of the studies and/or publications reviewed, however, reported any survey directly related to the problem areas of this study. None of them even mentioned "intermediate level post secondary agricultural teacher training college" on which this study focused attention.

The study specifically made provision for a healthy relationship between the proposed ATTC and the university agricultural teacher preparation programs; not only the intermediate level pre-service agricultural teacher preparations, but also of in-service teacher education for all categories of teachers including the trained and the nontrained professionally qualified primary, secondary, and agricultural school teachers usually posted from other units of the ministry of agriculture.

The literature review cited in this chapter, relevant readings and the investigator's eleven years teaching experience in the Northern States of Nigeria, firmly established the need for a program of agricultural education for the successful operation of the development of professional agricultural teachers in the Northern States.

This study was therefore designed to monitor factors that a jury of experts consider important for establishing a really viable low cost and feasible type mechanism for providing intermediate level teacher training programs to produce the needed teachers of agriculture in primary schools, secondary schools and nondegree agricultural institutions throughout the Northern States of Nigeria.

Table 1
Number of Farm Training Centers in the Northern States

States	Farm Training Centers	Date Established
Bauchi	1	Before 1970
Benue	1	Before 1970
Bornu	1	Before 1970
Gongola	1	Before 1970
Kaduna	1	Before 1970
Kano	2	Before 1970
Kwara	2	Before 1970
Niger	1	Before 1970
Plateau	1	Before 1970
Sokoto	1	Before 1970

Table 2

Number of Schools of Agriculture in the Northern States

States	Schools of Agriculture	Date Established
Bauchi	1	1972
Benue	1	1973
Bornu	1	1977
Gongola	1	1979
Kaduna	3*	1931, 1968, 1974
Kano	1	1977
Kwara	1*	1964
Niger	1	1979
Plateau	1	1976
Sokoto	2*	1974, 1977

3* two are university owned and operated

1* university owned and operated

2* one is university owned and operated

Table 3

List of Nigerian Universities and When Established

Universities	Year Established	Remarks
University of Nigeria, Nsuka	1960	Offers Agricultural Ed. Degree
Ahmadu Bello University, Zaria	1962	Offers General Agricultural Degree
University of Ife, Ile-Ife	1962	Offers General Agricultural Degree
University of Lagos, Lagos	1962	
University of Ibadan, Ibadan	1962	Offers General Agricultural Degree Changed status from University College established in 1948 to University of Ibadan in 1962.
University of Benin, Benin	1972	
Bayero University, Kano		
University of Maiduguri, Maiduguri	1976	Offers General Agricultural Degree
University of Calabar, Calabar		
University of Port Hourcourt, Port Hourcourt		
University of Ilorin, Ilorin		
University of Sokoto, Sokoto		
University of Jos, Jos		A College of the University of Ibadan

Table 4
 Number of Agricultural Education Graduates in the Northern States
 of Nigeria 1970 - 1980

Degrees	Number of Graduates										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
B.S.	-	-	-	-	-	-	-	7	8	12	12
M.S.	-	1	1	3	4	4	*3	4	9	*10	12
Ph.D.	-	-	-	1	1	1	1	1	1	2	2
Total	-	1	1	4	5	5	4	12	18	24	26

*3 one graduate retired

*10 one graduate died

Table 5
Northern States Distribution of Agricultural Education
Graduates per State, 1970 - 1980

States	Number of Graduates										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Bauchi	-	-	-	-	-	-	-	2	2	2	1
Benue	-	-	-	2	2	2	2	2	3	*6	6
Bornu	-	-	-	-	-	-	-	-	-	-	-
Gongola	-	-	-	-	-	-	-	2	2	2	2
Kaduna	-	-	-	-	-	-	-	-	-	-	-
Kano	-	-	-	-	-	-	-	1	1	1	1
Kwara	-	1	1	2	3	3	*2	2	3	3	3
Niger	-	-	-	-	-	-	-	1	1	1	1
Plateau	-	-	-	-	-	-	-	-	-	1	2
Sokoto	-	-	-	-	-	-	-	1	2	3	3
Total	-	1	1	4	5	5	4	11	14	19	20

*4 one graduate died

*2 one graduate retired

Table 6

Register of Agricultural Education or Agricultural Education
Related Graduates in the Northern States of Nigeria

Name	Degree	Year Obtained	University	General Remarks
D. A. Petu	M.S.	1971	K.S.U.	Retired
O. C. Onazi	Ph.D.	1973	K.S.U.	Director DAC*1
B. O. Ogbole	M.S.	1973	K.S.U.	Deceased CAO*2
J. O. Olawoye	M.S.	1973	K.S.U.	Left teaching
D. O. Oni	M.S.	1974	K.S.U.	Teaching
Haruna Baraya Datti	B.S., M.S.	1977	K.S.U.	
Alhaji Moh Hassan	B.S.	1977	K.S.U.	
Abdu A. Deba	B.S.	1977	K.S.U.	
Adamu A. Warra	B.S.	1977	K.S.U.	
Ahmed Abubakar Song	B.S., M.S.	1977, 1978	K.S.U.	
A. D. Tofa	B.S., M.S.	1977, 1978	K.S.U.	Commissioner for Agriculture
Y. L. Hinjari	B.S., M.S.	1977, 1978	K.S.U.	
Oloche O. Edache	M.S.	1978	K.S.U.	Job not connected with teaching
Moh Bawa	B.S.	1978	K.S.U.	Left teaching
E. B. Ogungbemi	M.S.	1978	K.S.U.	Principal FTC *3
D. Washima	Ph.D.	1979	Wisconsin	Principal School of Agriculture
M. Biam	B.S.	1979	Wisconsin	
Joe Igbeh	M.S.	1979	Wisconsin	
Joseph Bene	B.S., M.S.	1979	K.S.U.	

Table 6 (Continued)

Name	Degree	Year Obtained	University	General Remarks
A. A. Aliero	B.S.	1979	K.S.U.	
Silas M. Anibe	B.S., M.S.	1979, 1980	K.S.U.	
Moh Arikya	M.S.	1980	K.S.U.	

DAC^{*1}-Division of Agricultural Colleges

CAO^{*2}-Chief Agricultural Officer

FTC^{*3}-Farm Training Center

Information in Table 6 was obtained through consultations, and from the following official records:

a) International Agricultural Programs' Record, Waters Hall, Kansas State University, Manhattan, Kansas.

b) Nigerian Contract Terminal Reporters, Kansas State University.

c) Graduation Lists, Kansas State University, 1970-1980.

Break down of the degrees:

B.S.	Agricultural education or related field	6
M.S.	Agricultural education or related field	8
B.S. + M.S.	Agricultural education	6
Ph.D.	Agricultural education or related field	<u>2</u>
	Total	22
	One graduate was retired and one died, leaving	20

CHAPTER III

METHODS OF RESEARCH

After the review of literature, the need for agricultural teacher training colleges in the Northern States of Nigeria became obvious.

This study is designed to identify and prioritize factors necessary for the development and establishment of viable and effective programs of agricultural education in the ten Northern States of Nigeria. The purpose of the study could be fulfilled by providing answers to the following questions:

1. What factors are necessary for establishing effective agricultural teacher education programs in the Northern States of Nigeria?
2. Which of these factors are: "essential", "very important", "important"?

Development of Instrument

Based on a review of relevant literature and the investigator's eleven years teaching experience in two of the Northern States' agricultural schools, (a) Forty factors were identified by modifying and refining the items included in the 1978 Kansas Program Assistance Review and Research Project (KPARRP) in order to be more applicable to conditions in the Northern States of Nigeria. Some factors which were not on the original questionnaires but considered relevant to the study were also added (refer appendix).

The draft questionnaire was pretested by six subjects - two from each of the three groups of the intended population, excluding those earmarked as the actual subjects for the study. That is, two other former Northern States' agricultural teachers, two other agricultural teacher educators from the

College of Education, and two persons representing faculty/administrators from the College of Agriculture, Kansas State University.

As a result of the pretesting, some of the questions were reworded and modified to ensure clarity, before they were sent to the participating subjects.

A Likert scale of five points with "1" as the least important and "5" as the most important was used. By this method, it was possible to measure the intensity of the respondents' opinions which were rank-ordered according to their relative importance in developing and establishing guidelines for effective agricultural education programs for the preparation of professional agricultural teachers in the Northern States of Nigeria.

(b) A cover letter to all the respondents indicating the purpose of the study, its importance and the reason for respondents to complete the questionnaires was prepared. The cover letter also indicated provisions for the subjects' rights by assuring that their responses would be treated in complete confidence.

(c) Written instructions were prepared on how to complete the questions.

Population

The investigator made use of an eighteen member jury of experts as target population for the study. These experts were subdivided into three groups:

1. Six former agricultural school teachers from the Northern States of Nigeria.
2. Six agricultural teacher educators from the College of Education,

Kansas State University who have long been involved and are actively involved in preparing Nigerian agricultural educators, and

3. Six faculty/administrators, from the College of Agriculture, who had served as agricultural educators in the Northern States of Nigeria.

The investigator identified the former agricultural teachers from the Northern States of Nigeria who were currently taking degree courses at Kansas State University. The following respondents were chosen through consultations with faculty members in Agricultural Education. a) Agricultural teacher educators, College of Education, Kansas State University, b) faculty/administrators in the College of Agriculture, Kansas State University.

For the purposes of this study, each group was made up of six persons and all the subjects had at least two years teaching experience as agricultural teachers.

The choice of the Nigerian subjects was based on their experiences as agricultural teachers in the Northern States of Nigeria. They were chosen so each of the ten Northern States could be represented in the study but since the research was planned to involve only six persons in each group, one person was chosen from each state, making a total of six states physically represented. Fortunately however, the respondents had lived and served in various capacities in the other states as agriculturalists before coming to Kansas State, and their knowledge about agricultural education in the ten Northern States was most valuable to the research.

The agricultural teacher educators were selected on the basis of their long involvement in the training of prospective agricultural teachers.

The faculty and/or administrators in the College of Agriculture were selected because of their wealth of experience about problems of agricultural

education in the Northern States of Nigeria where they had served as agricultural educators. Apart from their relevant experience as former agricultural educators their administrative experiences helped generate inputs from an administrative point of view.

The necessity for a selected sample as described above is justified by Selltitz et al., who said:

.... it is a waste of time and effort to interview people who have little competence or little relevant experience or who lack ability to communicate their experience.¹⁶

Data Collection Methods

Questionnaires, cover letter and instructions on how to complete the questionnaires (refer appendix) were sent to each of the respondents, requesting all of them to complete and mail the questionnaires to the investigator within ten days. The investigator also made use of personal interviews, records, and literature review.

Data Analysis

All the eighteen questionnaires sent to the jury of experts, were duly completed and returned within the ten days!

The scores on the Likert scale measured the intensity of the respondents' opinions and were assumed to be the true reflections of the weight given to each of the forty factors in the questionnaires.

Based on the scores of the jury members for each of the factors, the investigator tabulated the results per each group of the experts, and finally

¹⁶Claire Selltitz et al., Research Methods in Social Relations, (New York: Holt, Rinehart and Winston, Inc., 1959), pp. 55-56.

made a single listing of all the factors by combining the experts' responses and presenting the mean scores which were used to rank order the forty factors.

CHAPTER IV

REPORT OF FINDINGS

To the best of the investigator's knowledge, no study of this type had yet been reported or carried out in or for the Northern States of Nigeria. The main purpose of the study was to provide an instrument for developing and establishing effective programs of agricultural education for preparing primary, secondary, and intermediate level agricultural school teachers in the Northern States of Nigeria. The specific purpose was to identify and prioritize the necessary factors for effective programs of agricultural education.

In order to provide data to achieve the specific objectives, questionnaires were used. In addition, personal interviews by the researcher was conducted, appropriate records were examined, and a literature review was conducted.

The questionnaires used in the study included the forty factors specifically identified. The questionnaires were designed to obtain opinions of the jury of experts as to the relative importance of the factors in establishing viable and efficient programs for training the needed agricultural teachers in the educationally developing Northern States of Nigeria. There were eighteen questionnaires sent out, Table 7, and all the eighteen were received for a 100 percent return.

Table 7

Number and Percentage of Questionnaires

	Number	Percentage
Questionnaires sent out	18	100
Questionnaires returned	18	100

Information in Tables 8, 9, 10 and 11 summarized the responses of the sub-juries. Table 8 listed the responses of the agricultural school teachers from Nigeria; Table 9 included the responses for the teacher educators from Kansas State University; Table 10 gave the responses for the faculty/administrators from the College of Agriculture, Kansas State University. The information in Table 11 gave the mean scores for each of the three groups: Nigerian agricultural teachers, agricultural teacher educators, agricultural faculty/administrators. The composite mean scores for the three groups which were obtained by adding the mean scores for each of the three groups and dividing by three, were used to rank order the forty factors.

It was found that the Nigerian agricultural teachers rated 20 of the 40 factors more important than the two other sub-juries; the teacher educators rated 8 of the 40 factors more important than the other two sub-juries; and agricultural faculty/administrators rated 3 of the 40 factors more important than the other two sub-juries.

The three most important factors for efficient agricultural teacher preparation programs according to this study included the following: qualified teacher educators; instruction in teaching methods; and instruction in agricultural skill development. The three least important factors included: recreation programs; professional teacher organizations; and student government.

In determining the mean scores for each of the sub-juries each response was given a value as follows: "essential", five points; "very important", four points; "important", three points, "little importance", two points, and "no importance", one point.

Each of the factors were given an "importance" rating according to composite mean scores as follows: "essential, 4.5 - 5.0; "very important", 3.5 - 4.49; "important", 2.5 - 3.49; "little importance", 1.5 - 2.49, and "no importance", .5 - 1.49.

Ten factors or 25 percent were considered "essential", 27 or 67.5 percent were considered "very important", and three of the factors or 7.5 percent were considered "important". None of the factors were considered of "little importance" or of "no importance".

Table 8

The Forty Factors Identified In The Teacher Education Program,
 Showing The Analysis of The Responses of Group A, Made Up
 of Six Selected Former Agricultural School Teachers
 From The Northern States of Nigeria, Currently
 Studying at Kansas State University

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
1. Philosophy and objectives of teached education	-	-	-	2	4
2. Program advisory committee	-	-	3	2	1
3. Qualified teacher educators	-	-	-	1	5
4. Teacher education curriculum	-	-	1	1	4
5. Plan for matching student and program objectives	-	-	-	4	2
6. Plan for matching community and/or state objectives	-	-	1	2	3
7. Financial resources for the program	-	-	1	-	5
8. School transportation	-	-	1	2	3
9. Instructional space and facilities	-	-	-	1	5
10. Local, state and national surveys of agricultural resources	-	-	1	2	3
11. Recruitment and admission policies for students and/or teachers	-	-	2	2	2
12. Career counseling and guidance service	-	-	3	2	1

Table 8 (Continued)

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
13. Staff housing, offices and management plans	-	-	-	1	5
14. Administration of the program	-	-	1	1	4
15. Student personnel service and academic advisement	-	-	-	4	2
16. Teacher - student working relationship	-	-	-	2	4
17. Finance and business management system	-	-	1	-	5
18. Student records	-	-	1	1	4
19. Instructional materials, equipment, and consumable supplies	-	-	-	2	4
20. Instructional resource center	-	-	-	3	3
21. School supporting personnel	-	-	2	2	2
22. Student housing and food arrangements	-	-	-	1	5
23. Tuition and student allowance accounting	-	-	-	2	4
24. Community resources for school use	-	1	1	2	2
25. School handbook of policies and regulations	-	-	2	-	4
26. Instruction in agricultural skill development	-	-	-	3	3
27. Instruction in teaching methods	-	-	-	4	2
28. Student health services	-	-	-	1	5
29. Student government	-	-	2	2	2
30. Recreation programs	-	-	2	1	3
31. Professional teacher organizations	-	-	4	2	-

Table 8 (Continued)

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
32. Professional library materials for teacher and student use	-	-	-	1	5
33. Placement services for graduates	-	-	1	3	2
34. Follow up on employer satisfaction	-	-	1	3	2
35. Follow up on student satisfaction	-	-	1	3	2
36. Teacher in-service workshops	-	-	1	2	3
37. Professional recognition of deserving teachers					
38. Projecting future needs of the states	-	-	1	-	5
39. Provision for advanced professional training	-	-	-	2	4
40. Program research and planning	-	-	1	2	3

Table 9

The Forty Factors Identified For The Teacher Education Program
 Showing The Analysis Of The Responses Of Group B, Made Up
 Of Six Selected Agricultural Teacher Educators From The
 College Of Education, Kansas State University

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
1. Philosophy and objectives of teacher education	-	-	-	3	3
2. Program advisory committee	-	-	1	3	2
3. Qualified teacher educators	-	-	-	-	6
4. Teacher education curriculum	-	-	-	2	4
5. Plan for matching student and program objectives	-	-	-	6	-
6. Plan for matching community and/or state objectives	-	-	2	4	-
7. Financial resources for the program	-	-	-	3	3
8. School transportation	-	1	2	3	-
9. Instructional space and facilities	-	-	1	3	2
10. Local, state and national surveys of agricultural resources	-	-	3	3	-
11. Recruitment and admission policies for students and/or teachers	-	-	-	4	2
12. Career counseling and guidance service	-	-	2	4	-

Table 9 (Continued)

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
13. Staff housing, offices and management plans	-	-	2	1	3
14. Administration of the program	-	-	-	3	3
15. Student personnel service and academic advisement	-	-	-	4	2
16. Teacher - student working relationship	-	-	-	3	3
17. Finance and business management system	-	-	-	6	-
18. Student records	-	-	-	4	2
19. Instructional materials, equipment, and consumable supplies	-	-	1	1	4
20. Instructional resource center	-	-	1	3	2
21. School supporting personnel	-	-	1	3	2
22. Student housing and food arrangements	-	1	1	2	2
23. Tuition and student allowance accounting	-	1	3	-	2
24. Community resources for school use	-	-	2	4	-
25. School handbook of policies and regulations	-	-	1	3	2
26. Instruction in agricultural skill development	-	-	-	1	5
27. Instruction in teaching methods	-	-	-	1	5
28. Student health service	-	1	3	-	2
29. Student government	-	3	1	2	-
30. Recreation programs	-	1	3	2	-
31. Professional teacher organizations	-	-	2	3	1

Table 9 (Continued)

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
32. Professional library materials for teacher and student use	-	-	-	3	3
33. Placement services for graduates	-	-	-	3	3
34. Follow up on employer satisfaction	-	-	1	4	1
35. Follow up on student satisfaction	-	-	-	3	3
36. Teacher in-service workshops	-	-	-	4	2
37. Professional recognition of deserving teachers	-	-	2	4	-
38. Projecting future needs of the states	-	-	1	3	2
39. Provision for advanced professional training	-	-	-	4	2
40. Program research and planning	-	-	-	5	1

Table 10

The Forty Factors Identified For The Teacher Education Program,
 Showing The Analysis Of The Responses of Group C, Made Up
 Of Six Selected Faculty/Administrators From The College
 Of Agriculture, Kansas State University

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
1. Philosophy and objectives of teacher education	-	-	-	3	3
2. Program advisory committee	-	-	4	1	1
3. Qualified teacher educators	-	-	-	2	4
4. Teacher education curriculum	-	-	-	3	3
5. Plan for matching student and program objectives	-	-	2	3	1
6. Plan for matching community and/or state objectives	-	1	2	2	1
7. Financial resources for the program	-	-	1	1	4
8. School transportation	-	1	3	2	-
9. Instructional space and facilities	-	-	1	4	1
10. Local, state and national surveys of agricultural resources	-	1	4	-	1
11. Recruitment and admission policies for students and/or teachers	-	-	1	5	-
12. Career counseling and guidance service	-	-	3	2	1

Table 10 (Continued)

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
13. Staff housing, offices and management plans	-	1	3	1	1
14. Administration of the program	-	-	-	3	3
15. Student personnel service and academic advisement	-	-	1	3	2
16. Teacher - student working relationship	-	-	-	1	5
17. Finance and business management system	-	-	3	3	-
18. Student records	-	-	2	3	1
19. Instructional materials, equipment, and consumable supplies	-	-	1	3	2
20. Instructional resource center	-	1	1	3	1
21. School supporting personnel	-	1	-	5	-
22. Student housing and food arrangements	-	1	2	3	-
23. Tuition and student allowance accounting	-	-	3	2	1
24. Community resources for school use	-	-	-	4	2
25. School handbook of policies and regulations	-	-	3	2	1
26. Instruction in agricultural skill development	-	-	-	1	5
27. Instruction in teaching methods	-	-	-	-	6
28. Student health services	-	1	2	2	1
29. Student government	-	3	1	2	-
30. Recreation programs	-	3	1	2	-
31. Professional teacher organizations	-	2	1	3	-

Table 10 (Continued)

Factor	Degree of Importance				
	No Importance	Little Importance	Important	Very Important	Essential
32. Professional library materials for teacher and student use	-	-	1	1	4
33. Placement services for graduates	-	-	2	2	2
34. Follow up on employer satisfaction	-	1	1	3	1
35. Follow up on student satisfaction	-	-	-	5	1
36. Teacher in-service workshops	-	-	-	1	5
37. Professional recognition of deserving teachers	-	-	4	2	-
38. Projecting future needs of the states	-	1	-	3	2
39. Provision for advanced professional training	-	-	1	2	3
40. Program research and planning	-	-	2	1	3

Table 11

The Mean Scores For The Nigerian Agricultural Teachers, Agricultural Teacher Educators, and Faculty/
Administrators For Each Of The Forty Factors, Rank Ordered By Means

Factors	Of The Composite Mean Scores			
	Nigerian Ag. Teachers Mean	Ag. Teacher Educators Mean	Ag. Faculty/ Admin. Mean	Composite Mean
<u>"Essential" *</u>				
1. Qualified teacher educators	4.83* ‡	5.00	4.67	4.83
2. Instruction in teaching methods	4.33	4.83	5.00	4.72
3. Instruction in agricultural skill development	4.50	4.83	4.83	4.72
4. Professional library materials for teacher and student use	4.83	4.50	4.50	4.61
5. Philosophy and objectives of teacher education	4.67	4.50	4.50	4.56
6. Teacher education curriculum	4.50	4.67	4.50	4.56
7. Financial resources for the program	4.67	4.50	4.50	4.56
8. Administration of the program	4.50	4.50	4.50	4.50
9. Teacher in-service workshops	4.33	4.33	4.83	4.50
10. Teacher-student working relationship	4.67	4.50	4.33	4.50

Table 11 (Continued)

Factors	Nigerian Ag. Teachers Mean	Ag. Teacher Educators Mean	Ag. Faculty/ Admin. Mean	Composite Mean
<u>"Very Important"</u>				
1. Projecting future needs of the states	4.17	4.17	4.00	4.45
2. Provision for advanced professional training	4.67	4.33	4.33	4.44
3. Instructional materials, equipment and consumable supplies	4.67	4.50	4.17	4.41
4. Instructional space and facilities	4.83	4.17	4.00	4.33
5. Follow up on student satisfaction	4.17	4.50	4.17	4.28
6. Student personnel service and academic advisement	4.33	4.33	4.17	4.28
7. Program research and planning	4.33	4.17	4.17	4.22
8. Placement services for graduates	4.17	4.50	4.00	4.22
9. Student records	4.50	4.33	3.83	4.22
10. Staff housing, offices and management	4.83	4.33	3.33	4.16
11. Instructional resource center	4.50	4.17	3.67	4.11

Table 11 (Continued)

Factors	Nigerian Ag. Teachers Mean	Ag. Teacher Educators Mean	Ag. Faculty/ Admin. Mean	Composite mean
12. School handbook of policies and regulations	4.50	4.17	3.67	4.06
13. Finance and business management system	4.67	4.00	3.50	4.06
14. Follow up on employer satisfaction	4.17	4.00	4.00	4.06
15. Recruitment and admission policies for students and/or teachers	4.00	4.33	3.83	4.05
16. Student housing and food arrangements	4.83	3.83	3.33	4.00
17. School supporting personnel	4.00	4.17	3.67	3.95
18. Tuition and student allowance accounting	4.67	3.50	3.67	3.95
19. Student health services	4.83	3.50	3.50	3.94
20. Community resources for school use	3.83	3.67	4.33	3.94
21. Professional recognition of deserving teachers	4.67	3.67	3.33	3.89
22. Plan for matching student and program objectives	4.33	4.00	3.33	3.89

Table 11 (Continued)

Factors	Nigerian Ag. Teachers Mean	Ag. Teacher Educators Mean	Ag. Faculty/ Admin. Mean	Composite Mean
23. Plan for matching community and/or state objectives	4.33	3.67	3.50	3.83
24. Program advisory committee	3.67	4.17	3.50	3.78
25. Career Counseling and guidance service	3.67	3.67	3.67	3.67
26. Local, state and national surveys of agricultural resources	4.33	3.50	3.17	3.67
27. School transportation	4.33	3.33	3.17	3.61
"Important"				
1. Recreation programs	4.33	3.17	2.83	3.44
2. Professional teacher organizations	3.33	3.83	3.17	3.44
3. Student government	4.00	2.83	2.83	3.22

*Rating Scale:	Description	* Individual Responses	**Categories
	"Essential"	5 points	4.50-5.00
	"Very Important"	4 points	3.50-4.49
	"Important"	3 points	2.50-3.49
	"Little Importance"	2 points	1.50-2.49
	"No Importance"	1 point	0.50-1.49

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The Northern States of Nigeria have arable lands and agricultural potential which can be developed to increase the output of agricultural production. Increased production could raise the per capita income and the general living standard of the people.

In general the people in the Southern States are more educated than those in the Northern States. Happily, however, the Northern States of Nigeria are making efforts to narrow the educational gap by encouraging more education at all levels for their people.

Care must be taken, however, in order for the north to evolve a system of education that is meaningful and relevant to the needs of the people. To be able to do this, the states need experienced educators in both general and agricultural schools to plan and develop the kind of educational programs that do not only provide adequate academic instruction but also educational programs that prepare the majority of the graduates for the 'world of work' and as useful citizens.

The type of education advocated above is most urgently needed in the Northern States because the present rate of literacy of about 25 percent is rapidly growing, and if the existing educational systems which are academically oriented are not improved, they will continue to encourage high rate of rural-urban migration and unemployment problems particularly among primary and secondary school graduates who "flood" the cities in search of white collar jobs.

The questions we must begin to seriously address are: What would be the unemployment situation in the Northern States when literacy rates have escalated from 25 to 80 percent by the time the first batch of UPE (Universal Primary Education) graduates are out in the job markets? What can the state governments do to effectively absorb (at least temporarily) and keep the rates of migration and unemployment at reasonable and/or desirable levels?

One of the approaches to solving migration and unemployment problems in the Northern States is to make agriculture attractive and remunerative so that the people can clearly see that it pays to be a farmer, and for them to choose agriculture as a profession.

To be able to achieve the above objective, the Northern States should, as a matter of urgency, embark on a realistic program of agricultural development which should emphasize agricultural education to train agricultural personnel. Increased availability of agricultural education programs would reduce the present ratio of trained agricultural extension agents to farm families from 1:2000 or more to 1:1000.

In the Northern States, an increase in the number of agricultural extension workers would increase the high paying modern farming or agricultural information and practices to the masses of the farm families. A reasonable thing to do at this stage of educational development is for the north to embark on training programs for all categories of agricultural personnel for the ultimate education of the farm families. There must be schools for the training of the needed personnel.

In fact, the first agricultural school in the north was established in 1931 and presently, there are, at least, one school of agriculture in each of the ten Northern States. The schools are operated as either a state or a

university owned and operated schools. In addition, the states operate farm institutes to provide vocational agricultural training for young people and Farm Training Centers for training junior cadre agricultural extension workers for the local and state governments.

The problem now is that although agricultural institutions in the Northern States have grown in number from 1931 to date, no attempt has been made to establish any corresponding agricultural teacher training colleges to train professional agricultural teachers anywhere in the states. The investigator of this study seriously recognizes that teaching agriculture requires trained professionals to do the job very effectively and convincingly.

The purpose of the study was to identify and prioritize necessary factors for developing and establishing viable and effective institutions for preparing primary, secondary and intermediate level agricultural teachers in the Northern States of Nigeria.

A research instrument for collecting data for the study was developed to allow the jury of experts to register their opinions on a scale of one to five for each of the forty factors. The rating scale was as follows:

(1) "No importance" (2) "Little importance" (3) "Important" (4) "Very important" (5) "Essential".

Based on the scores received from the respondents, the investigator tabulated the results per each group, and finally made a single list of all the factors by combining the experts' responses and presenting the mean scores. The forty factors were rank ordered using the composite mean scores.

The overall opinions of the jury of experts indicating the relative importance of the factors were that ten of the forty factors or 25 percent were "essential" ; 27 of them or 67.5 percent were "very important"; and 3

of the factors or 7.5 percent were rated "important"; none of the factors were considered of "little importance" or of "no importance".

Conclusions

The findings of the study provided answers to the two basic questions of identifying and showing the relative importance of the necessary factors for the development and establishment of teacher education programs in the Northern States of Nigeria. Forty factors were identified and rank-ordered. All the factors were considered at least, "important". A number of them were actually considered "very important" while some were rated "essential". (See Table 11, Pages 66-69).

Recommendations

Based upon the author's previous experience, the review of literature, and the findings of this study the following recommendations are made:

1. That the findings be used as basis for establishing guidelines for developing and operating effective intermediate level agricultural teacher training programs in the Northern States of Nigeria.
2. That the ministries of agriculture and education should work more closely together and fully utilize the expertise of experienced educators in both ministries for planning, developing and promoting effective agricultural education programs.
3. That the primary and secondary school courses should be restructured so that agriculture could be taught as a "terminal" and as a "transitional" course to enable those who have no opportunity to further their education to go into farming adequately prepared while those who have the opportunity could further their professional training in agriculture.

4. That agricultural faculties in Nigerian universities should establish departments of agricultural education to offer career prospects and attract students, the desired caliber of researchers and agricultural teacher educators.

5. That provisions be made for the graduates of the proposed agricultural teacher training colleges to receive advanced training courses in agricultural education up to university level.

6. That the ATTC graduates who go on to universities for B.S. degrees in agricultural education should be granted transfer credits to complete the degree within two years.

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APPENDIX

Silas M. Anibe
Kansas State University
T4 Jardine Terrace
Manhattan, Kansas 66502

March 13, 1980

Dear

I am presently working on my Master's research project in Agricultural Education entitled "The Importance of Forty Selected Factors for Establishing Agricultural Teacher Education Programs in the Northern States of Nigeria." This study is being done under the guidance of Professor James J. Albracht of Kansas State University, and follows strictly the guidelines of "Informed Consent" established by the university.

If you would be willing to assist me by taking a little time to fill out the enclosed questionnaire, I would be very appreciative. Your expertise in the field of agricultural education and/or your working knowledge about developing countries make your opinions and responses to my questions most valuable. By cooperating you will help the survey administrators find answers to important questions; however, your participation is strictly voluntary. Confidentiality is guaranteed; your name will not be associated with your answers in any public or private report of the results.

A stamped addressed envelope is enclosed for return of the questionnaire which I would deeply appreciate receiving by March 25, 1980.

Thank you so much for your time and effort.

Sincerely,

Silas M. Anibe

SAM:wp

Enc.

P.S. My phone number is 913-776-5926 in case you have any questions concerning the study.

SMA

QUESTIONNAIRE

Instructions

I would like your opinion of the relative importance of the forty factors I have identified for the successful operation of an agricultural education program for the preparation of professional agricultural teachers.

Please read each item and circle your response on a scale of 1 to 5 for each of the forty factors. The rating scale is as follows:

- (1) No importance
- (2) Little importance
- (3) Important
- (4) Very important
- (5) Essential

The following is an example of how you might respond to a factor rated as very important.

Example:

Factor	Degree of Importance				
1. Plan for Student Activities	1	2	3	4	5

Factor	Degree of Importance				
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The teacher education program will include the following:

1. Philosophy and objectives of teacher education	1	2	3	4	5
2. Program advisory committee	1	2	3	4	5
3. Qualified teacher educators	1	2	3	4	5

4. Teacher education curriculum	1	2	3	4	5
5. Plan for matching student and program objectives	1	2	3	4	5
6. Plan for matching community and/or state objectives	1	2	3	4	5
7. Financial resources for the program	1	2	3	4	5
8. School transportation	1	2	3	4	5
9. Instructional space and facilities	1	2	3	4	5
10. Local, state and national surveys of agricultural resources	1	2	3	4	5
11. Recruitment and admission policies for students and/or teachers	1	2	3	4	5
12. Career counseling and guidance service	1	2	3	4	5
13. Staff housing, offices and management plans	1	2	3	4	5
14. Administration of the program	1	2	3	4	5
15. Student personnel service and academic advisement	1	2	3	4	5
16. Teacher - student working relationship	1	2	3	4	5
17. Finance and business management system	1	2	3	4	5
18. Student records	1	2	3	4	5
19. Instructional materials, equipment, and consumable supplies	1	2	3	4	5
20. Instructional resource center	1	2	3	4	5
21. School supporting personnel	1	2	3	4	5
22. Student housing and food arrangements	1	2	3	4	5
23. Tuition and student allowance accounting	1	2	3	4	5
24. Community resources for school use	1	2	3	4	5
25. School handbook of policies and regulations	1	2	3	4	5
26. Instruction in agricultural skill development	1	2	3	4	5
27. Instruction in teaching methods	1	2	3	4	5

28. Student health services	1	2	3	4	5
29. Student government	1	2	3	4	5
30. Recreation programs	1	2	3	4	5
31. Professional teacher organizations	1	2	3	4	5
32. Professional library materials for teacher and student use	1	2	3	4	5
33. Placement services for graduates	1	2	3	4	5
34. Follow up on employer satisfaction	1	2	3	4	5
35. Follow up on student satisfaction	1	2	3	4	5
36. Teacher in-service workshops	1	2	3	4	5
37. Professional recognition of deserving teachers	1	2	3	4	5
38. Projecting future needs of the states	1	2	3	4	5
39. Provision for advanced professional training	1	2	3	4	5
40. Program research and planning	1	2	3	4	5

THE IMPORTANCE OF FORTY SELECTED FACTORS FOR ESTABLISHING
AGRICULTURAL TEACHER EDUCATION PROGRAMS IN THE
NORTHERN STATES OF NIGERIA

by

SILAS MELIGA ANIBE

Dip. A.V.A., University of London, 1973

B.S. Ag. Ed., Kansas State University, 1979

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the
requirements for the degree

MASTER OF SCIENCE
Agricultural Education
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1980

The purpose of this study was to identify and prioritize forty factors for the development and establishment of viable and effective programs of agricultural education. The programs would prepare teachers for the primary, secondary and intermediate level agricultural schools in the Northern States of Nigeria.

Since this is the first study for agricultural teacher preparation in the Northern States, the investigator carefully developed a forty factor research instrument for collecting the data.

The study included a population of 18 members who served as a jury of experts. These experts were subdivided into three groups: Six former agricultural school teachers from the Northern States of Nigeria, six agricultural teacher educators from the College of Education, Kansas State University who have long been involved and are actively involved in preparing Nigerian agricultural educators, and six faculty/administrators from the College of Agriculture, who had served as agricultural educators in the Northern States of Nigeria.

Based on the scores of the jury members for each of the forty factors, the investigator tabulated the results per each group of the experts and finally made a single list of all the factors by combining the experts' responses and presenting the mean scores which were used to rank order the factors.

The overall opinions of the jury of experts indicated by the scores on the Likert scale, measured the intensity of the respondents' opinions and were assumed to be the true reflections of the weight given to each of the forty factors. The results indicated that ten of the forty factors or 25 percent were considered "essential"; twenty-seven or 67.5 percent were

considered "very important" and three of the factors or 7.5 percent were rated "important"; none of the factors were considered of "little importance" or of "no importance".

Based upon the author's previous experience, the review of literature, and the findings of this study the following recommendations are made:

1. That the findings be used as basis for establishing guidelines for developing and operating effective intermediate level agricultural teacher training programs in the Northern States of Nigeria.

2. That the ministries of agriculture and education should work more closely together and fully utilize the expertise of experienced educators in both ministries for planning, developing and promoting effective agricultural education programs.

3. That primary and secondary school courses be restructured so that agriculture could be taught as a "terminal" and as a "transitional" course to enable those who have no opportunity to further their education to go into farming adequately prepared while those who have the opportunity could further their professional training in agriculture.

4. That agricultural faculties in Nigerian universities should establish departments of agricultural education to offer career prospects to attract students, the desired caliber of researchers and agricultural teacher educators.

5. That provisions be made for the graduates of the proposed agricultural teacher training colleges to receive advanced training courses in agricultural education up to university level.

6. That the ATTC graduates who go on to universities for B.S. agricultural education should be granted transfer credits to complete the degree within two years.