

UNIVERSITY OF CAPE COAST

THE DEVELOPMENT OF AGRICULTURAL EDUCATION IN COLONIAL
GHANA, 1874-1957

BY

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College of Humanities and Legal Studies, University of Cape Coast, in partial
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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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Supervisor's Declaration

We hereby declare that the preparation and presentation of this thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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ABSTRACT

This thesis, “The Development of Agricultural Education in Colonial Ghana: 1874-1957”, explores the evolution and change of agricultural education in colonial Ghana. It examines the structures that supported the development of agricultural education and how such structures were reorganized to meet new challenges that faced agricultural education in the colony. The period of the study, 1874-1957, is significant because it is the time frame of British colonialism in the Gold Coast. The aim of this study is to determine how agricultural education was promoted to aid in the exploitation of the cash crops by the British government in the Gold Coast. The nature of agricultural education in colonial Ghana is examined to ascertain whether agricultural education in colonial Ghana was for the interest of the indigenes or the colonial state. Considering the efforts made by the British government in providing administrative structures and measures in the development of agricultural education in the formal and non-formal sectors of colonial Ghana, this study shows that agricultural education in colonial Ghana was designed and implemented to serve the colonial state.

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DEDICATION

To my mother, Irene Kaki Asante and also to Martin Darl, a generous friend.

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LIST OF ABBREVIATIONS

A. R. P. S	Aborigines' Rights Protection Society
C. R. S	Cocoa Research Station
C. P. P	Convention People's Party
G. C. R	Gold Coast Regiment
N. A. O	Native Administration Ordinance
P. R. A. A. D	Public Records and Archives Administration Department
R. W. A. F. F	Royal West African Frontier Force
U. A. C	United African Company
U. G. C. F. C	United Gold Coast Farmers Council
W. A. C. R. I	West African Cocoa Research Institute

CHAPTER ONE

Background to the Study

Agricultural education is in many respects more vital to Africa than any other kind and neglect of it is one of the most unfortunate failures of government and missionary education.¹

Africa, before the advent of the Europeans, had its own philosophies and methodologies of education.² Agriculture formed part of the vocational training in pre-colonial Africa.³ Embodied in the science of agriculture was the indigenous knowledge that every agricultural practice must fall within the socio-cultural milieu of the people. Indigenous agriculture also had spiritual and philosophico-ecological considerations.⁴ Agriculture in pre-colonial Africa was considered to have both physical and spiritual underpinnings. Pre-colonial Africans recognized

¹ Thomas Jesse Jones, *Education in Africa: A Study of West, South and Equatorial Africa by the African Education Commission, Under the Auspices of the Phelps-Stokes Fund and Foreign Mission Societies of North America and Europe*, New York: Phelps-Stokes Fund, 1922, p. 11

² By the time of the European arrival, pre-colonial Ghana had evolved from the stone Age period into the Iron Age and thus had an appreciable form of technology for exploiting its environment. Also, the philosophy and methodology of traditional education in general and agricultural education in particular are intricately interwoven and not rigidly defined as it is in the modern system. See, James Anquandah, *Rediscovering Ghana's Past*, Accra: Sedco Publishing Limited, 1982; K. A. Busia, *Purposeful Education for Africa*, the Hague: Mouton, 1964, as referenced in C. O. Obosi & J. Brookman-Amisshah (eds), *Introduction to Education in Ghana*, Accra: Sedco Publishing Limited, 1992, p. 1. See also, C. K. Graham, *The History of Education in Ghana: From the Earliest Times to the Declaration of Independence*, London: Frank Cass & Co Ltd, 1971, p. ix.

³ Although the term agriculture is derived from the Latin word *agricultura* which means 'cultivation of land,' it is used extensively in modern terminology to refer to the cultivation of the soil, the production of crops and the rearing of livestock, poultry and fish, for human needs. This work identifies itself with the modern terminology of Agriculture and will therefore be structured on the aforementioned aspects. See J. A. Kwarteng & M. J. Towler, *West African Agriculture: A Textbook for Schools and Colleges*, London: The Macmillan Press Ltd, 1994.

⁴ De-Valera N. Y. M. Botchway & Awo Abena Amoia Sarpong, "Indigenous Work Ethics Among Akan of Ghana," *Work Ethics: Religions, Doha International Centre for Interfaith Dialogue*, Issue 7, 2015, p. 41.

a Supreme Being and a host of deities who administered cosmic principles to ensure harmony between the natural and physical worlds, hence agricultural activities were interwoven with the peoples' spirituality. Stated differently, agriculture in pre-colonial Ghana was propounded on the notion of interdependency, mutuality and the need to maintain the balance that was espoused in African relations with nature.⁵ With this background, ethnic groups in pre-colonial Ghana, for example the Akan, observed certain days, Tuesdays and Thursdays, as holy and refrained from cultivating sacred lands but rather celebrated festivals in acknowledgment of the gods.⁶ It was, therefore, a categorical error for Africans to conceive the production of *flora* and *fauna* as separated by consciousness or personality.⁷ This foundation determined and regulated the conduct of farmers and also provided the moral basis for human intervention in nature. Improper extraction of natural resources, therefore, posed a serious threat to the maintenance of the intimacy between indigenous spirituality and the ecosystem. For this reason, primacy was given to the training of the young ones before they undertook any form of agricultural occupation.⁸

⁵ *Ibid.* See also, Emmanuel K. Akyeampong, *Between the Sea and the Lagoon: An Eco-History of the Anlo of Southern Ghana, 1850 to the Recent Times*, Oxford: James Currey, 2001, p. 2.

⁶ In Ghana, most festivals are celebrated to commemorate the beginning or the end of the harvest season. Festivals were held to thank the gods and ancestors for a good harvest and the provision of food for the current year. Examples of these festivals are Homowo, Yam Festival, Kundum, Ngmayem, and Bugum.

⁷ Oyeronke Olademo, 'Gender and the Environment in Yoruba Religion: A Focus on Water Bodies,' in K. Opoku-Agyemang (ed) *Culture, Science and Sustainable Development in Africa*, Cape Coast: University of Cape Coast Press, 2011, p. 157. See also, John S. Mbiti, *African Religion and Philosophy*, London: Heinemann, 1969.

⁸ Walter Rodney, *How Europe Underdeveloped Africa*, Dar es Salaam: Tanzania Publishing House, 1972, p. 262.

The methodology of agricultural education in pre-colonial Ghana, like any other African state or society, was functional and a life-long process, starting from childhood to adulthood.⁹ Since the science of agricultural education was determined by the geographical space within which a group of people found themselves, there were appropriate methodologies to that end. According to the account of Pieter de Marees, who was one of the early European explorers of the coast, children on the littoral of the Gold Coast were exposed to the sea as soon as they started walking.¹⁰ By the time they reached adulthood, they became proficient in swimming, diving, and were taught how to spin yarn out of the bark of trees and weave them into nets.¹¹ In the forest and savanna areas, children accompanied their parents to the farm and gradually acquired their parents' skills. They learnt when and how crops were to be planted and when they would be ready for harvesting. Also, they were taught the science of reading the moon and stars from which they could predict the weather. These skills enabled them to tap the forest, which had a multi-purpose value, for their flora, fauna, shelter and pharmacopoeia needs.¹²

⁹ K. A. Busia, *Purposeful Education for Africa*, The Hague: Mouton, 1964, p. 6.

¹⁰ Pieter de Marees, *Description and Historical Account of the Gold Kingdom of Guinea (1602)* translated by A. van Dantzig & Adam Jones, Oxford: Oxford University Press, 1987, p. 187.

¹¹ Irene Odotei, *Artisanal Marine Fishing Industry: A Historical Overview*, Legon: Institute of African Studies, University of Ghana, p. 23. See also, Kwame Kwarteng, *A History of the Elephant in Ghana in the Twentieth Century*, Herstellung: Lambert Academic Publishing, 2011, p. 85.

¹² M. A. S. Owusu & K. O. Kwarteng, "The Desparacidos: Study of Local Knowledge and Forest Culture in the Development Agenda of Ghana," in D. D. Kuupole & De-Valera N. Y. M. Botchway (Eds), *Polishing the Pearls of Ancient Wisdom; Exploring the Relevance of Endogenous African Knowledge Systems for Sustainable Development in Post-Colonial Africa*, Cape Coast: Faculty of Arts, University of Cape Coast, and Centre for Indigenous Knowledge and Organisational Development, 2010, p. 87.

The arrival and subsequent occupation of the Gold Coast by the Europeans from the second half of the fifteenth century heralded the introduction and experimentation of some crops in and surrounding the castles along the coast.¹³ According to K. B. Dickson, the crops did not only serve as the source of supplying food to the castles,¹⁴ but also as “experimental agricultural stations in which exotic and local crops were cultivated under careful management, and from which some of the crops of foreign origin that are now important in the country’s economy eventually reached the countryside.”¹⁵ The bulk of the exotic species were introduced by the Portuguese after their adventure to the Mediterranean region, Asia and the exploration of the New World. This move was to conveniently provide basic food crops to the inhabitants of the castles.¹⁶

The emergence of the Industrial Revolution, which was characterized by a spread of scientific methods, a self-conscious analysis and systematization of existing knowledge, the development of new techniques and the discovery of new knowledge through questioning and research,¹⁷ led *inter alia* to the discovery of improved methods of agricultural production. The knowledge and techniques of improved methods of agriculture such as planting in straight lines, the use of

¹³ See K. B. Dickson, *A Historical Geography of Ghana*, London: Cambridge University Press, 1969, p. 74-76 and D. E. K. Amenumey, *Ghana: A Concise History from Pre-Colonial Times to the 20th Century*, Accra: Woeli Publishing Services, 2011, p. 213.

¹⁴ Although they have been called castles over the years, they were nothing more than prisons and dungeons for enslaved Africans and forts for the European enslavers and imperialist. See, Edmund Abaka, *House of Slaves and “Door of No Return”: Gold Coast/Ghana Slave Forts, Castles & Dungeons and the Atlantic Slave Trade*, Trenton: Africa World Press, 2012, p. 2.

¹⁵ Dickson, *A Historical Geography of Ghana*, p. 75.

¹⁶ Stanley. B. Alpern, “The European Introduction of Crops into West Africa in Precolonial Times” in David Henige, (ed) *History in Africa: A Journal of Methods*, Vol. 19, 1992, p. 13.

¹⁷ T. S. Ashton, *The Industrial Revolution, 1760-1839*, London: Oxford University Press, 1963, p. 2.

manure, mechanisation and so on, were passed on to the people of the Gold Coast through the activities of Europeans who were the missionaries and the employees of chartered companies. To the missionaries, agricultural education became a tool for proselytisation; and to the chartered companies, a means of expanding the sources of their raw materials.¹⁸

With the declaration of the Gold Coast as British Colony in 1874, the British integrated their colony into the International Capitalist Economy as a source of raw materials to the metropolitan power within the frame of the “Legitimate” Trade.¹⁹ In order to increase agricultural production in the “Legitimate” Trade, agricultural education became important and hence the institutionalisation of administrative structures to coordinate the development of agricultural education in colonial Ghana.

Consequently, agricultural education was grouped into categories, namely: “agricultural bias,” vocational training, professional training and agricultural extension.²⁰ The first three aspects were held in the formal sector and the latter in the non-formal sector. It must be explained that agricultural education in the formal sector represents the classroom type of education which was conducted by

¹⁸ Peter A. Schweizer, *Survivors on the Gold Coast: The Basel Missionaries in Colonial Ghana*, Accra: Smartline Limited, 2000, p. 78.

¹⁹ See, A. G. Hopkins, *An Economic History of West Africa*, New York: Longman, 1973; Rhoda Howard, *Colonialism and Underdevelopment in Ghana*, London: Croom Helm, 1978; D. K. Fieldhouse, *Colonialism, 1870-1945: An Introduction*, London: Weidonfield and Nicolson, 1981; A. Adu Boahen, *African Perspectives on Colonialism*, Baltimore: John Hopkins University Press, 1987.

²⁰ Public Records and Archives Administration Department, Accra, CSO. 8/1/168, ‘Agricultural Education’ [here after PRAAD].

teachers with a common syllabus and training curriculum.²¹ Students graduated from one stage, class, or level to another. At the end of the programme, certificates were awarded to students after they had passed the prescribed examination.²² On the other hand, agricultural education in the non-formal sector refers to an organized agricultural education outside the formal system. This was different from the classroom style of agricultural education. It was organized for specific target groups such as farmers.²³ Its programmes were tailor-made to suit a target group and they were organized on short-term basis.²⁴ The use of the media and technology were very key in the development of agricultural education in the non-formal sector.

The first category of agricultural education was focused on making students “agricultural bias.” This was designed to make students ready and be willing to work on the farm after completing school. This was a way of countering a seeming popular distaste for vocational occupations such as agriculture in the Gold Coast. For this reason, an effort was made to incorporate the study of Agriculture as a core subject in the educational curriculum by the Department of Education which was founded in 1890 by the colonial administration.²⁵ To this end, school farms were established to provide the practical aspect of the theories of Agriculture. Teachers were also trained at the various agricultural stations and later at the post secondary schools to the tertiary

²¹ A. D. K. Amedzro & Anthony Youdeowei, *Non-Formal Education for Training in Integrated Production and Pest Management in Farmer Field Schools*, Accra: Ghana University Press, 2005.

²² *Ibid.*

²³ Kwarteng & Towler, *West African Agriculture*, p. 2.

²⁴ *Ibid.*

²⁵ H. O. A. McWilliam & M. A. Kwamena-Poh, *The Development of Education in Ghana*, London: Longman, New Edition, 1975, p. 39.

level to teach Agriculture in the various schools. This was done with the Department of Agriculture which supervised school farms and made recommendations. With the establishment of secondary schools and tertiary institutions in the first part of the twentieth century, agricultural education became an avenue for migrating graduates first, into the Department of Agriculture as staff and second, into other agricultural institutions as workers in colonial Ghana.²⁶

The second category was designed to make students take up agriculture as a vocation after leaving school. This provided an opportunity for pupils who wished to further their study in Agriculture to attend trade schools. This type of agricultural education falls within the domain of the colonial government's institutions such as the Department of Agriculture, which later became the Ministry of Agriculture, and the Department of Veterinary, which later became the Department of Animal Health. Vocational training equipped students to acquire improved techniques in agriculture in order to become farmers after the period of study. The essence of agricultural training in vocational schools was also to offset the notion that white-collar jobs were superior to manual occupations such as agriculture. It is important to note that most of the graduates of vocational training in agriculture were enrolled in higher agricultural training centres to be trained as staff of the Department of Agriculture and other agricultural agencies.²⁷

²⁶ K. Twum-Barima, *Development of Agricultural Education*, Tema: Ghana Publishing Corporation, 1977.

²⁷ PRAAD, Accra, CSO. 8/1/168, 'Agricultural Education.'

The third category of agricultural education was intended to make students take up agriculture as a profession. This was designed for the training of government agricultural officers, teachers of agriculture and supervisors of agricultural education in schools. This category of agricultural education was controlled by the Department of Agriculture. At this level, agricultural education was engineered to produce the working staff for the Department of Agriculture and other agencies.²⁸ At the early stages, professional courses were held at the agricultural stations in the various towns such as Aburi, Asuansi, Tarkwa, Kumasi and Tamale. The stations became places where people were trained to take up positions such as travelling agricultural instructors and agricultural assistants. With the establishment of training centres such as the Agricultural Training Centre in Kumasi, Bunso Agricultural School, and later Nyankpala Agricultural Training Centre, agricultural education for professionals moved from the agricultural stations to these centres or schools. Again, the establishment of the University College of the Gold Coast and Kumasi College of Technology led to the training of senior staff of the Ministry of Agriculture in the latter part of colonial rule in the Gold Coast.

The final category of agricultural education was agricultural extension.²⁹ It was designed to train farmers outside the domain of formal education. This

²⁸ *Ibid.*

²⁹ Agricultural extension is concerned with educating farmers about how to improve their farming and related activities to obtain greater production. Extension education provides knowledge, imparts skills and brings about changes in attitude of farmers through non-formal practical oriented education. The term 'extension' was first introduced in 1873 at Cambridge University to describe an educational innovation different from the well-known formal or classroom education. See J. A. Kwarteng & M. J. Towler, *West African Agriculture: A Textbook for Schools and Colleges*, London: The Macmillan Press Ltd, 1994, p. 2; E. E. Ackah-Nyamike Jnr., *Extension*

entailed the transfer of agricultural knowledge or techniques from agricultural officers to the farmers. The Department of Agriculture embarked on tours to key cash crop communities to educate farmers on improved methods of agriculture. The establishment of agricultural stations throughout the Gold Coast and the Aburi Botanical Garden in 1889 were instrumental in the agricultural extension programme. They were used for the introduction of new crops into the colony through demonstrations and the results of experiments conducted at the stations were passed on to the farmers. It is important to note that the Department of Agriculture used the office of traditional rulers to engage people in a particular polity in agricultural education. Also, there was the Department of Veterinary which engaged the people in livestock rearing.

Period of Study

The chronological frame of the study covers the period of formal imposition of colonial rule in the Gold Coast from 1874 to 1957.³⁰ The term 'colonial Ghana' is used broadly to refer to the geographic and political area of the Gold Coast Colony, Ashanti, the Northern Territories and the British Mandated Togoland, located in the south of West Africa on longitude 1° East and 3° West along the Atlantic coast between latitudes 4.5° North and 11.5° South of the Equator. It covers a land area of 239,460 sq.km. It was bounded to the east by the French Mandated Togoland, the French colony of Ivory Coast to the west, the

Programme Development and Implementation: A Fundamental Guide for Tertiary Students and Practitioners, Accra: Sedco Publishing Ltd, 2007, p. 14.

³⁰ Officially, colonial Ghana became part of the British colonial holdings in 1874 but prior to this date in as early as the 1820's the British assumed political leadership over the people of southern Ghana.

French Sudan, which became Upper Volta and now Burkina Faso, to the north and to the south by the Gulf of Guinea. Although the Gold Coast Colony, Ashanti, and Northern Territories were separately administered by the British until 1936,³¹ the term colonial Ghana is used to refer to all these areas from 1874 to 1957. Also, the study uses colonial Ghana and Gold Coast interchangeably.

Statement of the Problem

The existing historiography on Western education³² in colonial Ghana reveals the following stages of the development: the development of Western education from the castles to other parts of Ghana by the missionaries; educational ordinances that were passed to regulate the Western form of education; the development of educational curriculum; the building of educational institutions; and the reactions of the people to Western forms of education.³³ Although the existing historiography on education gives a general summary of the development of the various types of education in colonial Ghana, it is silent on the development of vocational and industrial aspects of education such as agricultural education. Thus, this research is an attempt to bridge the gap.

³¹ Rhoda Howard, *Colonialism and Underdevelopment in Ghana*, London: Croom Helm, 1978, p. 11.

³² Western education refers to that kind of education which emerged from Europe with empiricism as its foundational philosophy and rationalism as a tool for acquiring knowledge. Secular in nature, western education differentiates life from religion and gives primacy to materialism. It is organised in schools with trained teachers as facilitators for a given period of time.

³³ See, Philip Foster, *Education and Social Change in Ghana*, London: Routledge, 1967; C. K. Graham, *The History of Education in Ghana: From the Earliest Times to the Declaration of Independence*, London: Frank Cass & Co Ltd, 1971; H. O. A. McWilliam & M. A. Kwamena-Poh, *The Development of Education in Ghana*, London: Longman, New Edition, 1975; F. Agbodeka, *Achimota in the National Setting: A Unique Educational Experiment in West Africa*, Accra: Afram Publications Ltd, 1977; S. K. Odamtten, *The Missionary Factor in Ghana's Development up to the 1880's*, Accra: Waterville Publishing House, 1978; R. B. Bening, *A History of Education in Northern Ghana, 1907-1976*, Accra: Ghana University Press, 1990; F. Agbodeka, *A History of University of Ghana: Half Century of Higher Education (1948)*, Accra: Woeli Publishing Services, 1998.

As it stands, there is no systematic research work that has been produced on the history of agricultural education in Ghana in general and colonial Ghana in particular. It is this gap in the knowledge of agricultural education that has resulted in creating *lacunae* in the historiography of the development of education in Ghana.

Also, the purposive justification of agricultural education in colonial Ghana stands unexamined. This is because only few works have studied the extent to which imperial education was organised to meet the needs of colonial Africa.³⁴ Thus, the need to find out whether the introduction of agricultural education in colonial Ghana served the interest of the people or the colonial system becomes very important.

The practical aspect of the problem is the decline and lack of emphasis on agricultural education in post-colonial Ghana. Agricultural education is gradually being eliminated from the primary and secondary levels because it has been encapsulated into the sciences, hence the low interest in agricultural education in the secondary and tertiary levels of education. For the reason that post-colonial Ghana has to deal with some of the resilient vestiges of its colonial period, an analysis of agricultural education becomes imperative in showing the way forward in Ghana's quest to restructure its educational policy to meet national needs.

³⁴ Omolewa avers that although African scholars have addressed broad issues on the purpose, only few "asked whether education truly help in Africa's march towards freedom and self-reliance." See, Michael Omolewa, "Trends in the study of education in Africa," in Toyin Falola (ed), *African Historiography*, London: Longman, 1993, p. 135

Our inability to research agricultural education as an aspect of colonial education makes the historiography on education in Ghana unbalanced and incomplete and as a result, makes history inadequate in addressing the needs of the nation. This proposed study on agricultural education is therefore part of the attempt to bridge the gap between academia and the needs of post-colonial Ghana.

Thus, this study hopes to address this gap by producing a document which will, to a large extent, deal with agricultural education to fill the existing lacuna. Also, the history of agricultural education in colonial Ghana will serve as a reminder to Ghanaians in order to realize how the peculiar nature of agricultural education over the years has negatively affected the production of food crops and unemployed graduates. In this way, the project hopes to make history relevant to society.

Literature Review

Existing historiography on the social history of Ghana indicates that a lot has been written on the development of education in Ghana from the earliest times to the recent past.³⁵ The subject of education became very important especially when Ghana became independent and the need to reconstruct its past by using history as one of the efficient tools arose. However, none of the existing literature fully examines the evolution and change of agricultural education in post-colonial Ghana in general and colonial Ghana in particular. Since the subject

³⁵ See, D. E. K. Amenumey, *Challenges of Education in Ghana in the 21st Century*, Accra: Woeli Publishing Services, 2007.

of agricultural education is dispersed in the existing historiography on education, the literature will be reviewed thematically.

Nature of Agricultural Education

K. Twum-Barima outlines the nature and scope of agricultural education.³⁶ In his discussion, he maintains that agricultural education entails the acquisition, transmission and absorption of knowledge in understanding the process which leads to the satisfaction of man's domestic and industrial needs. It involves a thorough knowledge of the environment since there is no single human activity which interferes more with the environment than agriculture. Without mincing words, Twum-Barima maintains that agricultural education must be based on the agricultural and rural needs and problems of the country which it is intended to serve. Although his work informs this study about the nature and scope of agricultural education, it is not historical since its focus was not to provide a historical work on agricultural education in colonial Ghana.

Development of Education

In their respective perspectives on agricultural education in pre-colonial Ghana, Pieter de Marees, W. Bosman, K. B. Dickson, James Anquandah and Irene Odotei maintained that pre-colonial Ghana had its own form of agricultural education before the arrival of the Europeans in the fifteenth century.³⁷ They all illustrate how agricultural education was undertaken, with Odotei indicating that

³⁶ K. Twum-Barima, *Development of Agricultural Education*, Tema: Ghana Publishing Corporation, 1977.

³⁷ de Marees, *Description and Historical Account*; W. Bosman, *A New Accurate and Description of the Gold Coast*, London [1705] 1967; Dickson, *A Historical Geography of Ghana*; Anquandah, *Rediscovering Ghana's Past*; Odotei, *Artisanal Marine Fishing Industry*.

agricultural education proceeded through 'learning by doing.' This took the form of informal apprenticeship when younger members of the farming families studied farming methods by participating at all levels of operations on the farm. For this reason, G. Benneh avers that even as science and technology research is being applied to the improvement of agriculture in Africa, scientists need to understand and respect traditional farming systems with the indigenous knowledge, cultural beliefs and time-tested practices associated with them.³⁸ Although they provide useful historical information on agricultural education in pre-colonial Ghana, their discussions are limited in time and scope. Their discussion concentrated on agricultural education in pre-colonial Ghana. This created room for the researcher to consider agricultural education in the colonial period.

C. K. Graham and H. O. A. McWilliam and M. A. Kwamena-Poh bring to the fore the evolutionary stages of Western education in Ghana: from its embryonic state in the castle schools through to the attainment of independence and thereafter.³⁹ They look at how the activities of the missionaries helped in the spread of Western education from the coast to the other parts of Ghana and examine the various ordinances of education and other government policies in the development of education. Also, they looked at how external events such as the First and Second World Wars as well as nationalist activities, served as catalysts

³⁸ G. Benneh, *Technology Should Seek Tradition: Studies on Traditional Land Tenure and Smallholder Farming Systems in Ghana*, R. B. Bening, (ed), Accra: Ghana Universities Press, 2011.

³⁹ Graham, *The History of Education in Ghana* and McWilliam & Kwamena-Poh, *The Development of Education in Ghana*.

for the evolution of education in the colony. A limitation in their works is their failure to look at the development of education in the Northern Territories. This defect became the basis for Bening's⁴⁰ groundbreaking work on the development of education in Northern Ghana. His work, therefore, makes the historiography on the spread of formal education in Ghana complete. This thesis looks at the development of agricultural education in the whole of Ghana.

On the development of agricultural education at the secondary and tertiary levels, C. K. Williams, F. Agbodeka, and Twum-Barima and discuss how agricultural education was incorporated into the respective curricula and programs.⁴¹ Agbodeka and Williams present the development of agriculture as a subject in the secondary schools and training colleges for the first time in Achimota in 1927. They argue that in establishing a model school which sought to address the needs of the colony, the founders of Achimota College considered agricultural education as important. The lacuna here is that apart from knowing the development of agricultural education in Achimota College, we do not know of other efforts to develop agricultural education in other secondary institutions. This work investigates the development of agricultural education in other existing secondary and technical schools.

⁴⁰ R. B. Bening, *A History of Education in Northern Ghana, 1907-1976*, Accra: Ghana University Press, 1990.

⁴¹ C. K. Williams, *Achimota: the Early Years, 1924-1948*, Accra: Longmans, 1962; F. Agbodeka, *Achimota in the National Setting: A Unique Educational Experiment in West Africa*, Accra: Afram Publications Ltd, 1977; K. Twum-Barima, *Development of Agricultural Education*, Tema: Ghana Publishing Corporation, 1977; F. Agbodeka, *A History of University of Ghana: Half Century of Higher Education (1948)*, Accra: Woeli Publishing Services, 1998.

Further, Agbodeka⁴² and Twum-Barima outline how agricultural education was institutionalised at the tertiary level. Agbodeka effectively demonstrates the colonial government's attitude to agricultural education. His work shows that although the University College of the Gold Coast was established in 1948, the Gold Coast Cocoa Marketing Board had to give a grant of one million pounds before the Department of Agriculture was established in 1949.⁴³ This gives a broader idea of how the colonial government gave primacy to the development of agricultural education at the tertiary level. To understand the pyramidal nature of agricultural education in colonial Ghana, this study critically analyses the development of agricultural education from the base to the apex of the pyramid.

In terms of the relationship between education and society, Philip Foster⁴⁴ examines the impact of formal education on the indigenous social, economic and political structures. Stated differently, Foster avers that in the process of developing Western the type of education, the indigenous society became tied to that of the metropolitan society. He argues that since the Western educational system was dysfunctional for the traditional social structure, it did not meet the social needs of the people. According to Foster, the colonial educationists failed in the direction of vocational, technical or agricultural education because of three reasons. First, the colonial government and the Christian missions ignored the fact that most of the various occupations were tied to the land. Second, they did not

⁴² Agbodeka, *A History of University of Ghana*.

⁴³ *Ibid*, p. 71.

⁴⁴ Philip Foster, *Education and Social Change in Ghana*, London: Routledge, 1967.

understand some of the objective social functions of the schools and the purpose for which they were utilized by Africans. Third, they underestimated their own significance as a normative reference group. This work used historical methods as tools to interrogate Forster's position, and examined the reaction of Ghanaians to the Western form of agricultural education.⁴⁵

Polly Hill, B. Beckman and B. Acquah discuss how agricultural education was extended to cash crop communities, especially in the cocoa growing areas through the extension agencies.⁴⁶ They demonstrate how the Department of Agriculture and other agencies engaged farmers in agricultural education. Hill maintains that economic factors, such as migration, necessitated the convergence of migrant farmers in cocoa areas to receive agricultural education through the work of colonial extension services. During the outbreak of the Swollen Shoot disease from the 1930s, infected cocoa trees received treatment from extension workers since economic factors brought the farmers together at the time of the outbreak. Beckman demonstrates how the political atmosphere, especially, after World War II, encouraged nationalist groups to enter the cocoa areas in the guise of agricultural education by discussing reasons for the formation of farmers' associations in the Gold Coast. While these works provide the political and economic perspectives of the development of agricultural education in colonial Ghana, their discussions do not look, into detail, how agricultural

⁴⁵ *Ibid.*, p. 8.

⁴⁶ P. Hill., *The Migrant Cocoa-Farmers of Southern Ghana: A Study in Rural Capitalism*, Cambridge: Cambridge University Press, 1963; B. Beckman, *Organising the Farmers: Cocoa Politics and National Development in Ghana*, Uppsala: The Scandinavian Institute of African Studies, 1976; B. Acquah, *Cocoa Development in West Africa: The Early Period With Particular Reference to Ghana*, Accra: Ghana Universities Press, 1999.

education was packaged to the people. This work built on their findings on extension services in writing a comprehensive thesis on agricultural education in colonial Ghana.

Colonialism

Walter Rodney, S. Kiwanuka, and A. A. Boahen present a clear picture of the colonial situation in Africa.⁴⁷ They all illustrate how the colonial machinery was instituted and functioned, with education being one of the major channels for the domination and exploitation of the colonies. The introduction of Western education is identified as the most phenomenal impact of colonial rule on Africa. S. La Anyane⁴⁸ gives a good example of how the colonial system created political institutions such as the Department of Agriculture to provide the channel for tapping the agricultural resources in the Gold Coast. Anyane avers that agricultural education was introduced with the establishment of the Department of Agriculture in the Gold Coast in 1890.⁴⁹ The thesis benefits from Anyane's work because his work serves as a background to the development of agriculture in Ghana. Although Anyane identifies agricultural education as a contributing factor to the development of agriculture in Ghana, his analysis is limited in scope.

On the nature of the impact of colonialism, Walter Rodney maintains that colonialism had no positive impact on Africa. Informed by his use of

⁴⁷ Walter Rodney, *How Europe Underdeveloped Africa*, Dar es Salaam: Tanzania Publishing House, 1972; Semakula Kiwanuka, *From Colonialism to Independence: A Reappraisal of Colonial Policies and African Reactions, 1870-1960*, Nairobi: East African Literature Bureau, 1973; A. Adu Boahen, *African Perspective on Colonialism*, Baltimore: John Hopkins University Press, 1987.

⁴⁸ S. La Anyane, *Ghana Agriculture: Its Economic Development from Early Times to the Middle of the Twentieth Century*, London: Oxford University Press, 1963.

⁴⁹ *Ibid.*, p. 19.

development and underdevelopment hypothesis, Rodney argues that all that colonialism offered was the exploitation of Africans. He equates Western education to underdevelopment by arguing that Western education has no close links with social life, both in a material and spiritual sense and its progressive development is not in conformity with the stages of physical, emotional and mental development of the African child. Simply put, Western education did not reflect the needs of the people. He thus describes Western education as education for subordination, exploitation, the creation of mental confusion and the development of underdevelopment. With this background, Rodney argues that agricultural education did not receive much attention since agriculture, as a subject, was not well patronized and teachers received no agricultural education.⁵⁰

Departing from Rodney's position that colonialism made no positive impact on Africa, Boahen argues that the negative impact of colonialism outweighs the positive. In supporting this position, Boahen opines that the positive impact of colonialism, such as education, was not planned but rather accidental and unintended. Also, the neglect of technical and agricultural education and the emphasis on liberal education, which created in educated Africans contempt for manual work and an admiration for white-collar jobs, is a theme in Boahen's work.⁵¹ This thesis engages the positions of both Rodney and Boahen in an attempt to contribute to the debate.

⁵⁰ Rodney, *How Europe Underdeveloped Africa*, pp. 261-287.

⁵¹ Boahen, *African Perspectives on Colonialism*, p. 106.

The literature reviewed gives an appreciable understanding of the nature of the educational system in colonial Ghana. However, the literature reveals that agricultural education is not a major theme in the historiography of education in colonial Ghana. This thesis therefore attempts at constructing a synthesis on the development of agricultural education in colonial Ghana.

Objectives of the Study

The overall aim of the study is to explore the evolution and change of agricultural education in colonial Ghana.

The sub-objectives are five-fold, namely:

1. Examine the teleology of agricultural education in colonial Ghana and ascertain whether agricultural education in colonial Ghana was in the interest of Africans or the colonial system;
2. Assess the nature of agricultural education in colonial Ghana;
3. Critically examine the nature of the agricultural education curriculum in colonial Ghana;
4. Analyse the reactions of Africans to the introduction of agricultural education in the Gold Coast.

Methodology and Sources

As a historical work, the study employed the appropriate methodology which conforms to historical methods. The study used the qualitative method of research for the reason that it applied analytical and critical examination and

description to historical evidence. The main sources of information were archival materials, oral history, books and published articles in journals and anthologies.

Archival data were gleaned from the Accra, Cape Coast, Koforidua and Kumasi regional offices of the Public Records and Archives Administration Department (PRAAD) in Ghana. In Accra, information was gathered from the departmental reports on Agriculture, Education and Veterinary services under the classification known as the ADM 5 series. Also, data was gleaned from the correspondence between the Directors of Agriculture, Education and Veterinary on the one hand and the Provincial Commissioners and Chiefs and heads of schools, on the other, under the CSO 8 series. In Cape Coast, archival data was mined from the ADM 23 series. In Koforidua, materials were collected from the ERG series while in Kumasi information was assembled from files classified as ARG series.

With respect to oral history, oral interviews were conducted in Cape Coast, Legon, Akropong-Akuapem, Mampong-Akuapem, New Tafo, Osiem, Bunsu, Kwadaso, Asokwa and Techiman. A tape recorder was used to record all interviews in the field which were later transcribed. Among the people interviewed were farmers, lecturers, retired lecturers, and elderly people who were knowledgeable in the subject. The researcher did not know most of the interviewees when the research was conducted.

There were attempts to use the libraries of the Ministries of Agriculture and Education. However, due to bureaucratic bottlenecks at the two ministries, it was difficult to get qualified civil servants in the respective departments to

interview. What even made the situation worse was the release of a documentary on corruption in the judiciary by an ace journalist called Anas Aremeyaw Anas.⁵² For these reasons, the interviewees in the ministries were not willing to grant an interview with the researcher. The researcher then had to depend on information gathered from the various PRAAD centres.

In gathering data, the researcher also noticed that important historical documents have become “endangered species.” In an attempt to use the library of the Ministry of Agriculture, the researcher was told by an informant that the books in the library room have been moved to the Nungua Farms. It is sad to note that the ministry’s library is now a computer centre and the books are left at the mercy of the weather and animals at the Nungua Farms. This narration is to demonstrate some of the challenges that researchers go through to solicit information from interviewees in Ghana.

The primary data gathered were carefully synthesized to sift out inconsistencies, misrepresentations and exaggerations which create problems for historians. For this reason, a complementary application of both primary and secondary sources becomes important. Under secondary sources of information, the researcher depended on published articles in journals, books, published government documents, unpublished theses, and other authentic internet sources.

The secondary sources were obtained from the libraries of the University of Cape

⁵² On 23rd September 2015, Anas Aremeyaw Anas, a Ghanaian undercover journalist, premiered an investigative film entitled “Ghana In The Eyes Of God.” The film exposed massive corruption within the judicial arm of Ghana’s government. The film showed court clerks, bailiffs and a number of 34 judges and magistrates caught on a hidden camera receiving money, goats, sheep and foodstuffs. This led to cases on robbery, murder, drug trafficking, rape, and land litigation unfairly determined by the said judges and magistrates. More than 100 members of staff of the Judicial Service were investigated and some of them dismissed.

Coast, the University of Ghana, Kwame Nkrumah University of Science and Technology, Bunso Cocoa College, Bunso, Department of History libraries in Cape Coast and Legon, the Institute of African Studies, Legon, Faculty of Agriculture, Legon, Faculty of Agriculture, KNUST, Kumasi, and the Cocoa Research Institute, New Tafo.

Significance of the Study

Ghana stands a better chance of surviving the political, economic and social challenges of the twenty-first century if she drinks the lessons and wisdom from the fountain of history. And even as the country takes another look at the development of education within her space in order to march towards freedom and self-reliance, she ought to tailor her educational policies to the needs of the people. With this background, agricultural education becomes one of the important facets to reconsider and research upon from holistic historical perspectives, hence the need to extensively research the topic. Although studies on the development of education abound, none examines the evolution and change of agricultural education in Ghana in general and colonial Ghana in particular. This study, therefore:

- a. Informs policy makers on the development of agricultural education to meet the needs of the people;
- b. Provides another perspective in reducing unemployment, poverty, food insecurity and land degradation in post-colonial Ghana;
- c. Expands and enriches our knowledge of Ghanaian history in general and agricultural education in particular.

Organisation of the Work

The study consists of five chapters, including an introduction and a conclusion. A preface is provided in the preliminary pages and after the conclusion, specifically the last chapter, a bibliography and an appendix which contains relevant and informing photographic plates of agricultural education in colonial Ghana.

The introduction, apart from presenting a historical background to agricultural education in colonial Ghana, unveils the rationale for the study, explains the statement of the problem, reviews a body of literature and states the objectives of the study.

Chapter Two discusses the evolution of agricultural education at the formal and non-formal levels in colonial Ghana, from 1874 to 1918. First, the reasons and nature of agricultural education in the educational ordinances, curriculum developments and other attempts to develop agricultural education are discussed. Second, the chapter examines why and how the local people were engaged in agricultural education through the system of indirect rule and their reactions to agricultural education.

Chapter Three discusses the development of agricultural education during the inter-war years, a period which starts from 1919 to 1939. First, the reasons for reviewing the existing curriculum in order to promote the study of agriculture in the schools, and the promulgation of new agricultural policies and other attempts to develop agricultural education are discussed. Second, the chapter discusses new approaches that the colonial government adopted while it engaged the people in

agricultural education. Third, the responses of farmers to agricultural education are discussed.

Chapter Four explores the development of agricultural education after the outbreak of World War II in 1939 to the time when the Gold Coast gained its political independence and became Ghana in 1957. The first part of the chapter examines how agricultural education was developed during the war and assesses changes in the curriculum that embraced more aspects of agricultural education. Since university colleges were established during this period of study, the chapter explores the nature and purpose of studying Agriculture at the apex of the educational level in the Gold Coast. In the non-formal sector, the chapter looks at how the Gold Coast managed food production and at the same time provided raw materials to the Allied forces through agricultural education. Again, the chapter discusses the contributions of agricultural education in containing the Swollen Shoot disease. For the reason that Africans formed a quasi-self government in the colonial system from 1951 to 1957, their contributions to the development of agricultural education was assessed.

The Conclusion gives a summary of the key elements in the study and the contribution it has made to the existing knowledge on agricultural education in colonial Ghana.

In terms of chronology, the historical narrative is outlined thematically in order to present an uninterrupted flow of the narrative. In this process, fragments of data which contain some amount of historical facts on the development of

agricultural education in colonial Ghana were brought together in themes. This was to achieve sequence and consequence: events were selected, organised, connected and interpreted to make meaning.

Consequently, the Chapters, Two, Three and Four, are basically divided into two parts, formal and non-formal. Although the development of agricultural education in the non-formal sector preceded the formal sector, this work first presents the development of agricultural education in the formal sector before the non-formal sector for the reason that events in the formal sector influenced the development of agricultural education in the non-formal sector. For clarity, the formal sector in the development of agricultural education in colonial Ghana is also divided into two different themes; Agricultural Education in the educational system and Agricultural Education conducted in the Department of Agriculture and the Department of Veterinary services. The non-formal parts of the chapters are not divided.

CHAPTER TWO

THE BUDDING OF AGRICULTURAL EDUCATION IN COLONIAL GHANA, 1874-1918

Introduction

The aftermath of the Anglo-Asante War of 1874 witnessed *inter alia* the extension of British influence from the littoral through the Asante Confederacy to the northern part of colonial Ghana. Having broken the yoke of Asante's challenge to their influence and expansion, the British declared the Gold Coast a British Colony.⁵³ Consequently, the British integrated the Gold Coast into the International Capitalist Economy as a source of raw materials for the metropolitan power within the frame of 'legitimate trade.' This integration was ensured through the provision of systems and structures of administration by the colonial government. This was because the government wanted to fully exploit the new geographical, socio-economic, cultural and technological frontiers that it opened.⁵⁴ To fully incorporate the indigenes into the colonial pyramidal base, the

⁵³ For a definitive account of the rapid expansion of British influence after 1874, see W. W. Claridge, *A History of the Gold Coast and Ashanti*, London: John Murray, 1915; David Kimble, *A Political History of Ghana: The Rise of Gold Coast Nationalism, 1850-1928*, Oxford: Clarendon Press, 1963; A. Adu Boahen, *Ghana: Evolution and Change in the Nineteenth and Twentieth Centuries*, Accra: Sankofa Publishers, 2000; D. E. K. Amenumey, *Ghana: A Concise History from Pre-Colonial Times to the 20th Century*, Accra: Woeli Publishing Services, 2011.

⁵⁴ Rhoda Howard, *Colonialism and Underdevelopment in Ghana*, London: Croom Helm, 1978, p. 27. See also, Semakula Kiwanuka, *From Colonialism to Independence: A Reappraisal of Colonial Policies and African Reactions, 1870-1960*, Nairobi: East African Literature Bureau, 1973; A. Adu Boahen, *African Perspective on Colonialism*, Baltimore: John Hopkins University Press, 1987; K. S. Amanor, *The New Frontier: Farmer Responses to Land Degradation: A West African Study*, London: Led Books Ltd, 1992; Robin Hallett, *Africa Since 1875: A Modern History*, Delhi: Surjeet Publication, 2005.

Western-style school system became important. For the reason that most of the needed raw materials were mainly agrarian, the colonial government paid attention to agricultural education.

This chapter discusses the evolution of agricultural education at the formal and non-formal levels in colonial Ghana from 1874 to 1918. First, the reasons and nature of agricultural education in the educational ordinances, curriculum developments by the colonial state, and other attempts at developing agricultural education in the formal sector will be discussed. Also, the chapter examines the contributions of colonial institutions such as the agricultural stations in the development of agricultural education in colonial Ghana. Third, the chapter examines why and how the local people were engaged in agricultural education in the non-formal sector of colonial Ghana.

Agricultural Education in Western (Formal) Education

Prior to 1874, the Education Ordinance of 1852 was the *modus operandi* that regulated education in the Gold Coast.⁵⁵ The 1852 Ordinance was an attempt “to provide for the better Education for the Inhabitants of Her Majesty’s Forts and Settlements on the Gold Coast.”⁵⁶ But it failed to achieve its aim because of the failure of the Poll Tax revenue and the lack of interest in the Ordinance which was shown by the people of the Gold Coast.⁵⁷ This was the case largely because

⁵⁵ H. O. A. McWilliam & M. A. Kwamena-Poh, *The Development of Education in Ghana*, London: Longman, New Edition, 1975, p. 36. See also, P. Foster, *Education and Social Change in Ghana*, London: Routledge, 1967; C. K. Graham, *The History of Education in Ghana: From the Earliest Times to the Declaration of Independence*, London: Frank Cass & Co Ltd, 1971.

⁵⁶ David Kimble, *A Political History of Ghana: The Rise of Gold Coast Nationalism, 1850-1928*, Oxford: Clarendon Press, 1963, p. 70.

⁵⁷ McWilliam & Kwamena-Poh, *Development of Education in Ghana*, p. 37.

the indigenes could not identify themselves with the curriculum used in the early schools which entailed reading, writing, arithmetic and biblical instruction. The curriculum did not reflect their understanding of education as functional and a life-long process.⁵⁸

The Gold Coast government did not have total control over various missionary schools. As a result, the management and curriculum of the educational institutions varied. Consequently, in the 1880s a systematic effort was made by the colonial government to formulate policies to regulate the educational system in the Gold Coast.⁵⁹ This was intended to enable the colonial government to have a firmer grip on the educational system while partnering with the missionary institutions. The first systematic effort by the colonial government to regulate education occurred in 1882 when an Education Ordinance was enacted and applied to the British colonies in West Africa.⁶⁰

The 1882 Ordinance was tailored along the lines of the English Education Act of 1870.⁶¹ This Ordinance, which sought “the promotion and assistance of Education in the Gold Coast Colony,” provided an institutional framework for the educational system and the giving of grants to schools. At the top of the educational structure was the General Board of Education, followed by the Local Boards and an Inspector of Schools who was responsible to the Board. The curriculum, upon which grants were given, included reading, writing, arithmetic,

⁵⁸ K. A. Busia, *Purposeful Education for Africa*, Hague: Mouton, 1964, p. 3.

⁵⁹ McWilliam & Kwamena-Poh, *Development of Education*, p. 38.

⁶⁰ The British colonies in West Africa were Gambia, Sierra Leone, Gold Coast and Lagos. Available documents indicate that the 1882 Ordinance was operational only in the Gold Coast and Lagos.

⁶¹ M. K. Antwi, *Education, Society and Development in Ghana*, Accra: Unimax Publishers Limited, 1999, p. 32.

geography, and history, with needle work for girls. This type of curriculum was basically geared toward the clerical opportunities and subordinate administrative job existing in towns such as Accra, Cape Coast, Tarkwa, Koforidua and Takoradi.⁶²

In order to move away from the staple form of education where more pen-pushers were produced, the Education Ordinance of 1882 proposed the establishment of industrial⁶³ schools at strategic places in the Colony. However, this provision could not be implemented. One reason for the failure of the 1882 Ordinance was that the areas of the implementation of the Ordinance, Gold Coast and Lagos, were too wide for a single person to administer and implement. For example, the first Inspector of Schools, Rev. M. Sunter, was responsible for the Gold Coast and Lagos Colonies, but this area proved too big for him to administer alone.⁶⁴ Also, the colonial government was not financially positioned to undertake such a project since it depended on the British Treasury for funding. The government even found it difficult to give grants to the pre-existing missionary schools. For instance, Rev. Sunter was not paid regularly and he had to, therefore, divide his attention between his duties as a priest and as the Inspector of Schools.⁶⁵ For a period of five years, the educational curricular was devoid of the teaching of vocational and industrial subjects such as agriculture.

⁶²McWilliam & Kwamena-Poh, *Development of Education in Ghana*, p. 37.

⁶³ The term 'industrial', both in this passage and subsequently, refers to simple forms of trade training or manual training in schools. This includes elementary agricultural work.

⁶⁴ S. K. Odamtten, *The Missionary Factor in Ghana's Development up to the 1880's*, Accra: Waterville Publishing House, 1978, p. 202.

⁶⁵ It was only after 1907 that the colonial government started to generate its own funds without relying on the British Treasury. See, McWilliam & Kwamena-Poh, *Development of Education in Ghana*, p. 48.

To improve upon the lapses in the structure of the educational system and fashion Western education to the needs of the people, a new Educational Ordinance was passed in 1887. This Ordinance was enacted for the Gold Coast alone, since Lagos was separated administratively from the Gold Coast in 1886.⁶⁶ The 1887 Ordinance was an attempt to raise the standard of the educational work of the missionaries under the supervision of the colonial government and to also expand the existing curriculum to embrace additional aspects of industrial training which included agricultural education.⁶⁷ Like the other industrial courses, the Board of Education devoted not less than ten hours a week to the teaching of agriculture. Emphasis was placed on agricultural work for boys while needlework and household work were for girls. It was not until 1898 that industrial instruction, which was an optional course, was incorporated into the general curriculum.⁶⁸

At the same time, attempts at agricultural education in the Gold Coast were also made from another direction, through the efforts of the missionaries in their mission schools. The beginning of these attempts predated 1874. For example, the Basel missionaries, with their main philosophy of training the head, hand and heart,⁶⁹ had earlier given attention to agricultural education on a scale greater than any other missionary society in the Gold Coast. The Basel missionary teachers in particular, were not merely concerned with the training of their pupils

⁶⁶ *Ibid.*

⁶⁷ Industrial training included any kind of handicraft, manufacturing or agricultural work and in the case of girls, household work such as plain needlework, laundry work and cookery. See, Gold Coast, *The Education Ordinance 1887*, as cited in Foster, *Education and Social Change*, p. 83.

⁶⁸ *Ibid.*

⁶⁹ K. Nkansa-Kyeremateng, *The Presbyterian Church of Ghana and National Development*, Accra: Sebewie Publishers, 1995, p. 66.

to read, write and work arithmetic, but also assisted them to use their hands as expects in crafts and agriculture.⁷⁰ The curriculum was structured in a way that pupils' first three years in school involved intensive agricultural and manual instruction as well as the normal classroom work.⁷¹ At the high school level, like those in Akropong and Begoro, agriculture formed a vital part in their educational activities.

Contrary to the niche carved by the Basel Mission in their contribution to the development of agricultural education, the other church missionary societies such as the Wesleyans did little. According to C. K. Graham, in 1888, Rev. M. Sunter, in a report, lamented how the Wesleyans had failed to give attention to Industrial Education, especially agricultural education. He opined that:

while the Wesleyans neglected altogether industrial training and oversight of the children out of school, only going in for the Bible in particular and such other secular books as may be thought necessary, the Basel mission recognized the importance of industrial training as a humanizing influence.⁷²

It is pertinent at this point to interrogate the reasons why the Basel Mission, which was mainly operating in the hinterland, took the lead in agricultural education on a greater scale than the Wesleyans who largely operated in the coastal zones ever attempted. The first was the perceived misconception by many people, especially along the coast, that “to become a Western educated

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

⁷² Graham, *The History of Education in Ghana*, p. 122.

African ... was for many an avenue for escaping hard work.”⁷³ For this reason occupations such as farming, carpentry and iron work were considered appropriate for the “non-Western educated African”.⁷⁴ Also, the Wesleyan attempt at agricultural education in its schools was ineffective because of the extensive exposure that the Fante had with their encounter with Europeans on the coast and their middleman role in trade. The trading activities with the Europeans led to the emergence of the *nouveau riche* who commanded some economic and political power and so were respected in their societies. Pupils in the Wesleyan schools along the coast began to look down upon manual work such as farming with disdain because the *nouveau riche* they knew were not farmers but lawyers, teachers, doctors, merchants among others.⁷⁵ There was also the issue of the geographical location. Unlike the Basel missionaries who were located in the inland areas where agriculture was the mainstay of the people and so developed an educational philosophy of using industrial education as a proselytisation tool, the Wesleyan developed an educational curriculum which was geared toward opportunities existing in towns such as clerical appointments in commerce or government.⁷⁶

The effect of inadequate attention to agriculture is vividly described by C. C. Reindorf, a product of the Basel Mission educational system and a historian. He lamented how the educational system, by providing more school leavers into

⁷³ P. Ekeh, “Colonialism and the Two Publics in Africa: A Theoretical Statement,” *Comparative Studies in Society and History*, Vol. 17, No. 1, (1975): p. 99.

⁷⁴ *Ibid.*

⁷⁵ No information is provided on the size and gender of pupils who became clerks compared to artisans, mechanics or skilled agriculturalists. Foster, *Education and Social Change in Ghana*, pp. 87-88.

⁷⁶ *Ibid.*

clerical services than producing school leavers into other industrial sectors such as agriculture, had contributed to a decline in food production, an increase in food-imports from Europe and an increase in prices. Reindorf, therefore, suggested that the colonial government should tailor the educational system along the lines of the Basel Mission, which stressed industrial training for self-reliance.⁷⁷

From 1900 onwards, the colonial government began to undertake measures to modify the skewed nature of the educational system,⁷⁸ that is, to further balance literary training with industrial or agricultural training. The Gold Coast government was now able to make this move because starting from 1907, she could generate revenue internally without depending on grants from the British Treasury.⁷⁹ This positioned the colonial government to review its educational policies by means of providing more schools, reviewing the existing curriculum, and giving grants to schools.

The first step was to consider “whether Industrial Training should be added to the curriculum of the Schools in the Colony.”⁸⁰ This was to provide an educational system which was not based on the English Educational Act of 1870 which was exclusively devoted to literary work.⁸¹ The effect of the Act of 1870

⁷⁷ C. C. Reindorf, *The History of the Gold Coast and Asante: Based on Traditions and Historical Facts Comprising a Period of more than three Centuries from about 1850 to 1860*, Basel: Basel Mission Book Depot, 1895. See also, Heinz Hauser, “Tradition Meets Modernity: C. C. Reindorf and his History of the Gold Coast and Asante: A Late 19th century voice from urban Accra,” *Transactions of the Historical Society of Ghana*, New Series, No. 8, (2004), pp. 227-255.

⁷⁸ Antwi, *Education, Society and Development*, p. 32.

⁷⁹ McWilliam & Kwamena-Poh, *Development of Education in Ghana*, p. 48.

⁸⁰ Gold Coast, *Government Gazette*, Accra, West Africa, 1907, p. 255. [hereafter, *Gazette*]

⁸¹ Graham, *The History of Education Ghana*, p. 111.

on the Gold Coast Educational Ordinances was that a large number of pupils became clerks and a few became artisans, mechanics or skilled agriculturalist.⁸²

In dealing with these shortcomings, the Board of Education recommended that industrial education be developed alongside literary training so that the Colony would not be filled with semi-educated young people vainly seeking clerical jobs but without the capacity and training needed for skilled industrial labour. Hence, the Board of Education included some form of agricultural or industrial training among the core subjects at the primary level which were purely literary.⁸³ However, there was the problem of providing qualified teachers to teach these subjects. Furthermore, it was difficult to induce agricultural or industrial training in the coastal towns because of the common notions the indigenes held. Nevertheless, the Board resolved to make industrial training compulsory in the Colony.⁸⁴

New measures were outlined by the Board to regulate the award of grants to develop agricultural education because it was noticed by the Department of Education that most of the teachers enrolled in agricultural courses at the botanical gardens in order to have access to government grants attached to the certificates. Also, there was the concern that schools which enjoyed grants were content with just having a plantation and keeping it clean without being able to show any product of value. Coupled with these problems was the realisation by the Board that a large proportion of teachers who obtained agricultural certificates

⁸² Foster, *Education and Social Change*, p. 84.

⁸³ *Gazette* 1907, p. 882.

⁸⁴ *Ibid.*

were in coastal towns where agriculture could not be successfully pursued.⁸⁵ While the Board recommended that if schools did not do more by way of exhibiting the products of their school gardens either to the Inspector of Schools or at the Annual School Exhibition, their grants would be reduced, it also suggested that teachers should give a report on school gardens to the Education Department or the “Native Travelling Instructor” of the Agricultural Department.⁸⁶

In 1908, Governor Rodgers of the Gold Coast appointed a committee “to revise educational rules, establish a training institution for teachers, establish a technical school and introduce hand and eye, industrial and agricultural training into schools.”⁸⁷ The committee recommended two things; first, Industrial Schools were needed to train both teachers and students to provide a calibre of efficient industrial professionals in the Colony, second, agricultural education was not to be encouraged in the coastal towns, since earlier attempts did not succeed. On the contrary, it was suggested that agricultural schools should be established in cash crop districts to supplement the existing schools since agricultural education in

⁸⁵ Gold Coast, *Education Department Report* 1907, Accra: Government Printer [hereafter, *Education Department Report*].

⁸⁶ *Ibid.*

⁸⁷ The setting-up of this Committee by Governor Rodger was influenced by the Tuskegee Educational Experiment where primacy was given to industrial education as an attempt to relate education to the needs of the Black community in America. It was after touring the industrial schools of the Southern States in 1907 that he recommended the setting-up of this committee. “Report of the Committee on the Introduction of Technical, Industrial, and Agricultural Instruction in the Schools of the Gold Coast Colony,” *Gold Coast Gazette for the Second Half Year 1908*, p. 704; Thomas Jesse Jones, *Education in Africa: A Study of West, South and Equatorial Africa by the African Education Commission, Under the Auspices of the Phelps-Stokes Fund and Foreign Mission Societies of North America and Europe*, New York: Phelps-Stokes Fund, 1922, p. 141-142; See also, J. K. Kenneth, *Pan-Africanism and Education; A Study of Race Philanthropy and Education in the Southern States and Eastern Africa*, Oxford: Clarendon Press, 1971, p. 50.

the interior schools had been promising.⁸⁸ The recommendations led to the Educational Rule of 1909 which introduced widespread industrial training into schools and made agricultural education a compulsory subject in primary schools for the purpose of grants-in-aid. Consequently, the government established the first Technical School and Teachers Training College in Accra.⁸⁹

The beginning of the twentieth century saw industrial training, which was chiefly agricultural in character, given in 43 schools with most of the large mission schools having plantations which produced cotton, cocoa, corn, rubber vegetables and flowers.⁹⁰ However, there was a paucity of trained teachers to manage these plantations. Since the nature and scope of crops grown in these plantations required Western scientific methodology, which was in a way different from the indigenous conceptions and methods of planting of these crops, there was the need to take the teachers through the theoretical as well as the practical knowledge of producing these crops. However, it is very important to note that not all schools needed teachers in the development of school plantations. This was because at the Central Schools of the missionaries, which were located in towns and cities, especially the Basel Mission, there were experienced European Supervisors.⁹¹

⁸⁸ "Report of the Committee on the Introduction of Technical, Industrial, and Agricultural Instruction in the Schools of the Gold Coast Colony," *Gold Coast Gazette for the Second Half Year 1908*, p. 705.

⁸⁹ *Ibid.*

⁹⁰ *Education Department Report 1901*, p. 7.

⁹¹ Colonial Office, *Gold Coast Annual Report 1903*, Accra: Government Press, p. 16 [hereafter *Annual Report*].

Apart from the enactment of ordinances and rules of education, a course of instruction in agriculture for teachers was introduced at the Government Botanical Gardens at Aburi in 1902 to develop agricultural education. The aim was to improve the agricultural work done in schools by enabling teachers to acquire a theoretical as well as practical knowledge of agricultural education.⁹² To enable teachers participate fully, the course was taught during school vacations. The course was held for a period of three weeks, each during the dry season in January, and during the raining season in July to enable the teachers to gain knowledge in agricultural work at different seasons of the year. A grant of 2 pounds 10 shillings was given to defray the expenses of each of the candidates undertaking the course of study, provided the candidate attended the course regularly and passed the examination held at the end of the course.⁹³

To make the course balanced, it was divided into theory and practical instructions. The subjects taught at the course were: The Root, Stem, Leaf, Flower, Fertilisation, Soil, Food of Plants, Water Culture, Manure, Movement of water or sap in plants, Influence of light on the assimilation of carbon and the formation of starch in plants, Preparation of cocoa for the market, and Site and arrangement of a school garden. The practical instruction included Seed testing, Seed sowing, Digging, Trenching, Green manuring, Hoeing and Weeding,

⁹² *Annual Report* 1904, p. 18.

⁹³ *Ibid.*

Thinning out seedling, Transplanting, Budding, Grafting, Potting, Propagating, Planting, Mulching, Pruning, Collection and selecting seeds.⁹⁴

At the end of the course, an examination was held and, consequently, certificates were awarded. This was to appraise the participation of the teachers during the course of study. The number of marks required to secure a pass was 40 percent. Candidates who passed the exams at the end of the course received a grant of 50 shillings. Holders of the certificate of agriculture were entitled to an annual government grant of 5 pounds provided that ten or more of the pupils under their instruction earned the highest grant given by the government for agricultural training in assisted schools.⁹⁵ In 1907, Standard IV students and above were allowed to enrol for the course.⁹⁶

Although the colonial government made the attempt to encourage teachers to enrol for the course in agriculture, it faced some challenges. Since the course was held at the Botanical Garden with the staff of the Department of Agriculture in charge of the course as teachers or instructors, the lack of qualified Curators at the Garden led to the situation where, at times, there were no teachers to teach the course. This problem was a result of placing indigenous curators under the leadership of the European curators and so there was no one to teach the course in their absence. Moreover, there were no qualified local curators to teach the course.⁹⁷ Stated further, the staple theoretical nature of education in the colony

⁹⁴ Gold Coast, *Agriculture Department Report* 1905, Accra: Government Press, p. 11 [hereafter, *Agriculture Department Report*].

⁹⁵ *Education Department Report* 1902, p. 10. See also, *Agriculture Department Report* 1904.

⁹⁶ *Education Department Report* 1902, p. 10.

⁹⁷ *Agriculture Department Report* 1905, p. 9.

was evident in the course as it dwelt more on the theoretical aspect than balancing the theoretical with the practical. Consequently, the practical aspect of the course did not appeal to the teachers and so they did not show much enthusiasm in the scheme.⁹⁸

The incentives attached to the course, that is, the grants and the opportunity that the course gave to students to be employed in the Department of Agriculture, resulted in a large in-take of participants at the centres of instruction. As the number of teachers applying for the course increased, the structures available became inadequate to accommodate them. Some applicants were therefore refused admission although they were more qualified. In 1910, for example, the Aburi Botanical Garden recorded a large number of applicants who were more than the available accommodation for the applicants.⁹⁹ This further showed that the course was more effective in Aburi than the other stations for various reasons. First, the European tutors of the Department of Agriculture preferred teaching at Aburi to the other agricultural stations because of its conducive atmosphere and temperature. For this reason, the other centres lacked European teachers. Second, since Aburi was the headquarters of the Department of Agriculture and at the same time an agricultural station, it was better equipped with tools for teaching than the other centres. Hence, many people from other places preferred studying at Aburi to the other gardens.

⁹⁸ *Education Department Report* 1904, p. 6.

⁹⁹ *Education Department Report* 1910, p. 13.

A critical look at the courses taught for the six week period shows that the duration for studies was too short. The nature of the curriculum required more than the six weeks for completion. This prevented the course instructors “to do full justice to the subject.”¹⁰⁰ This was evident in the nature of questions that students were examined in. A review of the examination papers in 1912 revealed that candidates had rudimentary knowledge of the course and thus “when a question not bearing directly on their notes was asked, a distinct lack of foresight was exhibited in the answers.”¹⁰¹

To encourage and assess the effectiveness of Industrial Studies in the curriculum and also to move the teaching of industrial education from the theoretical frame to the practical, industrial products from schools were exhibited at the Annual Exhibition of School Industries. The Annual Exhibition of School Industries, which started in the 1890s, initially had exhibitions of Beat Iron Work, Enamel Work, Joinery, Cabinet-Making, Fancy Work, Netting, Hand Writing, Book Binding, Ornamental Penmanship for boys, Embroidery, and Laundry work. Also, competition was opened for boys and girls in Map Drawing, Brick Making, Clay Modelling and Manufactured Native Products.¹⁰² Clearly, but surprisingly, agricultural products were given no room at the exhibitions. At the Annual Exhibition, awards were given to students who demonstrated the art of mastery and skill in their respective fields of study.¹⁰³ Since the Annual Exhibition did not, to a large extent, reflect the colonial policy of tapping raw materials from the

¹⁰⁰ *Agriculture Department Report* 1912, p. 14.

¹⁰¹ *Ibid.*

¹⁰² *Gazette* 1907, p. 255.

¹⁰³ *Gazette* 1900, p. 30.

colony to the metropolitan power, items for the Annual Exhibition were reviewed by the Department of Education.

During the Annual Exhibition of 1907, Brick Making, Clay Modelling and Manufactured Native Products were omitted on the recommendation of the judges of the Exhibition. In their place was the competition for the best products of school plantation such as the best grown and prepared coffee, cocoa and rubber exhibits.¹⁰⁴ This was to encourage schools situated in the inland areas to exhibit products from their school farms at the Annual Exhibitions. Stated differently, the recommendation was to incorporate schools which had plantations into the Exhibition. Each year, the Exhibition moved from one school to the other. Also, since the Department of Education could not see prepared products of school plantations at the time of general inspection, special prizes were offered at the Annual School Exhibition for the best specimens of rubber, cocoa, coffee, cotton, etc, grown on school plantations and prepared by pupils attending the school.¹⁰⁵ These incentives led to the emergence of a large number of schools that had plantations with cotton, corn, rubber, vegetables and flowers. They also had some trained teachers to help nurture them well.

The outbreak of World War I affected the development of agricultural education in colonial Ghana. This was because Basel and Bremen missionaries, who were Germans, were deported from the Gold Coast during the First World War.¹⁰⁶ With the deportation of the missionaries, agricultural education in the

¹⁰⁴ *Gazette* 1907, p. 256.

¹⁰⁵ *Ibid.*

¹⁰⁶ W. E. F. Ward, *My Africa*, Accra: Ghana Universities Press, 1991, p. 118.

Gold Coast faced a major problem: the training of agricultural teachers was reduced. For example, when all Basel missionaries of German nationality were deported, the total staff was “reduced from thirty to eight, these numbers being exclusive of their wives.”¹⁰⁷ It is important to note that the training colleges of the Basel missionaries played a major role in the training of teachers in agriculture. At the time of their deportation, the Basel Mission Seminaries at Akropong and Abetifi were the only two missions operating Teacher Training Colleges in the Gold Coast. It became, therefore, the burden of the only Government Training College in Accra to produce teachers who could teach agriculture. The Director of Education reported that “the work of these Institutions [Akropong and Abetifi] has been adversely affected since the outbreak of the War.”¹⁰⁸

By 1918, the educational system of the Colony, based on the 1887 Ordinance and the Rules of the Board of Education of 1909, featured agricultural education as a compulsory subject in its curriculum. Agricultural education moved from the missionary domain to the government assisted schools. The problem of equipping qualified teachers to teach agriculture in schools was ameliorated by the introduction of a course of instruction in agriculture with grants attached to the course. In 1918, instruction in agriculture was given in nearly every assisted school with forty-eight candidates obtaining certificates for the course of instruction in Agriculture for the students and teachers held at Aburi,

¹⁰⁷*Education Department Report 1917*, p. 4. See also, P. A. Schweizer, *Survivor on the Gold Coast: The Basel Missionaries in Colonial Ghana*, Accra: Smartline Limited, 2000.

¹⁰⁸ *Education Department Report 1915*, p. 14.

Asuansi, Tarkwa and Kumasi Agricultural Stations.¹⁰⁹ The Annual Exhibition of School Industries continued to be held with schools bringing agricultural products from their farms, with special prizes awarded for the best specimens of crops such as rubber, cocoa, coffee, and cotton.¹¹⁰

Apart from the provision of agricultural education at the various levels of the educational system, the Department of Agriculture of the colonial government also provided formal training for people who wanted to be agriculturalists. This was done at the agricultural stations. The Agricultural stations provided the avenue for graduates from the primary schools and secondary schools to further their studies in Agriculture and thence be employed by the government to work in the Department of Agriculture.

Agricultural Education in Agricultural Stations

With the expansion of the economic frontiers in the Gold Coast, the need to employ more people into the Department of Botanical and Agriculture to effectively exploit the natural resources of the colony became necessary. Also, there was the need to deal with the language barrier in agricultural education in order to get closer to the people through no other effective means than one of the indigenous people. It was for these reasons that the system of agricultural apprenticeship was introduced in the 1890s. Agricultural apprenticeship was geared to the studying of agricultural methods by participating at all levels, both theory and practice, of the operations on the farm. Here, the African learnt

¹⁰⁹ *Annual Report* 1918, p. 18.

¹¹⁰ *Ibid.*

improved techniques of agriculture under European supervision.¹¹¹ In the early period of its introduction, matured educated indigenes were selected for agricultural apprenticeship and trained at the Aburi Botanical Station for one year under a curator.

At the government's expense, the apprentices were later sent to a botanical garden in the British colony of Jamaica for one year and finally received training for another one year at the Royal Gardens at Kew, London. On their return to the Gold Coast, they were required to serve the government for a definite period and, thereafter, be considered for employment in the Department of Agriculture as Sub-Station Overseers, "Native Instructors," Travelling Instructors and so on.¹¹² Given that European travelling instructors from the Department lectured and gave practical instructions on plantations outside the agricultural stations, the apprentices were employed as interpreters with European Instructors on tour.¹¹³

Consequently, the criteria for selecting indigenes for apprenticeship was later based on competitive examination for people from Standard VII of the elementary schools and any other matured indigene. At this point, the duration for apprenticeship was changed. From 1898, the apprentices were required to serve one year at the Aburi Botanical Garden before they were sent to Jamaica to undergo a further course of instruction for three years,¹¹⁴ before returning to the Gold Coast to disseminate their Western knowledge of cultivation, especially for

¹¹¹ K. Twum-Barima, *Development of Agricultural Education*, Tema: Ghana Publishing Corporation, 1977, p. xvii

¹¹² *Annual Report* 1895, p. 18.

¹¹³ *Agricultural Department Report* 1910, p. 16.

¹¹⁴ *Annual Report* 1895, p. 18.

cash crop in the Gold Coast.¹¹⁵ They were also employed as overseers of private gardens and plantations in the Gold Coast.¹¹⁶ For example, J. S. Martinson and E. A. Brew were the first apprentices who went to Jamaica in December 1898. They returned to assume their duties as Garden Assistants in 1901.¹¹⁷

In the early part of the twentieth century, the system of agricultural apprenticeship was modified to produce more qualified agricultural assistants. During this period, the system began to see developments: schooled youth holding the Standard VII Certificate who applied to be trained by the Department of Agriculture were started as “Improvers.” They were later appointed as “Learners” provided they had the necessary educational qualifications. A selection was made after an examination. This was different from the previous situation where matured educated indigenes were selected to start as Learners. After the course, the Learners were appointed as Assistant Overseers by the Department of Agriculture and other agencies and cocoa brokers in order to get a good selection of cocoa beans.¹¹⁸

The duration for the course of training of Learners was three years. Learners also attended the agricultural classes organised for school teachers in January and in July in order to receive a general training in Applied Agriculture. Also, they were examined at the end of every month on what they had been taught and were made to receive agricultural instruction at the various agricultural

¹¹⁵ *Ibid.*

¹¹⁶ *Agriculture Department Report* 1904, p. 6.

¹¹⁷ *Agriculture Department Report* 1901, p. 4.

¹¹⁸ *Agriculture Department Report* 1916, p. 17.

stations in order to broaden their perspective on agriculture. This was different from the earlier period where the training was only held at Aburi.¹¹⁹

Despite every effort to educate and employ the youth who desired to work in the Department of Agriculture, there were still vacancies. The Department of Agriculture was not very attractive to the youth because although it offered good prospects, the average educated youth preferred “a higher class of work which would not soil his hands or cocoa buying where he has many opportunity for making much more money, honestly or dishonestly.”¹²⁰ With the view of attracting a better class of youth, the initial salary of “Improvers” was increased from 5 pounds to 30 pounds a year.¹²¹

It is important to note that Learners received scholarships for further studies in Britain after a competitive examination. For example, Nicholas Timothy Clerk, a second year student under training, was awarded the first King Edward VII Scholarship in Agriculture with an annual value of 30 pounds for three years.¹²² In 1918, I. N. Acquah, who completed two years of his training as a Learner, was awarded a scholarship after a competitive examination. Holders of the award received special coaching in Entomology and Mycology outside the Gold Coast and they were also granted special opportunities for studying the cultivation and preparation of the various crops.¹²³

¹¹⁹ *Ibid.*

¹²⁰ *Agriculture Department Report* 1918, p. 8.

¹²¹ *Ibid.*

¹²² *Agriculture Department Report* 1916, p.17.

¹²³ *Agriculture Department Report* 1918, p. 8.

During the period of study, 1874-1918, some agricultural stations in the Gold Coast continued to serve as centres where agricultural knowledge was disseminated to the people. At the Asuansi Agricultural Station, a day and a boarding school were opened in 1917 to help counteract the growing tendency where the youth were attracted to the pursuit of white collar jobs.¹²⁴ In its estimation, the colonial government considered the school as an experiment for future action. Asuansi was chosen to host the schools because the Department of Agriculture wanted to prevent the students from being distracted by the attractions of town life. A senior curator of the agricultural station was in-charge of the school and a travelling instructor was the resident instructor. The school gave instruction in the three “R”s (reading, writing and arithmetic), and general agricultural practice and elementary theory to the students.¹²⁵ The mode of instruction was in Fante, which was the local language. Qualification to the school was done through the nomination of the Omanhene of Abura. A probable reason for this may be the fact that “the land on which the school was situated was gifted by the Omanhene of Abura.”¹²⁶ The school had a farm where foodstuffs and other cash crops were grown using improved scientific methods of production and was maintained by the students.¹²⁷ With the introduction of trade schools in the Gold Coast in 1922, the school became Asuansi Trade School, with Agriculture as one of its main subjects of study.

¹²⁴ *Agriculture Department Report* 1916, p. 17.

¹²⁵ *Agriculture Department Report* 1918, p. 8.

¹²⁶ *Ibid.*

¹²⁷ *Ibid.*

The development of formal agricultural education during the period of study, 1874-1918, was extended to the production of livestock by the Veterinary Department. The Veterinary Department was established in 1909. Captain W. P. B. Beal was its first Director. With its head office in Kumasi, the Veterinary Department was established, among other things, “to educate livestock owners in the proper methods of husbandry, livestock sanitation and disease prevention.”¹²⁸ In 1915, a course on Veterinary Pharmacy and Tropical Anatomy of the horse and cow was given three times per week to pupils of Veterinary Dispensary. The pupils went through practical training in Dispensing and administration of drugs under the Dispenser.¹²⁹ The programme required an Elementary School Leaving Certificate for admission. The general problem with these candidates was that they were “handicapped in their progress by a very imperfect and elementary knowledge in Arithmetic and English.”¹³⁰

Agricultural education in the various agricultural stations was an attempt to improve the junior rank base of the Departments of Agriculture and Veterinary. This period saw the organisation of agricultural training sessions at the various agricultural stations in the Gold Coast colony. Although the colony was limited in terms of providing higher agricultural training schools for its personnel, the awarding of scholarships presented the opportunity for few pupils to further their agricultural education outside the colony.

¹²⁸ Gold Coast, *Veterinary Department Report* 1909, Accra: Government Press, p. 1. [hereafter, *Veterinary Department Report*]. See also, K. O. Gyening, “Veterinary Problems in Ghana,” in *Background to Agricultural Policy in Ghana: Proceedings of a Seminar Organised by the Faculty of Agriculture, University of Ghana, Legon*, p. 133.

¹²⁹ *Veterinary Department Report* 1915, p.4.

¹³⁰ *Ibid.*

Agricultural Education in the Non-formal Sector

Apart from the aforementioned developments, progress was made in the transfer of agricultural knowledge outside the frame of formal education. Non-formal agricultural education was concurrently held to encourage farmers to adopt improved methods of farming and also deal with the menace of crop diseases. These measures were to position the colony as a source of raw materials for the metropolitan power.

Agricultural education in the non-formal sector can be described as agricultural extension. This kind of agricultural education was started by the merchants and missionaries. These Europeans engaged the people in crop production before and during the period of the legitimate trade.¹³¹ After 1874, the British initiated a planned colonial system of engaging the people in agricultural education through the wheels of the missionaries, colonial institutions, such as the Department of Agriculture and Department of Veterinary and the system of indirect rule.

By 1874, the missionaries, who basically conceived their schools as instruments for proselytisation, continued to engage their converts in improved methods of agriculture.¹³² The creation of “Salems” by the missionaries, where the new converts segregated themselves from their traditional communities, aided

¹³¹ See, K. B. Dickson, *A Historical Geography of Ghana*, London: Cambridge University Press, 1969; Peter A. Schweizer, *Survivors on the Gold Coast: The Basel Missionaries in Colonial Ghana*, Accra: Smartline Limited, 2000; Edmund Abaka, *Kola is God's Gift: Agricultural Production, Export Initiatives & the Kola Industry of Asante and the Gold Coast*, Oxford: James Currey, 2005.

¹³² World Missionary Conference, *Education in Relation to the Christianisation of National Life: Report of Commission III*, Edinburgh: Oliphant, 1910, p. 166.

agricultural education. To help sustain the *Salem*, a type of “new public” which Ekeh claimed was independent from the primordial public,¹³³ the converts under the tutelage of the missionaries grew local and exotic food crops as a way of sustaining themselves. Through this, the converts were exposed to the improved methods of crop production. Legitimate trade provided an avenue for the missionaries to introduce their converts to experimenting with cash crop production such as oil palm, cotton, and cocoa.¹³⁴ Since agricultural education in cash crops stimulated economic growth of local farmers, it became a tool for proselytisation by the missionaries. Consequently, many indigenes converted Christianity in order to have some economic prestige, and access to a new knowledge of the art and techniques of agriculture, and access to seedlings distributed by the mission to its converts.¹³⁵

Apart from the missionaries, Afro-Brazilian returnees in the Gold Coast from the second half of the nineteenth century contributed to the development of agricultural education.¹³⁶ The Afro-Brazilians settled within the Otublohum quarter in Accra.¹³⁷ Imitating the Brazilian plantocracy, they began small-scale plantations on the coast. Although there is no evidence that links the returnees to the exportation of cash crops to Europe in the second half of the nineteenth century, the Afro-Brazilians were known for planting varieties of crops which

¹³³ See, Ekeh, “Colonialism and the Two Publics in Africa,” p. 91-122.

¹³⁴ A. Adu Boahen, *Ghana: Evolution and Change in the Nineteenth and Twentieth Centuries*, Accra: Sankofa Publishers, 2000, p. 82.

¹³⁵ Peter A. Schweizer, *Survivors on the Gold Coast: The Basel Missionaries in Colonial Ghana*, Accra: Smartline Limited, 2000, p. 78.

¹³⁶ S. Y. Boadi-Siaw, “Brazilian Returnees of West Africa,” in Joseph E. Harris (ed), *Global Dimensions of the African Diaspora*, Washington: Howard University Press, 1993, p. 433.

¹³⁷ A. M. Amos & E. Ayesu, “‘I Am Brazilian’: History of the Tabon, Afro-Brazilians in Accra, Ghana,” *Transaction of the Historical Society of Ghana*, New Series, No. 6, 2002, p. 39.

included beans, cassava, corn, cashew nuts, mangoes, coconut, pineapples, pepper, flowers, silk and cotton.¹³⁸ Apart from selling these agriculture products to the Ga of Accra, who were primarily fishermen, their agricultural knowledge filtered into the indigenous community because the returnees became incorporated into the Ga society.

It must be mentioned that the establishment of botanical gardens in the last decades of the nineteenth century was another non-formal way of implementing agricultural education. The botanical gardens were also established to serve as places where foreign plants would be introduced to the local people; where local crops of economic value to the world market would be promoted; and where young Africans would also receive training in commercial agriculture to become farmers or care-takers of people's plantations. Consequently, it was suggested by the colonial government that each principal town in the Colony should establish one botanical garden.¹³⁹ Hence, botanical gardens became spaces of agricultural experimentation, where indigenous crops were improved and many local people were introduced to Western forms of scientific agriculture. It was for these reasons that the Aburi Garden was made a botanical garden by Sir W. B. Griffith in 1889.¹⁴⁰ Subsequently, the botanical garden became the venue for hosting the headquarters of the Botanical and Agriculture Department, which was established

¹³⁸ *Ibid.*, p. 43.

¹³⁹ Graham, *The History of Education in Ghana*, p. 123.

¹⁴⁰ D. A., Boakye-Yiadom, "A History of Aburi Botanical Garden," Unpublished Dissertation submitted to the Department of History, University of Ghana, Legon, 2005, p. 1.

in 1890, and also as an agricultural station.¹⁴¹ The next botanical garden was established at Tarkwa in the Western Province in 1903.¹⁴²

Consequently, the Botanical and Agriculture Department¹⁴³ promoted agriculture extension in the Gold Coast. The personnel of the Department were mandated to educate the indigenes in the most approved methods of planting and developing the agricultural resources of the colony. The Department, which was headed by a director, had the various botanical gardens as agricultural stations and sub-stations established in important cash crop communities with European curators in charge. For example, the Department of Agriculture established Agricultural Stations in Tarkwa (1902), Kumasi (1906) and Asuansi (1907).¹⁴⁴ Assisting the European curator was the “Native Travelling Instructor” who was attached to a station. His duty was to travel through the province instructing and advising the local farmers on what to grow, how to plant and how to prepare the produce for the market. Apart from the agricultural stations being distribution and purchasing centres, they were also places of experimentation.¹⁴⁵

¹⁴¹ Anyane maintains that with the establishment of the Botanical and Agricultural Department in 1890, the British colonial government assumed general responsibility for the development of agriculture in the Gold Coast. See S. La Anyane, *Ghana Agriculture: Its Economic Development from Early Times to the Middle of the Twentieth Century*, London: Oxford University Press, 1963, p. 19. See also, Edmund Abaka, *Kola is God's Gift: Agricultural Production, Export Initiatives & the Kola Industry of Asante and the Gold Coast*, Oxford: James Currey, 2005, p. 50.

¹⁴² Anyane avers that the Tarkwa botanical garden was built on the same pattern as Aburi. However, unlike Aburi botanical garden which gave primacy to both cash crops and horticulture, the Tarkwa botanical garden carried more experiments on cash crops such as rubber, cocoa, oil palm and rice. See, Anyane, *Ghana Agriculture*, p. 21.

¹⁴³ It was not until 1908 that the name Botanical and Agricultural Department was changed to Agricultural Department. See *Agriculture Department Report 1908*.

¹⁴⁴ *Ibid.*

¹⁴⁵ The botanical garden was also a sale centre for fruits such as oranges, Liberian coffee, Guavas, Mango, Rose Apple, Sweet Sop and Beefwood. Apart from the development of plant life in the garden, cross-breeding in animals such as pigs was experimented. This was to improve the breed and also the quality of the pork. See, *Gazette* 1893, p. 124.

In the Eastern Province, agricultural sub-stations were established in the following towns, Koforidua, Tafo, Kibi, Kade, Asamankese, Nsawam, Asamang-Kwahu District, Bunsu, and Peki-Blengo. In the Central Province, agriculture stations could be found in Agona Swedru, Mankesim, Saltpond, Dunkwa, Nsaba, Asuansi, Elmina, Jukwa, Agona Esikuma and Nyankomasi. In the Western Province, Sefwi, Bekwai, Wiaso, Amoya, Asankrangwa, Lower Wassa, and Tarkwa. In the Northern Territory, Tamale, and Gambaga.¹⁴⁶

These sub-stations were visited by travelling instructors from the Department of Botanical and Agriculture with the aim of furthering the dissemination of the necessary knowledge among local cultivators. They also employed every effort to impress Gold Coasters on the necessity for more improved methods and vigorous actions in dealing with the first signs of diseases.¹⁴⁷ Thus, demonstrations were given on the care of trees, mulching, removal and burning of all dead and diseased woods and the use of insecticides, gathering of cocoa pods, draining, and the preparation of beans for the market.¹⁴⁸ For example, before 1899, cocoa beans were only washed and dried in the sun without fermenting it. This affected the quality of the cocoa beans since fermenting the beans prevented maggots and other bacteria from infecting it. It took the instruction of the Agriculture Department before cocoa beans were fermented for the first time in 1899.¹⁴⁹

¹⁴⁶ *Gazette* 1914, p. 414.

¹⁴⁷ *Ibid.*

¹⁴⁸ *Ibid.*, p. 850.

¹⁴⁹ Acquaaah, *Cocoa Development*, p. 58.

At the botanical gardens or agricultural stations, the people were also taught the botanical names of plants and seeds in the English language.¹⁵⁰ The verbosity of these names made it difficult for the people to pronounce. Most often the people corrupted the pronunciation of these names to that which was similar to their native tongue.¹⁵¹

In some of the places that the agriculture officers toured, the people showed interest in the instruction given and appeared to welcome them. The people in the Eastern Province were said to be welcoming in the various reports by the travelling instructors probably because of their encounter with the Basel missionaries who engaged them in agricultural training earlier. However, in some places, the travelling instructors were not well received and the people were indifferent to the instructions and paid very little attention. For example, in a tour of the Western Province by travelling agents, reports were made of some villages in Lower Wassaw which showed little interest in the agricultural demonstrations.¹⁵² For this reason, it was realized that instructions given on many of the farms were not carried out.¹⁵³

The reason for this attitude can be attributed to the following factor. Whereas many cash crop farmers in other colonies depended on European capital and management, the Gold Coast farmers depended on their own resources in

¹⁵⁰ Plants and seeds were sent from the Royal Gardens, Kew (Kew Gardens) in London to Aburi Botanical Garden. Plants such as *Achras Sapota* (fruit tree) (Cinnamon), *Caryophyllus aromaticus* (Clove), *Flacourtia Romantchi* (Fence Plant), *Michelia Champaca* (Fruit tree), *Castilloa elastic* (Central American Rubber), *Hevea Spruceana* (British Guiana Rubber) etc. the Garden also received seeds such as *Acacia linifolia*, *Dioscorea sativa*, *Eucalyptus crebra* and *Corypha elata*. See, *Gazette* 1893, p. 124.

¹⁵¹ *Ibid.*

¹⁵² *Agriculture Department Report* 1901, p. 5.

¹⁵³ *Gazette* 1914, p. 850.

cash crop production.¹⁵⁴ For this reason, they were at liberty to implement or ignore the instructions of the agricultural officers on tour. This had a negative effect on the cash crop industry. For example, in 1904 Hamburg and London brokers reported that the exported cocoa beans were improperly dried because a large percentage of the beans were immature, shrivelled and maggot-infected.¹⁵⁵ This affected the market price of cocoa in the subsequent year. Given that the exported beans did not fetch good prices on the world market and as a result led to the reduction of the prices, the Department of Agriculture toured plantations in the Colony and instructed the farmers on the best methods of cultivating cocoa and coffee. The farmers were also taught how to pick and prepare the pods and seeds in order to obtain good prices.¹⁵⁶

With the continuous expansion of the cash crop economy, as a result of local farmers investing in land and labour in the wake of high demand of cash crops such as cocoa,¹⁵⁷ starting from the Akuapem Hills to the west of Akyem Abuakwa territory and later from Ashanti¹⁵⁸ to the Ahafo areas agricultural extension became important so as to increase the cash crop export.¹⁵⁹ To achieve this objective, a considerable amount of travelling was done by the officers of the

¹⁵⁴ Acquaaah, *Cocoa Development*, p. 57.

¹⁵⁵ *Annual Report* 1904, p. 19.

¹⁵⁶ *Annual Report* 1906, p. 14

¹⁵⁷ P. Hill., *The Migrant Cocoa-Farmers of Southern Ghana: A Study in Rural Capitalism*, Cambridge: Cambridge University Press, 1963, p. 183. See also, F. Agbodeka, *An Economic History of Ghana From the Earliest Times*, Accra: Ghana Universities Press, 1992, K. S. Amanor, *The New Frontier: Farmer Responses to Land Degradation: A West African Study*, London: Led Books Ltd, 1992.

¹⁵⁸ The word "Ashanti" is an European corrupted version of the word "Asante," a confederacy of Akan states in the forest belt of the Gold Coast. However, since most of the archival documents use the former word in their official documents, this thesis with follow suit in order to achieve consistency in the usage of the word.

¹⁵⁹ G. B. Kay, *The Political Economy of Colonialism in Ghana; Documents and Statistics, 1900-1960*, Cambridge: Cambridge University Press, 1972, p. 202.

Department of Agriculture. In 1915 for example, “the European staff occupied an aggregate of 641 days and the African officers 2,299 on duty from their station.”¹⁶⁰ The Travelling Instructors embarked on several tours: 24 in the Eastern Province, 14 in the Central Province, 9 in the Western Province, 17 in Ashanti and 3 in the Northern Territories.¹⁶¹

On their tours, the Travelling Instructors assessed the work done at the various agriculture stations and sub-stations and the progress of model farms, and also interacted with chiefs and opinion leaders. The travelling instructors held discussions with farmers and answered many pertinent questions bothering the mind of the farmers. Although the farmers listened to the instructions made by the instructors, most of them did not put into practice the recommendations on issues such as the control of crop diseases, farm hygiene and improved method of cocoa beans fermentation. The Department of Agriculture was of the opinion that the farmers “obviously do not yet realize the necessity for such operations.”¹⁶²

Consequently, the attitude of the farmers to the instructions of the travelling instructors affected cocoa production again during World War I. The Travelling Instructors reported numerous cases of “Brown root disease,” “Thread blight,” and “Brown pod.”¹⁶³ Once again, cocoa beans were infected by bacteria because they were not well fermented. Most of the cocoa brokers complained that before the cocoa beans got to its destination, they were already rotten. This was also as a result of improper fermentation. Some farmers did not ferment their

¹⁶⁰ *Agriculture Department Report* 1915, p. 14.

¹⁶¹ *Ibid.*

¹⁶² *Agriculture Department Report* 1916, p. 11.

¹⁶³ *Ibid.*

cocoa because they claimed that the beans lost weight after fermentation.¹⁶⁴ To this end, efforts were made by the travelling instructors to get the farmers to thoroughly prepare and dry their cocoa beans so that in the event of not finding a purchaser, the farmers would more easily store the beans without deterioration and that not all cocoa beans lost their weight when they were fermented. However, in several instances, some uninformed brokers refused to purchase fermented cocoa beans because it was dark in colour, although it had superior quality.¹⁶⁵ The lack of knowledge shown by brokers who refused to buy fermented beans because of its colour prompted the Department of Agriculture to consider educating brokers about the characteristics of the quality cocoa beans.

Considering the challenges that faced the cash crop industry when it came to preventing and containing diseases, the travelling instructors engaged farmers in farm hygiene. The period, 1874-1918, saw an attempt to conscientise local farmers on the need to sustain and increase crop production through farm hygiene, an act of maintaining cleanliness and the consequent elimination of sources of crop and livestock diseases.¹⁶⁶ The instructors were of the view that, farm diseases were as a result of local farmers' failure to contain crop diseases from extending to unaffected plants by burning all diseased plants. Farm hygiene prevented crop diseases from spreading.¹⁶⁷ In some situations, instructors were stationed on farms to carry out demonstrations on how to 'treat' the farms. However, some farmers

¹⁶⁴ An experiment was held at the various agricultural stations to determine the loss of the weight due to fermentation. The result showed that an average loss of 1 percent was recorded when the Amelonado variety of cocoa was fermented. *Ibid.*

¹⁶⁵ *Ibid.*

¹⁶⁶ Kwarteng & Towler, *West African Agriculture*, p. 81.

¹⁶⁷ *Agriculture Department Report 1916*, p.27.

discontinued the treatment of their farms after the instructors had left their farms.¹⁶⁸

Consequently, instructors were not able to contain some of the diseases caused by insects and fungoid due to the inability of some farmers to put measures of controlling crop diseases into practice. Two reasons can be adduced to explain the aforementioned problem. First, the availability of land in the Gold Coast made farmers cultivate new large farms instead of treating the infected ones. Second, since the farms were large and demanded extra labour, it became very difficult for a farmer to treat each of the trees infected by the diseases alone. With an outbreak of crop diseases, therefore, they moved to other available lands (shifting cultivation) to continue their farming instead of treating the diseases trees. In situations where instructors intervened to put the cocoa farms in order, no pragmatic steps were taken by the owners to continue the work of the Instructors.

The Director of Agriculture reported that:

Whilst cocoa was extended, there was no noticeable progress made in the care of existing farms. Insects and fungoid pests were allowed free play, pruning was carried out in a careless manner, and the majority of the farms received little or no attention. And so, an Instructor was stationed in the district and carried out demonstrations on badly attacked farms but the owners did not continue the work and treated trees are gradually going back into their original infected conditions.¹⁶⁹

The situation could not be contained by the Department of Agriculture due to lack of cooperation from the local farmers. Progress would have been made if the local

¹⁶⁸ *Ibid.*

¹⁶⁹ *Agriculture Department Report 1918*, p. 15.

people had responded to the containment measures outlined by the Department of Agriculture.

Three things come to the fore when analysing the reasons for the deplorable state of the cocoa farms during the period of study. The Director of Agriculture was of the view that; “the natives as a result of his acquisition of wealth has become too indolent to work on his farm...”¹⁷⁰ This position cannot entirely be the case. From the perspective of Hill, local farmers, after acquiring wealth, invested in new land and labour by moving to new areas where soils were most suitable and where land could be acquired through purchase or leases.¹⁷¹ Later, farmers reinvested the surplus from new lands and farms in other enterprises such as transportation and complementary services.¹⁷² Because labourers could be hired, most farmers became absentee farmers who preferred to live in the cities without necessarily living on their farm lands.¹⁷³ It can, therefore, be surmised that the labourers of these farms did not give much attention to the instructions. Also, the abundance of land made farmers cultivate large cocoa farms which needed extra labour. This problem was difficult to control because of “the absence of regulation.”¹⁷⁴ The colonial government was not empowered by law to apply punitive measures on farmers who did not manage their farms well.

Lastly, the colonial government did not have control over lands in the Gold Coast. Since land was owned by the local people and communities, the

¹⁷⁰ *Agriculture Department Report* 1917, p. 11.

¹⁷¹ Hill, *The Migrant Cocoa-Farmers of Southern Ghana*, p. 183.

¹⁷² *Ibid.*, p. 190.

¹⁷³ *Ibid.*, p. 185.

¹⁷⁴ *Agriculture Department Report* 1917, p. 11.

colonial government could not control land use.¹⁷⁵ The French colony of Ivory Coast presented a contrary situation. Cocoa farms in the Ivory Coast were mostly ordered by the colonial regime specifications: cocoa trees were planted in rows at the appropriate distance, cocoa trees had cover trees to provide shade, trees were pruned and farm hygiene was highly observed. This was the case in the Ivory Coast because land was the state's property and so land was leased to farmers who were ready to go by the rules of the colonial government for cocoa production.¹⁷⁶

For the reason that no punitive action could be taken against the farmers in the Gold Coast, coupled with the need to maximise production, the Department of Agriculture took measures to contain the challenges. The Director of Agriculture reported that:

Demonstration on the cultivation and sanitation of cocoa farms were conducted. The necessity for the control of insect and fungoid pest was fully explained and every opportunity was taken to advise farmers against planting up larger areas with cocoa than they should control. The preparation of the beans for market was fully explained and all farmers were advised to ferment their beans for six days in wooden boxes and dry thoroughly before putting the produce on the market.¹⁷⁷

The Director's report shows how the colonial government persistently engaged cocoa farmers in agricultural training from the early stages of planting to the harvesting stage of cocoa beans for the market.

¹⁷⁵ In 1897, the people of the Gold Coast led by the Aborigines' Right Protection Society successfully protested against the British quest to vest all lands in the Queen of England. This prevented the colonial government from determining the usage of lands by the local people in the Gold Coast. See, David Kimble, *A Political History of Ghana: The Rise of Gold Coast Nationalism, 1850-1928*, Oxford: Clarendon Press, 1963, pp. 330-355.

¹⁷⁶ W.E F. Ward, *My Africa*, Accra: Ghana Universities Press, 1991, p. 114.

¹⁷⁷ *Agriculture Department Report 1916*, p. 23.

The travelling instructors also encouraged agricultural diversification by conscientising the indigenes on the need to cultivate other cash crops apart from cocoa since it was not advisable to put “all their eggs in one basket.”¹⁷⁸ The need to cultivate para-rubber, coconut, coffee, as well as valuable products such as oil palm and kola was brought to the notice of the farmers through agricultural education. It is important to note that although some farmers took an interest in coconut, para-rubber and coffee, others did not consider kola as a cash crop and so did not give the required attention to it. Although farmers viewed oil palm production to be labour expensive or too difficult, in comparison with cocoa, they recognised the potential high value of oil palm production.¹⁷⁹

Equally important to the narrative of agricultural diversification, through agricultural education, was the role played by the White Fathers in the Northern Territories.¹⁸⁰ The White Fathers, who established their station in Navrongo in 1906, initiated the cultivation of vegetables such as tomatoes, lettuce, onions, carrots and spinach and fruits such as mangoes, guavas, and pawpaw.¹⁸¹ The missionaries made a garden which they maintained both in the dry season and wet seasons. According to B. G. Der, with the extension of the White Fathers stations to Bolgatanga, Wiaga and Binduri in the North-Eastern and Jirapa, Kaleo and Nandom in the North-West, similar gardens were established at these places and

¹⁷⁸ *Ibid.*, p. 11. See also, Kay, *The Political Economy of Colonialism in Ghana*, p. 200.

¹⁷⁹ *Agriculture Department Report 1919*, p. 16.

¹⁸⁰ The White Fathers were French Roman Catholic missionaries who first settled in the Upper Volta, now Burkina Faso. The White Fathers moved to the Northern Territories in 1906 after their application to establish a mission field in Northern Territory was accepted by the British government. See, R. B. Bening, *A History of Education in Northern Ghana, 1907-1976*, Accra: Ghana University Press, 1990.

¹⁸¹ Benedict G, Der, ‘Missionary Enterprise in Northern Ghana, 1906-1975: A Study in Impact,’ PhD thesis submitted to the Department of History, University of Ghana, Legon, 1983, p. 356.

fruit trees were grown on the mission premises. In the course of time, the knowledge of cultivating these crops, especially tomatoes and fruit trees, were absorbed by the local people.¹⁸² For example, tomatoes became a major staple in their domestic consumption and a source of revenue.

Also, through agricultural education, the White Fathers introduced rice cultivation in the eastern part of the Northern Territories. Until 1912, the Kasena did not grow rice. Although they grew crops such as maize, beans and groundnuts, they were cultivated in insufficient quantities.¹⁸³ This led to frequent food shortage in Navrongo and its environs. The missionaries saw the situation as an obstacle to their missionary activities. To remedy the situation, the White Fathers introduced rice cultivation in Navrongo through the education of their converts in 1912. The White Fathers distributed rice among the converts and practical steps were taken to demonstrate its cultivation to the Kasena on a land which was acquired from the colonial government.¹⁸⁴

Moving away from the development of agricultural education through agricultural diversification, attention will now be drawn to the role played by the colonial system of Indirect Rule in the development of agricultural education in colonial Ghana. Under the colonial system of Indirect Rule, the British government used African traditional rulers and existing political institutions in the administration of the colony to help spread agricultural education in various polities. The travelling agents and District Commissioners impressed upon the

¹⁸² *Ibid.*

¹⁸³ *Ibid.*

¹⁸⁴ *Ibid.*

chiefs on the necessity to carry out the bye-laws relating to cocoa and other crops and to do all within their power to help the local farmers.¹⁸⁵ For example, Nana Owusu Ansah, Omanhene (Paramount Chief) of Akuapem, (1895-1913), after being informed about economic opportunities in cocoa production, obligated his subjects to possess at least five acres of cocoa farms. This decision of the State Council spread through the 17 towns that constituted the Akuapem State.¹⁸⁶

Additionally, under the auspices of the Indirect Rule, government experimental cotton farms were established, for example at Anum (105 acres) and Labolabo (27 acres)¹⁸⁷ in the Eastern Province, in 1904 to serve as experimental and seed-distributing centres. To educate local farmers on the economic prospects of growing cotton in an area already introduced to the production of cocoa and oil palm, the manager of the farms and his assistants promoted the cultivation of cotton by visiting the chiefs in the Akwamu State. With the acceptance of cotton growing in the area, the British Cotton Growing Association took over the Anum and Labolabo farms and begun experimentation in the hybridization of the seeds in 1906.¹⁸⁸ Also, the British Cotton Growing Association established a cotton experimental farm in Tamale to introduce the local farmers to improved scientific methods of cotton cultivation in 1909. To further introduce the local farmers to

¹⁸⁵ *Agriculture Department Report* 1919, p. 16.

¹⁸⁶ *Ibid.*, p. 22.

¹⁸⁷ The Labolabo farm was situated at the base of the Aframame Hill, about a mile distant from the Volta River. See, *Agriculture Department Report* 1904.

¹⁸⁸ *Annual Report* 1906, p. 24; See also, S. E. Koli, *A Guide to Cotton Cultivation in Ghana*, Tema: Ghana Publishing Corporation, 1973.

the use of cotton harvesting machines such as the cotton gin and the press, a public demonstration was given in Tamale in the same year.¹⁸⁹

On the littoral of the Gold Coast, chiefs were encouraged to promote the copra industry. For example, the Director of Agriculture met the Ga Mantse, the Paramount Chief of the Ga people, to discuss the possibility of a coconut industry in 1907. Apart from providing the free coconut tree seedlings, the Director deployed officers of the Agricultural Department to supervise the people in planting and giving of any necessary assistance.¹⁹⁰

Chiefs were also encouraged by the British to engage their people in the production of cash crops by appointing one of the indigenes in a given chiefdom to go through agricultural instruction at a botanical station. After the completion of the training, the “native” became a local instructor who served the chiefdom which appointed him to go for the agricultural training. These local instructors were called Omanhene Cocoa Instructors for the Akan speaking communities or Fia¹⁹¹ Cocoa Instructors for the Ewe, especially, Peki area.¹⁹²

These instructors trained local farmers, in their chiefdom, in cash crop production in the vernacular language. The pupils, who were middle aged men, received 3 pounds as an allowance for enrolling for the course of study. At the end of the course, the trained farmers returned to their various chiefdoms to spread the knowledge gained from their training. In a situation where local

¹⁸⁹ Samuel A. Ntewusu, “Kwame Nkrumah and the Agricultural Development of Northern Ghana,” in Bea Lundt & Christoph Marx (eds), *Kwame Nkrumah, 1909-1972: A Controversial African Visionary*, Stuttgart: Franz Steiner Verlag, 2016, p. 110. See also, K. B. Dickson, “Background to the Problem of Economic Development of Northern Ghana,” in *Annals of the Association of American Geographers*, Vol. 58, (1968): pp. 696-696.

¹⁹⁰ *Gazette* 1907, p. 847.

¹⁹¹ Fia is the traditional title for a chief among the Ewe people in the south-eastern part of Ghana.

¹⁹² *Gazette* 1914, p. 414.

instructors were able to transmit the art and techniques of what was studied at the agricultural station, the instructors continued to receive a regular fee from the government.

This was to motivate the use of improved methods of agriculture among the people and also encourage them to attach more importance to their adoption of western methods of production. The Omanhene's local instructors also recommended their fellow indigenes to their Omanhene to be selected to go to the agricultural station at Aburi for agricultural training. Later, the local instructors were employed in the Department of Agriculture as interpreters and travelling instructors.¹⁹³ From the beginning of 1915, local instructors were given a list of villages to visit monthly. The lists were arranged so that the same village was visited every three months.¹⁹⁴ This was to enable the instructors to visit every village in a given chiefdom in an appreciable interval.

The scheme of producing Local Cocoa Instructors was not free from challenges. An assessment reveals that the scheme faced supervisory problems.¹⁹⁵ The first problem was failure by many Amanhene (Paramount Chiefs) of indigenous states to supervise the instructors by making sure that they performed their duties in a given chiefdom. This failure can be attributed to the fact that the Amanhene themselves were not informed about the improved agricultural techniques. Since the Instructors were trained by the Department of Agriculture, they were exposed to the improved techniques in cocoa production as compared to the chiefs who had no training. Thus, whether the instructors performed their

¹⁹³ *Ibid.*, p. 19.

¹⁹⁴ *Agriculture Department Report* 1915, p. 27.

¹⁹⁵ *Agriculture Department Report* 1918, p. 9.

duties or not, it became difficult for the Omanhene to assess them. Another problem was the attitude of the local farmers. Little progress was made because farmers did not pay sufficient attention to the instructors.¹⁹⁶ Since cash crop in general and cocoa production in particular was a local enterprise controlled by the indigenous farmers, they were not obliged to implement the advice of the instructors.¹⁹⁷

The attitude of some of the instructors also hindered the progress of the scheme. Under the scheme, the Local Cocoa Instructor, an indigene who worked among his people, was required to demonstrate his agricultural knowledge on his farms so that its outcome will encourage his neighbours to adopt the improved systems of farming espoused by the Department of Agriculture. In this way, the instructor was expected to be an example to his people. On the contrary, many of the farms of instructors were not well kept because “the slovenly method in which their own farms were conducted could not have influence on their neighbour’s farms.”¹⁹⁸ Measures taken to solve these problems were to employ more junior agriculture officers and reprimand instructors who were not up to task. For example, of the 12 Local Cocoa Instructors in the Gold Coast, three were dismissed and one resigned in 1915.¹⁹⁹

Furthermore, the colonial effort to root western agricultural norms in the Gold Coast led the colonial regime to establish “model farms”.²⁰⁰ Model farms

¹⁹⁶ *Agriculture Department Report* 1915, p.14.

¹⁹⁷ Hansen, “National Food Policies and Organisations in Ghana,” p. 49.

¹⁹⁸ *Agriculture Department Report* 1916, p. 11.

¹⁹⁹ *Agriculture Department Report* 1915, p. 27.

²⁰⁰ A model farm is an experimental farm which demonstrates improved agricultural techniques in a layout. It is designed to serve as a pattern in agricultural production.

were established in cash crop areas to serve as an example to the people on how the colonial government wanted the farms of the indigenous people to be carried out. The establishment of model farms meant that the farms became the ideal type of farm which the people were expected to emulate. Also, the model farms presented the Department of Agriculture the opportunity to practically demonstrate their theoretical position on agriculture to the people. For example, on the model farms, crops were planted in straight lines and at specified or suitable distance apart.²⁰¹ The farms were established by the Department of Agriculture at the request of certain Amanhene (paramount chiefs) who provided land for the farm. After completion, the farms were handed over to the chiefs. Model farms were established in places such as Nsawam, Esikuma, Nsaba, Juaben, Ejisu and Mampong.²⁰²

The introduction of model farms did not receive the expected support from the people. While some chiefs made efforts to maintain the farms, some neglected the farms. For example, on the one hand, the Omanhene of Nsaba “provided assistance and displayed some enthusiasm in the Model Farms projects.”²⁰³ On the other hand, the Juaben Model Farm, after being handed over to the chiefs, “was overgrown, the cocoa plants were all destroyed by insects and several of the para-rubber trees were killed by brown and white root diseases.”²⁰⁴ For this reason, the department did not establish more model farms since some chiefs paid little or no attention to model farms once they were handed over to them. For

²⁰¹ *Agriculture Department Report* 1917, p. 10.

²⁰² *Agriculture Department Report* 1918, p. 11.

²⁰³ *Agriculture Department Report* 1915, p. 14.

²⁰⁴ *Agriculture Department Report* 1917, p. 23.

chiefs who showed the desire to have model farms, the department had to send farm attendants to the model farms before they were well kept.²⁰⁵

The organisation of Agricultural Shows by the Department of Agriculture also provided another way of engaging the people in agricultural education. The first Agricultural Show in the Colony took place in Accra in 1905²⁰⁶; earlier in the pre-colonial period, one was held in 1857. The Show was designed to stimulate the people to venture into the production of cash crops to meet the metropolitan demands. At the Agricultural Shows, agricultural products from the various agricultural stations and sub-stations as well as some school farms were showcased for the people to imbibe the methodologies which underpinned the planting of such agricultural products. Additionally, the exhibits were made up of a collection of indigenous agricultural and cash crop products as well as poultry and sheep.

With its main purpose of introducing new cash crops to the people and further integrating the Colony into the global capitalist economy, the Agricultural Shows received people and exhibits from outside the Colony. Present at the 1906 Agricultural Show was Lord Mountmorres, Director of Liverpool Institute of Commercial Research. He showed interest in the collection of cocoa, rubber, palm oil, rice and gums, some of which were produced in Africa and others in the West Indies.²⁰⁷ In an attempt to introduce cash crop economy to other parts of the Gold

²⁰⁵ *Ibid.*

²⁰⁶ *Agriculture Department Report* 1905, p. 11.

²⁰⁷ *Annual Report* 1907, p. 463.

Coast, some chiefs were selected from the Northern Territories to attend the first Agricultural Show in Kumasi in 1908.²⁰⁸

Before an Agricultural Show was held, government officials visited leading chiefs in cash crop communities to explain the purpose of the show to them. This was to influence the chiefs to encourage their subjects to attend in their numbers. It is important to note that participating chiefs and some farmers were sent with their exhibits, at the expense of colonial government, to represent the Colony at other Agricultural Shows in other British Colonies. For example, in 1906, some chiefs and 37 farmers from the Gold Coast Colony participated in an Agricultural Show held in Lagos where 10 out of the 37 farmers received prizes for their exhibits.²⁰⁹ As the Show became popular, it was also organized at the district levels. For example, the Agricultural Show which was held in Kibi in 1911 was attended by most of the chiefs in Eastern Akyem and nearly all the chiefs from the Birim District.²¹⁰

The organisation of the Agricultural Shows was not free from counter-reaction. Although some people saw the Agricultural Shows as an opportunity to market their products, others questioned the justification of sending their exhibits to the Show since some had the opinion that the Agricultural Shows were a new means of assessing the taxable capacity of the Colony.²¹¹ For this reason, the organizing committee of the Show found it difficult to induce the people to

²⁰⁸ R. B. Bening, *A History of Education in Northern Ghana, 1907-1976*, Accra: Ghana University Press, 1990, p.150.

²⁰⁹ Available documents do not name those who went to Lagos for the Agricultural Show. *Annual Report 1906*, p. 21.

²¹⁰ *Agriculture Department Report 1911*, p. 7.

²¹¹ *Gazette 1893*, p. 124.

participate in the Agricultural Shows. This explains, in a way, why chiefs were invited to participate in the Shows and subsequently selected to attend Agricultural Shows in other colonies.

The need to encourage the quality and quantity of cash crops produced in the Gold Coast led to the organisation of an agricultural competition by the Department of Agriculture. For the first time in the Gold Coast, a Cocoa Farm Competition was organised in 1917. Such competitions were opened to all cocoa farmers in the Gold Coast, having farms of not less than 300 cocoa trees. At the end of the competition, 20 prizes of five pounds each were awarded to the participants, with eight prizes being allocated to the Central Province, seven to the Southern and five to the Western Province.²¹² The judges awarded points based on the general cultivation, spacing of trees, pruning, sanitation and the preparation of beans for market. These requirements, outlined by the Department of Agriculture, made farmers to, indirectly, implement agricultural policies. Of the 156 competitors who entered the competition, 75 came from the Central Province, 56 from the Southern Province and 25 from the Western Province.²¹³

The results of the judges indicated that the quality of farms was higher in the Central Province than in the two other provinces. Considering the standard of the farms in the three provinces and taking the marks of 100 percent, the first prize winner in the Central Province gained 83 percent, the Western Province, 74 percent and in the Southern, 71 percent of the marks. Generally, the competitors gained good marks for general cultivation and pruning, but were poor in

²¹² *Agriculture Department Report* 1917, p. 23.

²¹³ *Ibid.*

sanitation and preparation of the crops for the market. It was also noticed that the fermentation of the beans in many instances was good considering the general lack of fermenting appliances.²¹⁴ The competition was short-lived because the sponsors, Messrs Cadbury Brothers, did not release funds to support the programme in the subsequent years. However, the competition awakened the interest of the farmers to apply the improved methods on their farms. The travelling inspectors were of the view that “if regular competitions were held, it would stimulate improved agricultural methods.”²¹⁵

The period of study, 1874-1918, also witnessed the formation of cocoa growers associations among Gold Coasters. For example, the Nsawam-Aburi Cocoa Growers Association, *Sika Mpoano Fekuw* (Gold Coast Farmers Association) and Asuogya Cocoa Growers Association were formed. Although they were formed to basically bargain for better prices for cocoa, they also organised their members to receive cocoa instructions from the Department of Agriculture. Issues concerning the control of cocoa diseases and emerging farming techniques were discussed during their meetings.²¹⁶ They also arranged with Travelling Instructors to tour the farms of their members. It is also important to note that farmers associations participated in District Agricultural Shows. In 1915, the Director of Agriculture reported that “that the native farmers could

²¹⁴ *Ibid.*

²¹⁵ *Agriculture Department Report* 1918, p. 10.

²¹⁶ Acquah, *Cocoa Development in West Africa*, p. 42.

prepare higher grade quality of cocoa was demonstrated at the Cocoa Show held at Nsawam by a small association of cocoa farmers.”²¹⁷

Agricultural education among farmers’ associations became non-effective especially after the First World War, when the association’s demand for better prices for their products became severe. In the passage of time, the zeal of the farmers began to wane when their expectations were not met. In 1916, the Director of Agriculture reported that:

The formation of Association of Cocoa farmers has made no progress during the year and the Association formed in the Aburi-Nsawam district in spite frequent meetings and assistance, does not seem to make much headway. It is extremely difficult to raise any enthusiasm and maintain the interest of farmers when immediate results are not apparent.²¹⁸

Agricultural education in the various associations was non-effective because the associations were not formed by the colonial government. The organisation of training for the members was, therefore, based on the consent of the members of the associations when the local farmers deemed it plausible. Also, since the primary purpose for the establishment of the associations was not agricultural education, it was considered as one of the secondary objectives of the associations and, therefore, it was not given the needed attention.

The production of literary works, books, pamphlets and the newspapers that carried information about agricultural ideas for the consumption of the local farmers and people interested in agriculture also supported the development of

²¹⁷ *Agriculture Department Report* 1918, p. 9.

²¹⁸ *Agriculture Department Report* 1916, p. 7.

agricultural education. According to Acquaaah, Governor Bradford wrote widely on cocoa cultivation during his tenure in office.²¹⁹ In 1915, the Department of Agriculture published books to help in agricultural education. For example, the following pamphlets were published: “Hints on the Cultivation and Preparation of the Gold Coast Rubber;” “Hints on the Cultivation and Preparation of Cocoa;” “Instructions for the Guidance of Native Travelling Instructors;” and “Rules for the Guidance of Agriculture Learners or Apprentices.”²²⁰

The Department of Agriculture also used its publications to promote the use of local farm products. For example, in 1918, a small pamphlet on *Methods of Utilising Local Products in Place of Imported Provisions* was prepared and issued by the Department of Agriculture.²²¹ The printing of agricultural publication in the Gold Coast was affected by the First World War. By the end of the war, the Director of Agriculture reported that:

the shortage of paper during the war has prohibited the printing of other than the most absolutely important works... our pamphlets on various crops are consequently now almost exhausted...²²²

The outbreak of World War I did not only affect the development of agricultural education in the formal sector but also the non-formal sector.

By 1919, agricultural education in the non-formal sector, which was once dominated by the missionaries, was spearheaded by the Department of Agriculture. This did not mean that the missionaries no longer engaged in

²¹⁹ Acquaaah, *Cocoa Development*, p. 32.

²²⁰ *Agriculture Department Report* 1915, p. 16.

²²¹ *Agriculture Department Report* 1918, p. 8.

²²² *Ibid.*

agricultural education. They did, but the Department of Agriculture was mainly in charge of the *modus operandi* of agricultural education among the people. The establishment of botanical gardens and agricultural stations in principal cash crop communities spread improved methods of cash crop production. The extension services of the Department provided the people an access to the Western form of agricultural education through practical experimentation. By 1919, agricultural stations in charge of European agriculturists has been established in the Gold Coast Colony, Ashanti and the Northern Territories with European and local instructors serving as travelling instructors and educating the indigenous producers' on the improved methods of cultivation and preparation of farm products.

Conclusion

So far, we have seen that the period reviewed, 1874-1918, witnessed the beginning of agricultural education in colonial Ghana with the aim of satisfying the colonial demand for cash crops, through the application of Western-oriented scientific knowledge and technological research. This was achieved through the establishment of institutions such as the Department of Education, Department of Agriculture, and the Department of Veterinary. In the formal sector, the Department of Education in collaboration with the Department of Agriculture did some restructuring work to the staple curriculum to include agricultural education. The collaborating institutions also encouraged agricultural education through school exhibitions and the organisation of agricultural courses for teachers and students.

In the non-formal sector, the Department of Agriculture, in responding to the opening up of new economic frontiers in the Gold Coast because of the legitimate trade, extended its services of agricultural education with the establishment of agricultural stations. This in turn provided agricultural experimentation and demonstration within important cash crop growing areas and the provision of agriculture extension officers to educate the people. By 1919, the educational activities of the Department of Agriculture positioned the Gold Coast as a major source of cash crop to the colonial government. This enabled Britain to prosecute the World War I and II. The next chapter looks at agricultural education in colonial Ghana in the inter-war periods, 1919 to 1939.

CHAPTER THREE

AGRICULTURAL EDUCATION IN THE INTER-WAR YEARS,
1919-1939**Introduction**

Prior to the inter-war years, 1919-1939, the colonial system positioned the Gold Coast as a source of raw materials to the metropolitan power within the matrix of the “Legitimate” Trade through its exploitative machineries. During the inter-war years, the British colonial government was faced with the task of sustaining what it had achieved as well as expanding its resource base in its colonies.²²³ Consequently, the colonial machinery of exploitation was further equipped to manage the new agricultural frontiers that were opened by the farmers of the Gold Coast. The opening up of the new frontiers was largely in response to the metropolitan demand for cash crops from the Gold Coast.²²⁴ In order to encourage farmers to increase cash crop production and motivate school pupils to become farmers, agricultural education became one of the important steps the colonial government took during the inter-war years.

²²³ Roland Oliver & Anthony Atmore, *Africa Since 1800*, Cambridge: Cambridge University Press, 1969, p. 160; A. G. Hopkins, *An Economic History of West Africa*, New York: Longman, 1973, p. 184; Andrew Roberts (ed), *The Colonial Moment in Africa: Essays on the movement of minds and materials, 1900-1940*, Cambridge: Cambridge University Press, 1986, p. 41; Robin Hallett, *Africa Since 1875: A Modern History*, Delhi: Surjeet Publications, 2005, p. 58. See also, M. Crowder, *West Africa under Colonial Rule*, London: Hutchison, 1968; Semakula Kiwanuka, *From Colonialism to Independence: A Reappraisal of Colonial Policies and African Reactions, 1870-1960*, Nairobi: East African Literature Bureau, 1973; R. Howard, *Colonialism and Underdevelopment in Ghana*, London: Croom Helm, 1978; D. K. Fieldhouse, *Colonialism, 1870-1945: An Introduction*, London: Weidonfeld and Nicolson, 1981; A. Adu Boahen, *African Perspectives on Colonialism*, Baltimore: John Hopkins University Press, 1987.

²²⁴ K. S. Amanor, *The New Frontier: Farmer Responses to Land Degradation: A West African Study*, London: Led Books Ltd, 1992, p. 33. See also, P. Hill., *The Migrant Cocoa-Farmers of Southern Ghana: A Study in Rural Capitalism*, Cambridge: Cambridge University Press, 1963; F. Agbodeka, *An Economic History of Ghana From the Earliest Times*, Accra: Ghana Universities Press, 1992; A. Adu Boahen, *Ghana: Evolution and Change in the Nineteenth and Twentieth Centuries*, Accra: Sankofa Publishers, 2000.

This chapter discusses the development of agricultural education during the inter-war years, a period which starts from 1919-1939. First, the reasons for reviewing the existing curriculum in order to promote the study of agriculture in the schools, and the promulgation of new agricultural policies and other attempts to develop agricultural education are discussed. Second, the chapter discusses new approaches that the colonial government adopted while it engaged the people in agricultural education. Third, the responses of farmers to agricultural education are discussed.

Agricultural Education in the Formal Sector

By 1918, agricultural education featured in the educational system of the Gold Coast as a core subject. Also, the study of agriculture moved from the missionary domain of education to government assisted schools. This feat was possible because of the introduction of agriculture into teacher training colleges and the organisation of agricultural programmes such as the Annual Exhibition of School Industries. The end of World War I, therefore, coincided with a time when instruction in agriculture was given in nearly every missionary and government assisted school in the Gold Coast.²²⁵

The aftermath of World War I witnessed significant improvements in agricultural education in the Gold Coast. This resulted from internal and external factors. In the Gold Coast, educational development was possible because of the “phenomenal expansion in trade which occurred after the War”,²²⁶ the period witnessed an economic boom mainly because of the spread of the cocoa industry

²²⁵ *Annual Report 1918*, p. 18.

²²⁶ *Education Department Report 1929*, p.1.

into other parts of the Colony and Ashanti.²²⁷ The growth of the economy positioned the colonial government to undertake educational projects. The external factor was the revealing report on education in Africa by the Phelps-Stokes Commission which called for the restructuring of the educational system to meet the needs of Africans.²²⁸ This report received “the support of leading missionaries, colonial educationists and even the Colonial Office itself.”²²⁹ Of these factors, it was the report of the Phelps-Stokes Commission which called for the restructuring of the educational system. Thus, the beginning of the 1920s saw attempts by the colonial government to redefine the content and nature of education in the Gold Coast.

In 1920, Governor Guggisberg appointed an Educational Committee “to investigate past educational effort in the Gold Coast, their success and failure and the reason therefore, and, also to consider and report on the methods, principles and policy governing the progress of education in the Gold Coast as laid down in several reports, official and otherwise.”²³⁰ The whole tenor of the report of the Educational Committee called for the intensification of agriculture and technical education at all levels of the school system. Also, the Educational Committee recommended the establishment of school gardens and senior trade schools which would provide courses in agriculture.²³¹

²²⁷ F. Agbodeka, *An Economic History of Ghana From the Earliest Times*, Accra: Ghana Universities Press, 1992, p. 32.

²²⁸ Thomas Jesse Jones, *Education in Africa: A Study of West, South and Equatorial Africa by the African Education Commission, Under the Auspices of the Phelps-Stokes Fund and Foreign Mission Societies of North America and Europe*, New York: Phelps-Stokes Fund, 1922.

²²⁹ J. K. Kenneth, *Pan-Africanism and Education; A Study of Race Philanthropy and Education in the Southern States and Eastern Africa*, Oxford: Clarendon Press, 1971, p. 95.

²³⁰ *Education Department Report 1923*, p. 2.

²³¹ Philip Foster, *Education and Social Change in Ghana*, London: Routledge, 1967, p. 156.

During the same period, the Phelps-Stoke Commission gave a report on the state of education in the whole of Africa.²³² Their findings were published into a book entitled *Education in Africa*. They criticised the existing educational curriculum for failing to meet the needs of the people since it did not reflect the “realities” of the African condition.²³³ The commission, therefore, recommended that agriculture should be featured in the curricular in order to develop agriculture. Also, the commission recommended that gardening as well as animal husbandry should be taught in all elementary schools. For the purpose of encouraging pupils who wish to specialise in agriculture as teachers or itinerant agriculture instructors, schools were instructed to establish departments of agriculture.²³⁴ The progressive nature of the Phelps-Stokes report made Guggisberg to intimate that the Phelps-Stokes report was “the book of the century, a combination of sound idealism and practical commonsense.”²³⁵ It is therefore not surprising that Guggisberg became “none than any other colonial governor who attempted to model the Gold Coast education on the lines suggested by the commission.”²³⁶

The first effort in implementing the recommendation of the 1920 Education Committee by the colonial government was the opening of government trade schools in Mampong, Kibi, Asuansi and Yendi in 1922. The purpose of

²³² The commission was financed by the Phelps-Stokes Fund, a million-dollar fund set up by, and named after, an American lady with the aim of advancing the education of African American, among others. The commission toured West Africa in 1920 and later toured South and East Africa to assess the nature of the educational system and its effects on the people. The chairman of the commission was Dr. Jesse Jones, and Dr. Emmanuel Kwagyir Aggrey was one of its members.

²³³ See, Jesse Jones, *Education in Africa*, p. 2.

²³⁴ *Ibid.*, p. 20-21.

²³⁵ Kenneth, *Pan-Africanism and Education*, p. 32.

²³⁶ Foster, *Education and Social Change in Ghana*, p. 156.

establishing trade schools was “to establish these schools gradually in each political division so that they may acquire the national character of the surrounding stool, tribe or native state.”²³⁷ The period of study lasted for four years after which a student was qualified for a *Junior Trade Certificate*. A proportion of students were trained in the elementary principles and practice of agriculture with the view to improving farms after leaving school.²³⁸ The qualification for the trade schools was elementary school Standard IV. However, because the Northern Territory had underdeveloped educational facilities, students of lower standard were accepted.²³⁹ The institution of trade schools was also an effort to experiment with the practicality of the agriculture curriculum in rural areas.

As a result of the far reaching effect of the Phelps-Stokes Commission on education in Africa, the Secretary of State for the Colonies appointed an Advisory Committee in 1923 to advise and assist the colonial government in promoting the advancement of education in the British Tropical African dependencies. The report of the Advisory Committee stressed the need for more technical, vocational, and agricultural training in the curricula.²⁴⁰ An analysis of the report reveals a toeing of a similar trend like that of the Phelps-Stokes Commission. Given the fact that the respective reports of the Phelps-Stokes Commission and

²³⁷ F. G. Guggisberg, *Governors Memorandum on Junior Trade Schools of 8th June, 1921*, Accra, 1921, p. 7.

²³⁸ Apart from Agriculture, trade schools gave instruction in Literary, Woodwork, Masonry and Metalwork. Pupils in their first year were taken through a general course of training in all the branches. In the second and later years, pupils were more or less confined to their own particular trade but having less than half of their hours devoted to literary training.

²³⁹ *Education Department Report 1924*, p.14.

²⁴⁰ H. O. A. McWilliam & M. A. Kwamena-Poh, *The Development of Education in Ghana*, London: Longman, New Edition, 1975, p. 36.

the Advisory Committee addressed the poor educational realities in the Gold Coast, the probability that the report would be translated into reality came to the fore. The first major attempt at implementing the recommendations of the various educational committees was the establishment of the Achimota College.

Achimota College was founded in 1927 by Governor Guggisberg and subsequently Alexander Gordon Fraser, a British educationist, became the first Principal of the College with Emman Kwagyir Aggrey²⁴¹ as Vice-Principal.²⁴² The whole philosophy for establishing Achimota College “rested on adapting (Western style format school) education to native mentality, traditions and needs.”²⁴³ Paramount among the aims of Achimota was the plan to produce students who could intellectually appreciate the “Western” attitude toward life and at the same time have what it takes to appreciate and tap the African environment for their needs.²⁴⁴ Although Achimota was tailored along the lines of the English Boarding School System, the curriculum was structured to meet the needs of Africans. It was for this reason that primacy was also given to the study of agriculture to expand agriculture in the colony. By 1929, Achimota College had five departments: kindergarten, primary (upper and lower), secondary, teacher

²⁴¹ Born in the Gold Coast, he resided for over twenty years in the United States as a teacher of classics and theology and only returned to Africa as a member of the Phelps-Stokes Commission. He was later appointed by Guggisberg as the Vice-Principal of Achimota College where he spent only two years before returning to the United States. See Kenneth, *Pan-Africanism and Education*, p. 18.

²⁴² Williams describes these men as “The Triumvirate.” See C. K. Williams, *Achimota: the Early Years, 1924-1948*, Accra: Longmans, 1962, pp. 4-11.

²⁴³ Gold Coast, *Achimota College Report 1926*, Accra: Government Printer, 1927, p. 1 [hereafter *Achimota College Report*].

²⁴⁴ F. Agbodeka, *Achimota in the National Setting: A Unique Educational Experiment in West Africa*, Accra: Afram Publications Ltd, 1977, p.32.

training and post-secondary.²⁴⁵ It is important to note that, agricultural education did not take place at the pre secondary level. It began at the secondary to the post secondary level.

Agricultural education began in Achimota College when the Accra Training College was moved from Accra to the Achimota College. C. K. Williams is of the view that the transfer of the Training College from Accra to Achimota marks the start of classes in agriculture. Contrary to Williams' position, it is important to note, that teacher training colleges already engaged their students in agriculture education so as to produce agricultural teachers after the completion of their training as teachers.²⁴⁶ The difference, however, was the intensification of the subject in the classroom and in the field; every student worked his own plot of land and studied the work done on the college farm. The training in agriculture began from the second year to the third year in Achimota. During the last year of their education, the training took one whole day in a week; from 6:30 am to 5: 00 pm with two and a half-hour break on the farm or in the laboratory.²⁴⁷

At the secondary level, it was compulsory for students to study a year's course in agriculture in their second year. When the Cambridge Examination Syndicate was restored in 1930, Achimota presented candidates because the college, as early as 1929, drew up a syllabus for submission to the Cambridge Examination Syndicate by the Agriculture Staff led by Dr. F. R. Irvine. The study of agriculture became one of the subjects in the education of Achimota students.

²⁴⁵ Williams, *Achimota: the Early Years*, p.40.

²⁴⁶ Refer to Chapter Two.

²⁴⁷ Williams, *Achimota: the Early Years*, p. 68.

Some of them specialised in stock-breeding, poultry keeping, and crop cultivation.²⁴⁸ It is instructive to note that female teacher trainees did practical gardening on their boarding house plots and poultry work with the girls in the secondary Forms II and III.²⁴⁹

In order to strengthen the study of agriculture in Achimota College, a School Certificate programme was designed for the secondary level. It was in the School Certificate course that agricultural education witnessed an appreciable advancement. The introduction of agriculture in the School Certificate saw some students enrolling in agriculture and botany courses.²⁵⁰ During Easter breaks, the students embarked on agricultural camping in farming communities. The agricultural camps exposed the students further to the realities of an agricultural life with the community hosting the students and also providing an opportunity to know more about plant culture. At one of the agricultural camping sites at Dedeman,²⁵¹ Dr. Irvine reported that:

My main work was teaching Agriculture and Nature Study to the group of students. They were divided into three main groups, two of which went out into the forest to collect specimens to study nature methods of farming, to make enquiries from the villagers about timber prospects in the neighbourhood and the study of local plants... I found the week in the camp very useful and full of opportunities and material for practical study. Previously many of the plants and trees mentioned in class had been studied in theory only. Also the opportunities of visiting cocoa-farms and seeing

²⁴⁸ *Achimota Review* 1927-1937, p. 9.

²⁴⁹ Williams, *Achimota: the Early Years*, p. 69.

²⁵⁰ *Achimota Review*, 1927-1937, 11.

²⁵¹ Dedeman is a Ga farming community located at the northern part of Legon and somewhere near Dome-Kwabanya area in the Greater Accra region of Ghana.

methods of food-farming and methods of preparing palm-oil were most useful.²⁵²

Also, the agricultural camp was organised for students in the college. In 1931, an agricultural camp was organised at Asuansi for 30 teacher trainees in their final year of study and 15 Agriculture and Botany students. At the camp, among other things, they were to experiment whether they could find an alternative for cocoa by concentrating on the cultivation of fruits.²⁵³

The study of Agriculture as a subject in Achimota College was influenced by the proceedings of the Conference of Colonial Directors of Agriculture in 1931. The conference re-echoed the need to encourage agricultural education in the colonial educational system starting from the training of elementary teachers in agriculture in order to engender agriculture education at the early stage. To this end, the Department of Education was asked to train more teachers in agriculture and collaborate with the Department of Agriculture in the provision of agricultural education in the colonies. The conference also encouraged the Department of Agriculture to give more attention to the training of adult population through its external services.²⁵⁴

Achimota College also made an attempt to introduce agriculture at both the intermediate and degree levels in 1932. This attempt was influenced by the resolution of the Conference of Colonial Directors of Agriculture to support the founding of an Agricultural College in West Africa in 1931.²⁵⁵ However, the attempt at providing degree courses in agriculture failed to materialise because of

²⁵² *Achimota College Report 1929*, p. 12.

²⁵³ *Achimota College Report 1931*, p. 4.

²⁵⁴ PRAAD, Accra, CSO. 8/1/111, 'Agricultural Education.'

²⁵⁴ Agbodeka, *Achimota in the National Setting*, p. 100.

²⁵⁵ PRAAD, Accra, CSO. 8/1/111.

the following reasons: First, the College's quest to model its agricultural course, Tropical Agriculture, on that of the London University Course for Intermediate Agriculture was impractical since the Intermediate agriculture course at the London University was different from tropical agriculture. This meant that it would have been difficult to situate what they would have learnt to the African condition.²⁵⁶ Second, there were difficulties in gathering the appropriate study materials for the commencement of the course due to Dr. Irvine illness. For example, in 1933, there were insufficient study materials to start the course in Intermediate agriculture.²⁵⁷ The final blow to this attempt was the knowledge that 'no further development of Intermediate and degree courses either in Agriculture or any other subject was possible without an increase in government subvention or some other endowment.'²⁵⁸ To ameliorate their inability to enrol post-secondary students who wished to apply for a higher degree in agriculture through the intermediate levels, Achimota College introduced a diploma programme in agriculture. Provision was also made for Standard Seven leavers and peasant farmers.²⁵⁹

Important to the development of agricultural education in Achimota was the school farm which was started in 1925.²⁶⁰ The farm had tree crops, a building, livestock and poultry, and a herbarium which consisted of a collection of different species of tropical plants. The herbarium served as a place where students gained

²⁵⁶ Agbodeka, *Achimota in the National Setting*, p. 99.

²⁵⁷ *Ibid.*

²⁵⁸ *Ibid.*, p. 100.

²⁵⁹ *Achimota Review 1927-1937*, p. 6.

²⁶⁰ *Ibid.*, 14.

knowledge of a vast collection of tropical plants.²⁶¹ At the farm, the principles of farming, with special attention to vegetable and poultry, were taught using methods similar to those of the society in which the students lived. The farm presented an opportunity for the tutors and students to practice key principles of farming. At the farm, “improved types of livestock and poultry and new varieties of plants were made available.”²⁶² The plants included corn, cassava, sweet potato, yam, cotton and pigeon pea. Livestock included fowls, cattle, pigs, sheep, goats, and guinea-pigs.²⁶³

Also, the farm served as a place where students taking Agriculture as a subject in Secondary and Training Colleges had their practical demonstrations, as well as a two year practical course in market gardening, poultry, and livestock to post-standard VII boys and employed as working people on the farm. It is important to note that the teaching staff used the farm for the testing of crops and methods of maintaining soil fertility.²⁶⁴

By 1935, Achimota College had agriculture as a subject taught in its secondary and training college classes. Also, there was a farm where the principles of agriculture were practiced. Also, a two year practical course in marketing gardening, poultry and livestock existed for ex-standard VII boys employed as pupils on the farm.²⁶⁵ The college farm was very productive, hence

²⁶¹ *Ibid.*

²⁶² Agbodeka, *Achimota in the National Setting*, p. 102.

²⁶³ *Ibid.*

²⁶⁴ *Ibid.*, p. 103.

²⁶⁵ *Achimota Review 1927-1937*, p. 17.

its produce was made into items such as jam, jellies, marmalades, fruit syrups, gari, kokonte,²⁶⁶ stzarch, tanned and dyed leather.²⁶⁷

However, the farm faced some challenges. Maintaining the farm was expensive and so the college could not raise enough funds to keep the farms hence the losses were felt by the authorities.²⁶⁸ Closely linked to the above was the fact that the geographical location of the Achimota farm, in the coastal dry zone, favoured mostly livestock rearing and vegetables rather than cash crops which did well in the forest area. The Principal wrote in 1936 that:

At present our practical work is confined to the coastal dry-zone farm at Achimota. This farm is only suitable for livestock, poultry and those few crops which can be grown on the Accra Plain.²⁶⁹

Consequently, consultative measures were taken by the Principal of Achimota College with other stakeholders to address the problem. The Principal of Achimota, Rev. Grace, after consultation with the Director of Agriculture, the Director of Education and the Conservator of Forests, prepared a memorandum on the expansion of the agricultural course offered at the college to address the unemployment situation in the colony. The Principal of the college set up a Committee to advice and search for an alternative solution to the problem. The committee recommended, among other things, the establishment of a Diploma Course of three years and a Certificate Course of one year in agriculture. It also

²⁶⁶ Gari, which is also called cassava flakes, is a food product which is obtained when cassava tubers are peeled, washed and fried after the water in the cassava has been squeezed out of it. Kokonte on the other hand, is a powdered food product obtained when cassava or yam tubers are peeled, dried and milled to produce a powdered form of cassava or yam. Gari and Kokonte are staples which are commonly served in West African countries such as Ghana, Nigeria, Togo and Cote d' Ivore.

²⁶⁷ *Achimota Review 1927-1937*, p. 17.

²⁶⁸ Agbodeka, *Achimota in the National Setting*, p. 152.

²⁶⁹ PRAAD, Accra, CSO 8/1/169 'Agricultural Education.'

recommended the acquisition of United Africa Company's (UAC) plantation at Bunsu by Achimota for diploma and certificate programmes in agriculture.²⁷⁰ For these reasons, the Principal, Rev. Grace, wrote that:

We therefore recommend that the U. A. C. Estate at Bunsu be acquired, as soon as possible, for the purpose of relating our agricultural education to the forest-country.²⁷¹

In 1937, Achimota College acquired the Bunsu Estate from UAC "with the intention that technical and theoretical courses in tropical agriculture leading to a diploma should be established by the College, as a step towards the training of educated farmers and of teachers of agriculture."²⁷² The Bunsu Estate provided an opportunity for cash crop farming in the forest areas while the farm at Achimota was only used for livestock rearing and vegetable farming. At Bunsu, a Diploma in the Practice of Tropical Agriculture and a Certificate in Tropical Agriculture begun. The duration of the course was three years and the qualification to read the course was Cambridge School Certificate of Commerce or the Teachers' four year Diploma with Second-class Certificate.

In the first year, students did practical agriculture either on the Forest-Country Station at Bunsu or the Dry-zone farm at Achimota. The subjects for practical work was chosen from Nursery Practice, Citrus, Rubber, Cocoa, Coffee, Tobacco, Fruit, Food, Small fruits and Vegetable, Forestry, Coconut, Poultry and Eggs, Pigs and Small Stock and Cattle-farming.²⁷³ The second year was spent at

²⁷⁰ *Ibid.*

²⁷¹ PRAAD, Accra, CSO 8/1/168 Vol. 1, 'Agricultural Education.'

²⁷² William, *Achimota: the Early Years*, p. 102, See also, *Achimota Review 1937-1947*, p. 27.

²⁷³ PRAAD, Accra, CSO 8/1/168, Vol. 1.

Achimota College and devoted to lectures, readings and demonstrations on the following eight subjects; Market Gardening and Minor Fruits, Poultry and Egg Production, Agricultural Botany and Forestry, Agricultural Accountancy, Agricultural Economics, Agricultural Chemistry of Soils and Foods, Surveying and Building Construction, and Wood and Metal Work.²⁷⁴ In the third year, the students were expected to start their own holding under the direction and supervision of a Farm Manager and employ the necessary labour and capital for economic start of their farm.²⁷⁵

The Certificate in Tropical Agriculture lasted for a year. The course was designed to meet the needs of students who were not qualified for the diploma course and for persons who desired to receive a special qualification in some practical aspects of tropical farming. The subjects studied for the Certificate course were Small-holding Management (Forest-country), Small-holding Management (Dry-zone), Fruit growing, Poultry and Egg Production, Livestock Management, Home and Village Crafts, and Horticulture and Forestry. The day was devoted to practical work and the evening to class-work and personal reading.²⁷⁶

With the outbreak of World War II in 1939, the diploma and certificate courses in Agriculture at Bunsu were short-lived. Funds were not provided for the building of unit farms and hostels to accommodate the students at the Bunsu farm due to the War. The college, therefore, decided to take students from Achimota to Bunso for field work. Although this initiative started well, the rising cost of

²⁷⁴ PRAAD, Accra, CSO 8/1/168, Vol. 1.

²⁷⁵ *Ibid.* See also, *Achimota Review, 1937-1947*, p. 26.

²⁷⁶ *Ibid.*

transporting students from Achimota to Bunsu, which was 100 kilometres inland, led to the abandonment of the courses in agriculture.²⁷⁷

At this point, it is very important to examine whether attention was also given to the development of agricultural education outside Achimota. Within the period of study, the Education Department encouraged the development of agricultural education in the upper classes of the primary schools and tailored the school curricula to the needs of the school environment. The first step was the restructuring of the educational system. At the elementary level, the primary school was divided into Infants Primary (classes 1-3), Junior Primary (Standards I-III), Senior Primary (Standards IV-VII).²⁷⁸ This was to present more mature school leavers either for the job-market or for secondary level education in the Gold Coast. There was no provision for agricultural education in the infant and junior classes of the primary schools. This was because “the children in such classes have not reached an age when this type of training could profitably be given to them.”²⁷⁹ The senior primary and secondary schools witnessed marked development in the Gold Coast. Most of the schools had gardens or farms. In 1929 the Department of Education introduced a scheme for the reorganisation of school gardens. The Department of Agriculture assisted the scheme through its Division of Rural Economics. The Division was responsible for the establishment of school gardens and advised on the upkeep of existing ones; inspected and

²⁷⁷ Agbodeka, *Achimota in the National Setting*, p. 152.

²⁷⁸ *Education Department Reports* 1928, p. 4.

²⁷⁹ PRAAD, Accra, CSO. 8/1/205, ‘Employment of African Boys Leaving Schools on Industrial Work.’

reported on gardens; registered approved gardens; instituted school garden competitions; and issued tools for schools with registered gardens.²⁸⁰

Accordingly, a panoramic view of educational activities in other parts of the Gold Coast shows a marked progress in agricultural education. In Ashanti, the Council of Education decided to re-adjust the time-tables for certain schools in order to extend the time for farming. The sizes of the school gardens were wide enough to establish small cocoa farms.²⁸¹

In the Western Province of the Gold Coast, government schools modified their curriculum so as to provide a system of education which suited the needs of the rural areas. At Wiawso, the senior classes had regular weekly demonstrations in the local garden, and at Essiama, the preparation of copra became an integral part of the schools' activities. Also, students were taught simple arithmetic for the business side of the copra industry. This was to enable students account for their profits. These agricultural activities were emulated by several mission schools, notably the Methodist Mission School at Atwabo, which produced copra and also the Roman Catholic Mission School at Dunkwa, which possessed a farm of 15 acres.²⁸²

In the Central Province of the Gold Coast, the Essikuma Methodist School made a farm where sugar-cane, corn, cassava and plantains were grown. Each pupil cultivated a small farm of his/her own with the support of his/her family's labour. Similar farms existed at the Awisa Presbyterian and Oda Government

²⁸⁰ *Education Department Reported* 1930, p. 7.

²⁸¹ PRAAD, Accra, CSO. 8/1/205.

²⁸² *Ibid.*

Schools in the Eastern Province.²⁸³ In the Northern Territories, the Tamale Government Boarding School “devoted ten hours a week to practical farming with five additional hours of theoretical instruction for pupils specializing in agriculture.”²⁸⁴

At this juncture, there is the need to examine the nature of the curriculum of the other government assisted secondary schools and also interrogate the extent to which they engage their pupils in agricultural education. An examination of the curriculum of the major secondary schools such as Mfantipim, Adisadel, Saint Augustine, Wesley Girls and Tamale Government School within the inter-war years reveals that the various schools had an ambivalent approach to agricultural education. With the exception of Tamale Government School, the aforementioned schools had courses in Liberal Arts, Science and Commerce as their staple subjects. On the reasons why secondary schools patronised literary subjects, Adu Boahen avers that majority of parents during the second-half of the twentieth century were favourably biased to the literary subjects.²⁸⁵

To appreciate why preference was given to literary subjects over agricultural or technical subjects, there is the need to interrogate the socio-economic situation of the Gold Coast during the inter-war years, 1919-1939. First, agriculture and technical schools were considered as “terminal institutions training individuals in special future economic roles, the academic system and, above all, the secondary schools provided intermediate link in a chain of

²⁸³ *Ibid.*

²⁸⁴ Foster, *Education and Social Change in Ghana*, p. 15.

²⁸⁵ A. A. Boahen, *Mfantipim and the Making of Ghana: A Centenary History, 1876-1976*, Accra: Sankofa Educational Publishers, 1996, p. 292.

instruction and entry into the professions most highly regarded (and accidentally the most lucrative), those of medicine and law.”²⁸⁶ Secondly, those who read literary subjects had the opportunity of working with private and government institutions as clerks as against those in agricultural or technical training. This explains why most of the graduates of the aforementioned schools worked in government institutions. In Foster’s estimation:

Given the occupational structure, an academic education was pre-eminently a *vocational* education allowing entry into the most prestigious and highly-paid occupations...White-collar aspirations stemmed from a realistic perception of occupational opportunities and from a recognition that the academic grammar school provided access to them. The African did not enter the clerical employment because he had been to an academic secondary school; he went to an academic secondary school because it provided most effective entry into such employment. The prestige of the academic secondary school had perhaps less to do with the courses of study that it provided than with the prestige and income levels of the occupants that it trained for.²⁸⁷

Foster’s estimation represents the social dynamics which influenced one’s choice of literary education over vocational education. Primacy was not only given to the school that one attended but the material opportunities that an individual accessed after studying in schools which majored in literary or liberal education.

Lastly, since the *nouveau riche* wanted their children to be the so-called “educated elites,” they sent their children to schools which taught subjects that were similar to that of the metropolitan power and since in Britain, emphasis was

²⁸⁶ Foster, *Education and Social Change in Ghana*, p. 134.

²⁸⁷ *Ibid*, pp. 135-136.

then on literary education, it was not surprising that most of the secondary schools gave primacy to literary subjects than agricultural or technical education.²⁸⁸

From 1937, however, the curriculum of some of the schools was restructured to include manual subjects such as agriculture. For example, pupils in Form's III-V at Mfantshipim received a course in agriculture but did not take the subject in the School Certificate Examination.²⁸⁹ The course in agriculture at Mfantshipim was considered as a hobby class held early Saturday morning for boarders.²⁹⁰

Agricultural education in the teacher training colleges in the Gold Coast saw some improvements. The coming of the Scottish Missions to take over the training colleges left by the Basel and Bremen missionaries from the colonial government in 1919 encouraged the study of agriculture.²⁹¹ As this focus resumed, it became part of the school curricula, and every teacher in training during the inter-war years took courses in agriculture. This was different from the earlier period, 1874-1918, when those who had interest to teach agriculture enrolled for the course in agriculture and received some stipends when teaching agriculture in their various stations. Consequently, the number of teachers who could teach agriculture in the various schools increased and hence the spread of agricultural knowledge in the formal sector. Also, teachers received instructions in agriculture for more appreciable period of time than before. From 1927, the

²⁸⁸ *Ibid*, p. 136.

²⁸⁹ *Education Department Report 1937*, p. 39.

²⁹⁰ *Ibid*.

²⁹¹ McWilliam & Kwamena-Poh, *The Development of Education in Ghana*, p. 50.

duration for training colleges was changed from three-years to four-years making it possible for teachers to explore vital topics in agriculture.²⁹²

By 1939, agriculture formed part of the educational curricular at all levels of formal education: primary, secondary, training college and post-secondary. This was as a result of the colonial government's response to both internal and external pressure to restructure its educational system to meet the needs of the colonial economy. The period thus saw the establishment of trade schools, new school gardens and farms, and the production of more teachers who taught agriculture. Again, some of the graduates of the primary and secondary schools were absorbed by the agricultural and veterinary institutions in the colony for further studies. However, the government directed too much of its resources to experiment on agricultural education at the Achimota College to the disadvantage of other educational institutions during the inter-war years.²⁹³

Agricultural Education in Agricultural and Veterinary Training Centres

Apart from the provision of agricultural education at the various levels of the educational system, the Department of Agriculture of the colonial government also provided formal training for people who wanted to be agriculturalists. This was done at the training centres. The agricultural training centres provided the avenue for graduates from the primary schools and secondary schools to further their studies in Agriculture and Veterinary and thence be employed by the government to work in the Department of Agriculture.

²⁹² *Education Department Report 1927*, p. 16.

²⁹³ Agbodeka, *Achimota in the National Setting*, p.133.

In 1918, Messrs Cadbury Brothers Limited wrote to Sir Hugh Clifford, Governor of the Gold Coast, and offered the sum of 5,000 pounds to form a nucleus of a special education fund for the people of the Gold Coast Colony. Although no restrictions were placed on the gift, the firm expressed the hope that some attention would be given in the direction of agricultural education.²⁹⁴ In 1922, a training centre was established by the colonial government with the aim of providing junior staff for the Departments of Agriculture and Forestry. The centre became known as the Agricultural and Forestry Training School.²⁹⁵ The school was located at the premises of the Kumasi Agricultural Station. The Agricultural and Forestry Training School was established to teach agricultural techniques in general in order to produce technically efficient personnel and officers for agricultural duties at the junior rank level. The school also trained teachers in Nature Studies. In 1923, Sir Gordon Guggisberg used part of the grants from the Cadbury Brothers to construct a lecture hall and a laboratory for the school.²⁹⁶

By 1924, the duties of the Agricultural and Forestry Training School comprised training candidates for Junior Staff positions in the Department of Agriculture, offering courses for farm students, and providing refresher courses for officers of the Junior Staff and holding Efficiency Bar Examination for the

²⁹⁴ PRAAD, Accra, CSO 8/1/85, "Agricultural and Forestry Training Centre, Kumasi," Vol. I.

²⁹⁵ Some authors refer to the school as Kumasi Agricultural Centre or Agricultural Training Centre. See, K. Twum-Barima, *Development of Agricultural Education*, Tema: Ghana Publishing Corporation, 1977, p. 126; B. Acquah, *Cocoa Development in West Africa: The Early Period with Particular Reference to Ghana*, Accra: Ghana Universities Press, 1999, p. 104-105; J. Kwarteng & I. Kwarteng, (eds), *Setting the Grassroots on Fire: Agriculture and Sasakawa Global 2000 in Ghana*, Cape Coast: Zophai Publishers, 2012, p. 123.

²⁹⁶ PRAAD, Accra, CSO 8/1/85.

Junior Staff.²⁹⁷ Qualification to the school was the possession of an Elementary School Leaving Certificate. The school's programme was designed to last for three years: the first year was for basic science, the second for practical attachment to an Agricultural Research Station, and the third year at the School applying the principles and practices experienced in the year of their attachment.²⁹⁸ In 1924, a lecture hall and laboratory was presented to the school by Messrs Cadbury Brothers Limited and were formally opened by Governor Gordon Guggisberg. To provide accommodation for farmers attending practical courses in farming, Hunter Hostels were built from a generous gift of 3,000 pounds from the Cadbury Brothers in 1930. The Hostels, which were named after Mr. T. Hunter, in recognition of his devoted work as superintendent in charge of the Agricultural and Forestry Training Centre at Kumasi since its inception in 1922, consisted of eight houses with two rooms each, arranged in a circle with a large central lecture, dining and recreation hall. They were completed and opened in 1931.²⁹⁹

The purpose of training Junior Staff for the Department of Agriculture was extended to "giving short course to farmers or would-be-farmers" after 1931.³⁰⁰ After completing a course, students were eligible for a grant which enabled them to purchase farm tools and books. There were special programmes for students who wished to specialize in certain branches of training practices. This programme was designed to produce more agriculturalists in the farming

²⁹⁷ *Ibid.*

²⁹⁸ Twum-Barima., *Development of Agricultural Education*, p. 126.

²⁹⁹ PRAAD, Accra, CSO 8/1/85.

³⁰⁰ *Ibid.*

communities.³⁰¹ However, when the Second World War broke out in 1939, the Kumasi Training Centre was closed down and no effective alternative was put in place immediately.³⁰² Also, the school was closed down due to the continuous expansion of Kumasi township to the premises of the training centre.³⁰³ It was, therefore, suggested by the Director of Agriculture to move the training centre to Aburi in the Eastern Province.³⁰⁴ To prevent a shortage of locally trained African staff, arrangements were made for people to attend the Agricultural School of Nigeria for an intermediate course.³⁰⁵

During the inter-war years, the system of agricultural apprenticeship was continued. From 1935, applicants were required to hold either a Matriculation or a School Certificate. Preference was given to those who read or wrote their school examination in Agriculture or Natural Science as an examination subject.³⁰⁶ This was a shift from the earlier practice whereby those holding the Standard VII Certificate were eligible to sit for the annual Learners Entrance Examination. At this point, entrance examination was discontinued and Learners were selected from the applications. The new development may have been due to the fact that an intensified unemployment situation in the country made many educated youth to consider working at the Department of Agriculture starting as Learners. For

³⁰¹ Acquaaah, *Cocoa Development in West Africa*, pp. 104-105. See also, Kwarteng & Kwarteng, (eds), *Setting the Grassroots on Fire*, p. 123.

³⁰² *Agriculture Department Report 1946*, p. 9.

³⁰³ Kay, *The Political Economy of Colonialism in Ghana*, p. 232.

³⁰⁴ *Agriculture Department Report 1940*, p. 3.

³⁰⁵ *Agriculture Department Report 1942*, p. 5.

³⁰⁶ *Agriculture Department Report 1935*, p. 15.

example, most of Mfantshipim graduates were employed by the Department of Agriculture and some even had scholarships to study agriculture abroad.³⁰⁷

The granting of agricultural scholarships contributed to the development of agricultural education in colonial Ghana. In 1925, the Sir Alfred Jones' Scholarship Fund was instituted to provide an opportunity for the Department of Agriculture to upgrade its staff cadre. The Scholarship provided an opportunity for the junior staff, mostly Africans, of the Department of Agriculture, to be promoted to the position of senior staff, a position which was largely held by Europeans.³⁰⁸ In 1924, the trustees of the Sir Alfred Jones Scholarship deposited into the chest of the Crown Agents, a sum of money to which the colonial government was expected to add an equal amount. The interest on the money provided scholarships at the Imperial College of Agriculture, Trinidad³⁰⁹ or any Agricultural College in British West Africa. The scholarship was opened to West Africans between the ages of 17 to 25 who satisfied the required conditions and were selected by a competitive examination.³¹⁰

The Secretary of State for the Colonies, realising the need for staff promotion in the Department of Agriculture, asked the department to accelerate the process of awarding the scholarship although most of the junior staff were not qualified in 1927.³¹¹ Also, the scheme made room for staff of the department to go

³⁰⁷ Boahen, *Mfantshipim and the Making of Ghana*, p. 301.

³⁰⁸ PRAAD, Accra, CSO 8/1/30 "Institution of a Special Refresher Course for West African Students at the Imperial College of Agriculture, Trinidad."

³⁰⁹ The Imperial College of Tropical Agriculture was established by the British to, among other things, provide post-graduate training and orientation courses for the cadets of the Colonial Agricultural Service at Saint Augustine in Trinidad. See, Twum-Barima., *Development of Agricultural Education*, p. 162.

³¹⁰ *Agriculture Department Report 1925*, p. 27.

³¹¹ *Agriculture Department Report 1927*. P, 8.

for refresher courses. In 1932, the Imperial College of Agriculture in Trinidad asked the Department of Agriculture to select well-educated members of the African staff of the Agriculture Department to be sent for a special refresher course at the College.³¹² In 1933, A. N. de Heer and A. K. Chinbuah, formerly of Mfantsipim College, were the first people to receive the Sir Alfred Jones Scholarship.³¹³

In 1938, the Principal of Achimota College questioned why only the Department of Agriculture controlled the scholarship scheme. The Principal was of the view that the award of Sir Alfred Jones Scholarship should not be controlled only by the Department of Agriculture but should be given to a committee similar to that of the King Edward VIII Scholarship Committee. This was to prevent the Department of Agriculture from having a monopoly over the award of the scholarship and also create room for other departments or government agencies to apply for the scholarship. He, therefore, called for the Sir Alfred Jones Scholarship to be extended to the Forestry and Veterinary Departments as well as channelling some of the funds of the scheme to Achimota for the organisation of a Diploma in Agriculture programme.³¹⁴ This proposal could not see the light of day because the outbreak of World War II relegated any other colonial project apart from the war effort to the background.

Besides the Department of Agriculture engaging people in formal agricultural education, the Department of Veterinary also engaged students in

³¹² PRAAD, Accra, CSO 8/1/30, "Institution of a Special Refresher Course for West Students - The Imperial College of Agriculture, Trinidad."

³¹³ Boahen, *Mfantsipim and the Making of Ghana*, p. 303.

³¹⁴ PRAAD, Accra, CSO 8/8/31A, "Re award of Sir Alfred Jones Agricultural Scholarship-Suggestions."

veterinary education during the inter-war years, 1919-1939. For the reason that the Gold Coast colony derived most of its livestock production from the northern part of the colony, the head office of the Department of Animal Health was moved from Kumasi to Tamale in 1922. All the Veterinary Dispensers attached to the veterinary officers in the field for training were withdrawn and sent to Tamale to complete their training. After the training, they were qualified for appointment and promotion.³¹⁵ In Tamale, a veterinary school for the training of Veterinary Assistants was established and it was a branch of the Department of Animal Health. The school was headed by an Indian Veterinary Graduate. Also, a Veterinary Officer and an Inspector of Livestock gave lectures at the school. The duration of the course was four years after which when passed, one was employed by the colonial government.³¹⁶

In 1924, it was reported that there were too many subjects in the curriculum for the first year students.³¹⁷ For this reason, it was recommended by the authorities that the course should be extended to four years. The curriculum for the first year comprised of Physics, Chemistry, Botany and Zoology. The second year courses consisted of subjects such as *Materia Medica*, Practical Pharmacy, Junior Anatomy, Elementary Physiology, Staple Management and Clerical Diagnostics. For the curriculum of the second year, the Director of Veterinary recommended that Clinical Diagnostics be abolished as it was a repetition of Veterinary Medicine. Students in the third year studied Senior Anatomy, Senior Physiology, Hygiene, Veterinary Medicine, Age and Soundness

³¹⁵ *Veterinary Department Report* 1923, p. 2.

³¹⁶ *Report on the Blue Book For 1923-1924*, p. 25. PRAAD, Accra, ADM. 5/1/80.

³¹⁷ *Veterinary Department Report* 1924, p. 5.

and for the fourth year, Surgery and Obstetrics, Veterinary Medicine, Therapeutic, Toxicology, Pathology, Bacteriology, Parasitology and Sanitary Science.³¹⁸ It was estimated that at the end of the course, a Veterinary Assistant would be able to run a quarantine or control a Veterinary Station under the direction of a Veterinary Officer, perform castration, inoculations, post-mortem and routine laboratory work as well as supervise small areas of the detection and control of diseases. It was also envisaged that they would dispense, inspect meat, recognise pathological conditions and understand the laws and diseases of livestock.³¹⁹

The expansion of secondary education facilities into the Northern Territories in the late 1920s made the Veterinary Department adopt a policy of admitting more boys who passed Standard VII as Learners until they were qualified to enroll in the Veterinary School.³²⁰ In 1930, the period of training at the school was reduced from four years to three years. Also, more practical work was introduced and “much unnecessary theory eliminated.”³²¹ The impact of veterinary training resulted in an increase in veterinary staff and the creation of a Coastal Veterinary Section with a staff of Veterinary Officers and two Veterinary Assistants in 1930.³²² The Veterinary Training School was not only limited to animal husbandry, but also a course of mixed farming was provided for the people in the Northern Territories. The duration for the course was four years. Instruction about animal husbandry, ploughing, dairying and breaking of bullocks to work

³¹⁸ *Ibid.*

³¹⁹ *Veterinary Department Report, 1930, p. 4.*

³²⁰ *Veterinary Department Report 1927, p. 7.*

³²¹ *Veterinary Department Report 1930, p. 4.*

³²² *Ibid.*

were provided in the course. After completing the course, the students were qualified to become managers of native administrative farms.³²³

It is very important to note that veterinary students also had scholarships to study abroad. In 1937, for example, a student was awarded a four year tenable scholarship from the King Edward VII Memorial Fund to study at the University of Edinburgh Livestock Farm in a town called Shorthead. Also, a Junior Staff was awarded a special Government Scholarship to enable him to attend the Royal College of Veterinary Surgeons for five years. The awardees returned to take up appointments as African Veterinary Officers.³²⁴ By 1939, the Veterinary Department, which was now Animal Health Department, was training pupils for the Government and Native Administration in the Northern Territories.³²⁵

To a large extent, agricultural education in the formal sector proved important to the Department of Agriculture and the Department of Veterinary because the training schools provided the cadre of junior staff for the aforementioned departments. It is important to note, however, that the training schools were not equipped enough to produce senior staff for the departments.³²⁶ Promotion to the rank of senior staff became possible only if one had studied outside the colony through the scholarship scheme. Agricultural education at this level during the inter-war years was geared towards the production of junior staff of the departments concerned.³²⁷

³²³ *Education Department Report 1937*, p. 55.

³²⁴ *Ibid.*

³²⁵ Dr. F. Y. Obisay, senior lecturer, Department of Animal Health, University of Ghana, Legon, on 21st April, 2016.

³²⁶ Dr. S. D. Boateng, senior lecturer, Department of Agricultural Extension, University of Ghana, Legon, on 21st April, 2016.

³²⁷ *Ibid.*

Agricultural Education in the Non-Formal Sector

Apart from these developments, progress was made in the transfer of agricultural knowledge outside the frame of formal education. Non-formal agricultural education was concurrently held to encourage farmers to adopt improved methods of farming and also deal with the menace of crop diseases. These measures were to position the colony as a source of raw materials for the metropolitan power during the inter-war years.

At the beginning of the inter-war years, 1919, agricultural education in the non-formal sector was administered by the Departments of Agriculture and Veterinary. These already established institutions continued to engage local farmers in improved methods of agriculture. The aftermath of World War I meant that the Gold Coast, as any other colony, became strategic in the reconstruction process of Europe. For this reason colonial institutions such as the Department of Agriculture were reviewed and restructured to meet the colonial demand. Equally important was the need to diversify the agrarian economy of the colony and adopt emerging technologies to aid agricultural education in the Gold Coast.

The use of modern technology such as coloured printers and slide projectors played an important role in the development of agricultural education in colonial Ghana. The inter-war years saw the Department of Agriculture use technology to educate farmers on basic issues concerning cash crop production. For the first time in the Gold Coast, coloured posters were prepared by the department illustrating the dangers of uncontrolled diseases and pests and the

need to improve the general sanitation of farms by local farmers in 1922.³²⁸ The coloured posters were exhibited at the agricultural stations and attracted a lot of attention. The colourful nature of the posters made farmers to appreciate what was being communicated to them. Considering the attractive nature of the posters, the Department of Agriculture produced a large number of coloured posters for wide circulation throughout the Gold Coast.³²⁹

Having witnessed the impact of coloured posters in agricultural education, the Department of Agriculture introduced the use of slide projectors³³⁰ to illustrate the information that they wanted to convey to the people in 1923.³³¹ This innovation was called the “lantern lectures.” In the “lantern lectures,” a series of agricultural diagrams and photographs in the form of slides were fixed into a slide projector which projected the slides onto a screen for multiple audience viewing. For the reason that the magic lantern did not have an inbuilt audio system, personnel of the Department of Agriculture provided commentaries on the slides as they were projected onto the screen. The lectures provided the opportunity to ask questions on what was projected. Because of the entertainment value attached to the lantern lectures, many people trooped to watch coloured photographs projected on large screens.³³² This innovation was started in the Eastern Province

³²⁸ *Agriculture Department Report* 1923, p. 12.

³²⁹ *Ibid.*

³³⁰ A slide projector is an optical device for projecting magnified images from transparent slides onto a wall or screen. The slide projector has two sets of lenses, one between the light source and the transparency, to concentrate the light, and one in front of the transparency, to focus the picture on the screen and enlarge the image. In the initial stage of its development, the slide projector was called the *Magic Lantern*. See, *The Reader's Digest Great Encyclopedic Dictionary* and *The New Encyclopaedia Britannica, Vol. 9*.

³³¹ *Agriculture Department Report* 1924, p. 29.

³³² Kyei Mensah, Aged 85 years, cocoa farmer, Osiem, 16th April, 2016.

and “everywhere it has aroused kin interest.”³³³ The success of the “lantern lectures” made the Department of Agriculture to extend its services to other cash crop communities in the Gold Coast. This was the first attempt to present agricultural education in the form of cinematography.³³⁴

The Department of Agriculture gave attention to other cash crops such as oil palm production through the Travelling Instructors. This was one of the ways of dealing with the economic depression which emerged in the 1920s. From 1922, the instructors advised farmers to take interest in palm plantation because of its economic prospects. Having come to the knowledge that the palm industry had similar economic potential to that of cocoa, some local chiefs adopted bye-laws prohibiting, under certain conditions, the felling of palm trees for the extraction of palm wine in their communities.³³⁵ Steps were also taken to encourage the planting of palm trees in the forest areas where few palms that existed were constantly tapped for the beverages they contain. Also, 100 acres of palm lands in selected districts were taken over by the Department of Agriculture to demonstrate to the people some improved methods of working on palm plantation and how they manage their palm lands to prevent their investments from going waste.³³⁶ These measures revived interest in oil palm production.³³⁷

From 1928, the Department of Agriculture formulated and adopted new measures of transferring improved agricultural education in the Gold Coast.

³³³ *Agriculture Department Report* 1924, p. 29.

³³⁴ Interview with Edmund Oti-Boateng, Aged 50 years, Technical Officer at the Social Science and Statistics Unit, CRIG, Tafo, on 3rd May, 2016.

³³⁵ *Agriculture Department Report* 1922, p. 22

³³⁶ The location of the palm lands is not documented.

³³⁷ *Ibid.*

Before this period, agricultural instruction was defined as the “dissemination of general agriculture knowledge among adults by word of mouth; the essence of it is personal contact with the farmer with the view of gaining his confidence and so inducing him to follow advice.”³³⁸ The Department of Agriculture realised that the “dissemination of general agriculture knowledge” had not worked out well. In 1930, therefore, agricultural extension replaced “agricultural instruction.” This was to address specific needs of farmers and was different from the earlier period when an instructor was expected to have expert knowledge in all aspects of agriculture. The extension officers now presented to the farmer issues that the Department of Agriculture recognised as instrumental to the general development of agriculture and at the same time profitable under local conditions. Stated further, the new system did not only focus on general stimulation of agricultural education but specific schemes framed with conditions and provisions which made it certain that the farmer would put them into effect.³³⁹

To meet the purpose for the change in its operation, the Department of Agriculture was hence restructured. Agricultural extension was to be directed and controlled by the senior staff officers who were mainly European, and policies of extension were carried out by the junior staff, mainly African. The department was of the opinion that the junior staff personnel “can deal with the farmers more intimately and effectively”³⁴⁰ because of their command of the local languages.

Also, the Department of Agriculture was divided into subject division headed by a senior staff with subordinates who carried out agricultural education

³³⁸ *Agriculture Department Report 1930*, p. 22.

³³⁹ *Ibid.*

³⁴⁰ *Ibid.*

at the various cash crop communities. The new arrangement was used to train the junior staff members. The divisions of the Department of Agriculture were the Economic Division, Inspectorate Division, Mycological Division, Entomological Division, Experimental and Botanical Division. Agricultural modules were designed to tackle emerging issues that fell within the divisions. A number of Overseers were assigned to each division. The focus of agricultural extension became direct and straight-forward, thus avoiding general stimulation which was not applicable to a particular location.³⁴¹

For agricultural extension to be effective, it was done on territorial basis. Overseers were posted to rural districts and were given definite programmes of advisory work which they were required to carry out. Each Overseer was limited to a radius of 10 miles, an area of about 300 square miles or 20,000 acres. This was to enable extension work to be done on foot or bicycle. Each officer was given a description of the problem to be tackled and the methods to be used. To enable efficiency in the extension work, no addition to the duties of an officer was allowed except by authority of the Director of Agriculture. The lines of work required that each officer came from one of the divisions and was proven “to be effective and workable.”³⁴² In a situation where an officer was limited to a particular type of work, such as co-operative societies, he was put under the direct control of the senior officer in charge of the division.³⁴³

Also, in the non-formal sector of agricultural education, the Department of Veterinary engaged local livestock farmers in training. This was to improve and

³⁴¹ *Ibid.*

³⁴² *Ibid.*

³⁴³ *Ibid.*

increase the number of local cattle in the Northern Territories in order to attain self-sufficiency in beef supply for the Gold Coast. The junior staff of the Veterinary Department engaged the people in animal husbandry. Field personnel of the department educated and trained local livestock owners in improved methods of animal rearing. In their training, it was recognised that though the veterinary staff possessed expert scientific knowledge of diseases and animal husbandry, the indigenous livestock owners had “superior knowledge of local conditions”³⁴⁴ and thus, cooperation with the indigenous livestock owners was essential to their success in veterinary education in the Northern Territories.³⁴⁵

In order to sustain the interest of local farmers in the production of cash crops, the Department of Agriculture continued with the organisation of agricultural competitions and shows. What made these activities interesting was the fact that they presented the opportunity for local farmers to demonstrate their cognitive capacity when it came to using agricultural techniques to produce cash crops.³⁴⁶ Stated differently, these were to increase production and awareness in the cultivation of other cash crops in the Gold Coast.

The cocoa competition, which was organised to increase the quality and quantity of cocoa production, was extended to include other cash crops. In 1931 for example, a competition in oil palm cultivation was organised for farmers in the Secondi-Dixcove area in the Western Province with 46 competitors. The competition was a failure since it was not patronised by the people and the fact

³⁴⁴ *Ibid.*

³⁴⁵ *Ibid.*

³⁴⁶ Interview with Prof. J. A. Kwarteng, Aged 68 years, retired professor, Department of Agricultural Economics and Extension, University of Cape Coast, on 17th March, 2016.

that the cocoa industry was more attractive than the other cash crops. However, in the Axim District, a Coconut Farm Competition received more support from the farmers. This was because the geographical location of Axim suited coconut production. The competition seemed as a useful purpose in calling attention to well-kept farms. Also, a Rice Farm Competition was organised by the Axim District Agricultural Committee with 145 entries in 1931.³⁴⁷

Again, the Department of Agriculture continued with the organisation of agricultural shows. The Shows were organised at the Provincial and District levels. A new development saw the agricultural shows being organised at the Village level. This was different from the initial period, 1874-1918, when agricultural shows were organised at the Provincial and District levels. The Village Shows were an attempt to transmit improved agricultural knowledge at the basic level in order to advance the state of agriculture. The agricultural shows were considered effective ways of attracting farmers to produce that which suited colonial demand. An agricultural show was also a means of creating a spirit of competition among the people in order to improve the quality of their produce.³⁴⁸ Village Shows proved to be efficient in helping the officers of the Department of Agriculture to get into close touch with the farmers. For example, agricultural shows were organised in villages such as Abor in the Keta-Ada District and Essiama in the Axim District in 1931. It was noticed that people preferred the shows to be held for only a day.³⁴⁹

³⁴⁷ *Agriculture Department Report* 1931, p. 2.

³⁴⁸ *Ibid.*

³⁴⁹ *Ibid.*

The inter-war years saw the effort of the Department of Agriculture to disseminate agricultural ideas in books, pamphlets, and newspapers. Within this period, this effort targeted all groups of people. For example, R. H. I. Bunting and H. A. Dade published a book entitled *Gold Coast Plant Diseases*. It contained a brief description of the known diseases of plants in the Gold Coast and suggestions as to how to contain such diseases. To make the book useful to others rather than scientific observers, technical terms were avoided where possible and those used were fully explained.³⁵⁰ Also, there were pamphlets which provided series of information on technical advice and instructions to farmers. For example, C. H. Knowles and R. H. Bunting wrote “Notes on Cocoa Posters” and Bunting authored “Diseases of Corn” in 1925.³⁵¹

It is very important to note that the Department of Agriculture contributed to the discourse on agricultural development in the world through its senior staff. For example, Bunting, in collaboration with R. J. Tabor of the Imperial College of Science and Technology published an article in *Annals of Botany* entitled “Diseases of Cocoa and Coffee Fruits Caused by Fungus.”³⁵² Also, the *Journal of Agriculture and Commercial Society*, edited by W. H. Patterson of the Department of Agriculture and with numerous articles contributed by officers of the Department of Agriculture in 1923.³⁵³ It is important to note that the publications on agriculture were limited within academic circles. W. G. A. Ormsby-Gore, a British diplomat stated that:

³⁵⁰ *Agriculture Department Report* 1925, p.28.

³⁵¹ *Ibid.*

³⁵² *Agriculture Department Report* 1923, p. 13.

³⁵³ *Ibid.*

At the present time the agricultural bulletins and reports are of highly technical character, and though they contain much of great scientific and general interest it is presented in a form which is over the head of the ordinary reader.³⁵⁴

These works were limited to only those who could read and were familiar with the various technical terms used in the publications. This raised the question of the utilitarian value of the publications to the development of agricultural education in colonial Ghana.

In 1932, the Department of Agriculture published *The Gold Coast Farmer* as a means of disseminating agricultural information to the staff of the department and also to address “the needs of an enlightened and progressive public.”³⁵⁵ The publication also outlined the agricultural problems of the country in the correct perspective. In *The Gold Coast Farmer*, instructive reports from all agricultural stations in the Gold Coast were reported to the public. The publication also reported on the formation of new agricultural associations and co-operative societies and provided a summary of their progress. This was a way of encouraging other farmers to join agricultural associations and co-operatives. It is interesting to note that *The Gold Coast Farmer* also presented a sketch of the *curriculum vitae* of retired staff who had a sterling performance in their service at the Department of Agriculture. For example, the 1933 edition provided the credentials of J. S. Martinson who served the Department of Agriculture from

³⁵⁴ Report by the Honourable W. G. A. Ormsby-Gore on his visit to West Africa during the year 1926, as cited in G. B. Kay, *The Political Economy of Colonialism in Ghana: Documents and Statistics, 1900-1960*, Cambridge: Cambridge University Press, 1972, p. 205.

³⁵⁵ PRAAD, Accra, CSO 8/1/117, “Information Concerning Use of Manures Required by Farmers.”

1895 and retired in 1932 as a superintendent of Agriculture.³⁵⁶ A defect of the publication was that it was limited within the literati and hence did not have a utilitarian value to the ordinary farmer.³⁵⁷

In 1933, readers of *The Gold Coast Farmer* requested that an edition be issued in Twi, the most widely spoken local language in the Gold Coast. Also, the African unofficial members on the Select Committee on the 1933/34 Estimates on *The Gold Coast Farmer* and the Accra Agricultural Advisory Committee suggested that results of the department's work should be made available to the public in the vernacular.³⁵⁸ This was because most farmers understood Twi. To understand publications in English, illiterate farmers obtained their information through translation by the literates in the farming communities. The system of impromptu translation, particularly where farming information was concerned and the reader himself was not a farmer, resulted in erroneous interpretation and misunderstanding. It was noted that this cause of these errors was general and that the issuing of Twi publication may ameliorate the problem. Thus, it was estimated that village literates be placed in the position of reading to their audience in Twi and not to rely on impromptu translation. To execute this mission, government's approval became necessary, since such publication needed special staff-arrangement before the Department of Agriculture embarked on such policy. Also, two African officers were to be withdrawn from the field-staff for the work of translating, checking and proof-reading. These officers were to be experienced

³⁵⁶ *Ibid.*

³⁵⁷ Interview with Prof. J. A. Kwarteng, Aged 68 years, retired professor, Department of Agricultural Economics and Extension, University of Cape Coast, on 17th March, 2016.

³⁵⁸ PRAAD, Accra, CSO 8/1/133, "Periodical Information Relating to Work Undertaken at Agricultural Laboratory-Aburi (ii) Vernacular Agricultural Publication."

in agriculture in order to translate correctly and soundly. Also, they were to have thorough knowledge of English and Twi.³⁵⁹

These suggestions, however, did not live to see the light of day probably because, the necessary conditions required for the publication of a Twi version of *The Gold Coast Farmer* were cumbersome and economically expensive. Critics of the idea contended that “the result of any experimental work of the technical nature even in popular form is extremely difficult in the African vernacular owing to lack of vocabulary, but even more so, owing to the foreign nature of the ideas.”³⁶⁰ Since the translation of the technical papers was extremely difficult, it was recommended that the Twi version of *The Gold Coast Farmer* be disallowed. Another reason for the discontinuation of *The Gold Coast Farmer* was because of the outbreak of World War II in 1939.

The inter-war years, 1919-1939, also witnessed the establishment of new agricultural research stations. In the 1920s, the sustainability of Ghana’s cocoa industry was questioned. This was because although cocoa production increased by leaps and bounds, there were great concerns about the short life-span of the cocoa trees. In 1921, the problems that faced the industry were summarised as: deterioration in the fecundity of the trees owing to close planting, careless methods and lack of attention to the soil, and the falling off of humidity owing to vast clearance of the forest.³⁶¹ In 1925, G. G. Auchinleck of the Department of Agriculture directed the government’s attention to the low standard of the purity

³⁵⁹ *Ibid.*

³⁶⁰ *Ibid.*

³⁶¹ *Agriculture Department Report* 1923, p. 6.

and quality of Gold Coast cocoa.³⁶² Accordingly, in 1925 and 1926, the United States of America rejected several shiploads of Gold Coast cocoa because it was said to contain mouldy and very wormy beans.³⁶³ From 1927, voluntary inspection at ports was introduced and organised by the Department of Agriculture officers to check shipment and to exclude low quality beans. Also, demonstration on fermentation of cocoa was given to farmers by the travelling instructors at various agricultural stations and cocoa farms.³⁶⁴ In the subsequent years, the quality of cocoa exported showed marked improvement over that of the previous years because of the efforts that were put into agricultural extension.³⁶⁵

At the Second West African Conference which was held in Freetown in 1929, British Colonies were admonished to widen their scope of agriculture education. The Gold Coast Department of Agriculture was asked to give more attention to the study of agriculture and improve local farming methods and crops. At the Conference, Frank Stockdale recommended to the Gold Coast government the necessity of establishing a special cocoa station in the Eastern Province.³⁶⁶ In his subsequent visit to the Gold Coast, now Sir Frank Stockdale, noticed a decline of cocoa production in the Eastern Province as a result of the swollen-shoot disease, soil exhaustion, and the deterioration of the eco-climate due to unimproved farming practices.³⁶⁷ Sir Stockdale, “recommended the establishment in the Eastern Province a research station which would determine the relative

³⁶² Acquaaah, *Cocoa Development in West Africa*, p. 58.

³⁶³ *Ibid.*

³⁶⁴ *Agriculture Department Report 1927*, p. 4.

³⁶⁵ *Agriculture Department Report 1929*, p. 3.

³⁶⁶ PRAAD, Accra, CSO. 8/1/2, “Colonial Development Act of 1929,” p. 4.

³⁶⁷ *Report on the Central Cocoa Research Station*, Tafo, 1938-42, p. 1.

magnitude of these factors and due means whereby the yield of existing farms might be maintained even if the resurrection of abandoned areas was not found possible.”³⁶⁸ At the same time, the Department of Agriculture raised concerns about failure of the farmers to adopt improved farming practices such as permanent farming, planting of shade trees and wind screens for the conservation of existing farms and farm hygiene.³⁶⁹

Among the measures that were taken by the Department of Agriculture was the need to improve “permanent” farming in the Gold Coast. The system of permanent farming, which is contrary to shifting cultivation, sought to deal with the situation where farmers of the Gold Coast moved their farms to different places at the least provocation. It is instructive to note that permanent farming was not against the extension of existing farms but the unbridled attitude of some farmers to leave their farms just because land was in abundance.³⁷⁰ In 1938, the department tested and demonstrated the techniques and the effectiveness of the various “permanent” systems which was preferred by the people.³⁷¹

Furthermore, the Department of Agriculture established the Central Research Station at New Tafo in 1938. The Station was required to work with the Department of Agriculture in order to ensure that solutions to problems were effective and implemented by the cocoa farmers. To help in curbing the spread of the swollen-shoot disease, the Department of Agriculture promoted a campaign

³⁶⁸ *Ibid.*

³⁶⁹ PRAAD, Accra, CSO. 8/1/206, “Minutes of Meeting of Agricultural Officers on Problems of Farming.”

³⁷⁰ Interview with Kyei Mensah, Aged 85 years, Cocoa Farmer, Osiem, 16th September, 2016, 3:00 pm.

³⁷¹ PRAAD, Accra, CSO. 8/1/206.

for cutting-down infected cocoa trees before they could spread to other plots. This campaign was as a result of a research findings at the Cocoa Research Station that a probable way of containing the disease was to cut all infected trees.³⁷²

To incorporate traditional rulers in the development of agricultural education in the non-formal sector, the Department of Agriculture proposed to establish a scheme called Native Administrative Agricultural Instructors in the second half of the 1930s. According to the scheme, agricultural instructors from the various Native Administrations were “to be selected and paid by the various chiefs and trained in chosen subjects by the Department of Agriculture.”³⁷³ The scheme was influenced by the Nigerian system of native administration instructors where “native” states employed senior and junior staff and paid their salaries and pensions.³⁷⁴ Such a scheme was proposed in the Gold Coast because chiefs pressed for agricultural instruction in their villages and farms at a time when the department had few staff. The department wanted to use lower grade officers instead of “highly trained staff” for itinerant work in the native administration. Moreover, the department wanted the chiefs to continue to participate in stimulating and improving agriculture in their states.³⁷⁵

To assess the efficacy of the proposed scheme in the Gold Coast, the Director of Agriculture asked the various Provincial Commissioners to express their views on the introduction of the native agricultural instructors in the Native Administrations. Majority of the Provincial Commissioners opined that most of

³⁷² Acquaaah, *Cocoa Development in West Africa*, p. 73.

³⁷³ PRAAD, Accra, CSO. 8/1/184, “Training of Native Agricultural Instructors for the Native Administrations.”

³⁷⁴ *Ibid.*

³⁷⁵ *Ibid.*

the Native Administrations in the Gold Coast did not have a regular source of revenue and so it would be difficult to employ native agricultural instructors.³⁷⁶

Although the Director of Agriculture used Nigeria as an example to propose the scheme, he did not take into consideration the fact that the Provinces in Nigerian had direct taxation and, therefore, had regular revenue. Also, the Director of Agriculture's view that chiefs were pressing for agriculture instruction in villages and farms was not really the case. It is worth quoting at length the Chief Commissioner for the Northern Territories:

It is not true of the Protectorate chiefs to say that they press for instruction in villages and farms. On the contrary they are openly sceptical of the ability of the Agricultural Officers to teach them anything that they do not already know about the cultivation of farm produce... when the Assistant Superintendent recently addressed a meeting at Bongo, the Chief asked him, at the end of the address, how long have you been farming in my country? The Superintendent replied four years. That being the extent of your experience, said the chief, you cannot have learnt as much as I have because I have been farming here for forty years.³⁷⁷

The report by the Commissioner indicates that the Director of Agriculture did not do adequate background check on the state of agricultural training in the Northern Territories before proposing the scheme. Again, the fact that the Northern Territories needed agricultural personnel did not mean that the local people did not have the cognitive capacity to deal with some of the challenges they faced in farming.

³⁷⁶ *Ibid.*

³⁷⁷ *Ibid.*

Also important to the above view was the fact that the Northern Territories did not have males with the requisite standard of education to be trained as native agricultural instructors. It was for these reasons that the Northern Commissioner described the scheme as “neither desirable nor practicable.”³⁷⁸ Based on the diversity in opinion on the scheme, coupled with financial constraints, the scheme was not introduced.

Conclusion

Agricultural education during the inter-war years was designed to maintain the colonial space; it became one of the tools used to engineer social and economic order. Although the inter-war years witnessed economic depression and unemployment especially after World War I, agricultural education contained, to some extent, the effects of these problems. The expansion of agricultural education in the various levels of the educational system produced a cadre of farmers in the wake of the unemployment situation in the Gold Coast in a limited way. Although agricultural education could not send most pupils ‘back to the land,’ some found their way into the junior staff rank of the Department of Agriculture. The colonial government’s effort to develop agricultural education in the Gold Coast during the inter-war was unbalanced since most of the resources for agricultural education were channelled to the Achimota College to the neglect of the other educational institutions.

Agricultural education in the non-formal sector coincided with the expansion of the agricultural frontiers during the period covered by this chapter.

³⁷⁸ *Ibid.*

The junior staff of the Department of Agriculture engaged farmers in cash crop production. This did not yield much result because cash crop production was controlled by the people and so they were not bound to follow instructions. It was for this reason that the system of indirect rule was employed by the Department of Agriculture to encourage chiefs to support the establishment of model farms in the various indigenous polities. Further, promoting measures to induce agricultural education like farm competitions and agricultural shows were organised by the Department of Agriculture. Although the colony faced social and economic problems such as the Great Depression in the 1920s and 1930s, unemployment and the outbreak of the swollen shoot disease, agricultural education helped in ameliorating these problems during the inter-war years, 1919-1939. The next chapter will explore agricultural education from World War II to the time when the Gold Coast gained its political independence and became Ghana in 1957.

CHAPTER FOUR
AGRICULTURAL EDUCATION FROM THE SECOND WORLD WAR
TO THE ATTAINMENT OF INDEPENDENCE IN 1957

Introduction

Agricultural education during the inter-war years, 1919-1939, positioned the Gold Coast colony, to some extent, as a reliable source of raw materials for imperial Britain. The activities of the Department of Agriculture and Department of Education were instrumental in this attainment. The outbreak of World War II in 1939,³⁷⁹ therefore, came with the need to sustain and, if possible, increase the agricultural output of the colony in order to effectively support the war and its aftermath.³⁸⁰ To this end, agricultural education was engineered in both the formal and non-formal sectors to position the Gold Coast as an avenue for exploitation.

This chapter explores the development of agricultural education after the outbreak of World War II in 1939 to the time when the Gold Coast gained its political independence and became Ghana in 1957. The first part of the chapter examines how agricultural education was engineered during the war period and assesses changes in the educational curriculum to embrace more aspects of agricultural education. This period of study saw the establishment of university colleges. The chapter explores the nature and purpose of studying agriculture at

³⁷⁹ The Second World War broke out with German aggression on Poland on September 1, 1939. The war was fought between the Allies (Britain, France, Soviet Union, and the United States of America and other states) on the one side and the Axis powers (Germany, Italy and Japan) on the other. See, V. N. Khanna, *International Relations*, New Delhi: Vikas Publishing House, 2005, p. 196.

³⁸⁰ Emmanuel Hansen, 'National Food Policies and Organisations in Ghana,' in Thandika Mkandawire and Naceur Bourenane (ed), *The State and Agriculture in Africa*, London: Codesria Book Series, 1987.

the apex level of school education in the Gold Coast. In the non-formal sector, the chapter looks at how the Gold Coast managed food production and, at the same time, provided raw materials to the Allied forces through agricultural education. Again, the chapter discusses the contribution of agricultural education in containing the Swollen Shoot disease. For the reason that Africans formed a quasi-self-government in the colonial system from 1951 to 1957, their contribution to the development of agricultural education will be assessed.

Agricultural Education in the Formal Sector

With the outbreak of the World War II, agricultural education became adversely affected. Inspectors, Principals and Masters of schools and colleges were mobilised for military service. For this reason, the war period witnessed a reduction in the inspection and supervision of schools by Inspectors who were mostly Europeans. With reference to agricultural education, the absence of school inspectors meant that Agriculture would be taken lightly since there would be no supervision of school gardens by the inspectors.³⁸¹ The outbreak of the war also saw an increased demand for education because the economic depression between the 1920s and 1930s made the colonial government to cut the expenditure on, *inter alia*, education.³⁸² This led to the opening of more primary schools which were not recognised by the Educational Unit or the Department of Education. The majority of these schools, with few exceptions, were staffed with untrained

³⁸¹ H. O. A. McWilliam & M. A. Kwamena-Poh, *The Development of Education in Ghana*, London: Longman, New Edition, 1975, p. 66.

³⁸² *Ibid.*

teachers making them unqualified to teach Agriculture in schools.³⁸³ There is also the probability that even if Agriculture was taught as a subject, teachers may not have had adequate tools to demonstrate to students.

The outbreak of the World War II led once again to the deportation of German missionaries who were affiliated to the Basel and Bremen denominations.³⁸⁴ This was because their mother country was part of the Axis Powers. In this regard, German missionaries who worked with the Basel and Bremen Missions as educationists were deported from the Gold Coast. For example, the Basel mission supervisor of schools, the headmistress of the Basel Mission Girls School at Agogo, and the secretary of the Ewe Presbyterian Church were all deported from the colony.³⁸⁵ Their deportation meant that the number of agricultural tutors in mission schools decreased.

During the war, the British government hosted its regiments at well-established educational institutions in the country. For example, the western compound of Achimota College was taken over by the British Army, and became the General Headquarters of the West African Command. The occupation of Achimota saw a disruption of school activities. To provide food for the army and civilians, the Achimota farm and the Bunso plantation were used for food production. The instructions in Agriculture in Achimota and Bunso by Achimota

³⁸³ *Ibid.*

³⁸⁴ C. P. Groves, *The Planting of Christianity in Africa, Volume Four (1914-1954)*, London: Lutterworth Press, 1958, p. 241.

³⁸⁵ C. K. Graham, *The History of Education in Ghana: From the Earliest Times to the Declaration of Independence*, London: Frank Cass, 1971, p. 168.

College were stopped because of the imperial war effort.³⁸⁶ Also, the three Middle Boarding Schools at Asuansi, Kibi, and Mampong, which provided vocational training such as Agriculture, were taken over by the army authorities for the training of army tradesmen in 1942. They were handed over to the school authorities after the war in 1946.³⁸⁷

The curricula for Agricultural education, like those of the other technical and vocational subjects, did not see any restructuring during World War II. Most of the educational activities embarked upon by the Department of Education had to do with administrative restructuring and the disbursement of grants to schools. In sum, the war stalled the growth of technical and vocational education in the Gold Coast.³⁸⁸

By 1948, the educational system had produced more clerical work force in the cities of the Gold Coast. Unfortunately, they were unemployed. The economic situation of the period showed how the educational system had failed to produce graduates who could fall on agriculture or any other vocational work for survival. Coupled with the return of the ex-servicemen, the economic situation became unbearable and that, *inter alia*, contributed to the 1948 riot.³⁸⁹

³⁸⁶ See, C. K. Williams, *Achimota: the Early Years, 1924-1948*, Accra: Longmans, 1962; F. Agbodeka, *Achimota in the National Setting: A Unique Educational Experiment in West Africa*, Accra: Afram Publications Ltd, 1977.

³⁸⁷ Gold Coast, *Agricultural Department Report*, 1950, Accra: Government Printer, p. 1 [hereafter *Agricultural Department Report*].

³⁸⁸ See, Philip Foster, *Education and Social Change in Ghana*, London: Routledge, 1967; H. O. A. McWilliam & M. A. Kwamena-Poh, *The Development of Education in Ghana*, London: Longman, New Edition, 1975.

³⁸⁹ On 28th February, 1948, a group of ex-service men, in a bid to present their petition to the governor were shot. This incident triggered a series of disturbances leading to the looting of shops, demonstrations and riots throughout the Gold Coast. This disturbance was as a result of political and national consciousness which had arisen as a result of the socio-economic and political situation in the Gold Coast. It was triggered by the shooting of the ex-servicemen. "Report of the

The 1948 “Riot” presented the need to restructure the general curricular of the colonial educational system to embrace more technical and vocational subjects such as Agriculture. With respect to education, the Watson Commission, chaired by Aiken Watson,³⁹⁰ identified government’s failure to tailor the educational system to meet the needs of the people in the country as one of the major complaints submitted to the Commission.³⁹¹ The Commission reported that:

... Literary education alone is doing great harm in the Gold Coast. It is creating a gulf between town and country. It is producing a youthful hooligan element in towns as boys emerge from school to find a glut of clerks and to find themselves disinterested in, or not equipped for, other occupations....There must be an immediate expansion of craft, technical and vocational training practically throughout the entire structure.³⁹²

The Commission, therefore, recommended an increase in the number of technical and vocational schools which would teach subjects such as Agriculture. This was to offset the dominance of literary education in the colony.³⁹³ To achieve the aforementioned, the Watson Commission proposed the establishment of gardens in all primary schools in the Gold Coast and the need to give maximum attention to agricultural education. Again, it was proposed that teachers should be

Commission of Enquiry into Disturbances in the Gold Coast, 1948," London: His Majesty’s Stationery Office, 1948, p. 7-10.

³⁹⁰ The Watson Commission was set by the British colonial government to investigate the causes of the 1948 disturbances and report on the general situation in the Gold Coast. Consisting of three members, the chairman of the commission was Andrew Aiken Watson, QC and other two members were Keith Murray of Lincoln College, Oxford and Andrew Dalgleish, an expert in trade unionism.

³⁹¹ *Ibid.*, p. 64.

³⁹² *Ibid.*

³⁹³ *Ibid.*, p. 65.

trained to teach technical and vocational subjects such as Agriculture at every school level including the university.³⁹⁴

Agricultural education at the highest level of the educational structure in the Gold Coast occurred with the establishment of the University College of the Gold Coast in 1948.³⁹⁵ The University College of the Gold Coast was established to provide degree courses in the humanities and the sciences as well as provide professional courses such as training in education, medicine, agriculture, forestry, animal health, engineering and architecture.³⁹⁶ However, David Balm, the first Principal, opted for the establishment of pure (or natural) science and arts before developing professional courses such as agriculture. This position may have been influenced by the fact that he wanted programmes in academic departments to conform to the University of London at that early stage.³⁹⁷

Following the introduction of the natural sciences and the arts, the Department of Agriculture was established at the University College of the Gold Coast in 1949 to improve agriculture by training teachers and specialists to deal

³⁹⁴ *Ibid.*

³⁹⁵ The University College of the Gold Coast was established as a result of the recommendations of the Asquith Commission on Higher Education in the Colonies and the Elliot Commission on Higher Education in West Africa. The Elliot Commission put forward a minority report which favoured the establishment of one university for all British West Africa Colonies and this was accepted by the Colonial Office, although majority pushed for a university for each British West African Colony. However, popular demand and agitation from the people of the Gold Coast led to the appointment of the Bradley Commission to review the report of the Elliot Commission in 1946. Consequently, the Bradley Commission recommended the establishment of a university college for the Gold Coast and even went further to suggest that a higher education centre be established in Kumasi. See, H. O. A. McWilliam & M. A. Kwamena-Poh, *The Development of Education in Ghana*, London: Longman, New Edition, 1975; F. Agbodeka, *A History of University of Ghana: Half Century of Higher Education (1948)*, Accra: Woeli Publishing Services, 1998; K. Osei Kwarteng, S. Y. Boadi-Siaw & D. A. Dwarko, *A History of the University of Cape Coast: Fifty Years of Excellence in Tertiary Education: (1962-2012)*, Cape Coast: Cape Coast University Press, 2012.

³⁹⁶ Agbodeka, *A History of University of Ghana*, p. 71.

³⁹⁷ *Ibid.*

with major issues affecting agricultural production in the Gold Coast. At the end of the programme, students were awarded a Bachelor of Science (B.Sc.) degree in Agriculture. The programme was divided into two parts; Part I and Part II. At the end of Part I, students wrote exams in Agricultural Chemistry, Botany, Zoology, Geology or Physics. For Part II, students were to write exams in Crop Husbandry, Animal Husbandry, Farm Management, etc.³⁹⁸

Since agriculture was included the budget for the first phase of developing the University College, it became difficult to fund a Faculty of Agriculture.³⁹⁹ However, the Gold Coast Cocoa Market Board gave a grant of one million pounds to start the Faculty of Agriculture in the University College of the Gold Coast, thus including agriculture in the first phase of developing the College. The grant made provision for the establishment of agricultural research stations in the Gold Coast. In 1954, the Nungua Agricultural Research Station was established.⁴⁰⁰ It was designed to train students in poultry and livestock production. The station, which was situated in the south-eastern part of the College, was suitable for animal husbandry because of the ecological landscape which favoured animal rearing.⁴⁰¹ At the Nungua station, courses of practical instruction were given to first and second year students during the long vacation. The first year students took part in all farming activities and were given special instruction on selected

³⁹⁸ *Ibid.*

³⁹⁹ The Gold Coast University College was developed in two phases; arts and pure science as phase one before the development of professional schools as phase two. See, Agbodeka, *A History of University of Ghana*, p. 29.

⁴⁰⁰ The Nungua Station is located near the Tema Motorway.

⁴⁰¹ Later, in the early years of post-colonial Ghana, the Kpong and Kade Agricultural Research Stations were established to help in agricultural research and teaching. See, Agbodeka, *A History of University of Ghana*, pp. 72-73.

topics. The second year students, for the greater part, undertook special projects.⁴⁰²

By 1955, the Agricultural Department of the University College of the Gold Coast was the only accredited institution in the country training the senior staff of the Ministry of Agriculture. This was because of its special relations with the London University, which helped the department to provide degree courses in Agriculture, which were accepted as the right standard for the senior professional officers of the local agricultural service.⁴⁰³

During the period 1939-1957, which is the focus here, traditional rulers contributed to the development of agricultural education in schools. Worthy of mention is the role played by the Native Authority of Akyem Abuakwa. In 1949, the Community Development and Local Development Committee in the Akim [Akyem] District designed a scheme to encourage the study of Agriculture in schools situated in the Akim District. Under the scheme, twenty schools were selected to receive a grant of 10 pounds each for the development of their school farms.⁴⁰⁴ The grant was to enable schools grow more food for the community in which the school was situated. The produce of the farm was sold and the profits were used in buying school equipment.⁴⁰⁵

To ensure effective use of the grants, the Committee visited each school farm under the scheme with an Agricultural Officer who advised pupils along

⁴⁰² The available documents did not provide in details the nature of work done on the Nungua Station. See, "The University College of the Gold Coast," *Annual Report by the Principal, 1955-1956*, Edinburgh: Thomas Nelson and Sons Limited, p. 35.

⁴⁰³ K. Twum-Barima, *Development of Agricultural Education*, Tema: Ghana Publishing Corporation, 1977, p. 126.

⁴⁰⁴ PRAAD, Koforidua, ERG. 4/1/3, "Akim Abuakwa Community Development and Local Development."

⁴⁰⁵ *Ibid.*

agricultural perspectives through the instrumentality of the Department of Agriculture. The scheme encouraged more schools to engage in Agricultural training.⁴⁰⁶ This is a report on Kibi Primary School:

One more plot, divided into four parts for each class, tilled and ridged up, planted with water yams, African Vegetables as garden eggs etc, maize, cassava, groundnut and cowpea as cover crop on the water you plot, the latter four crops were supplied by the Pokoase Agricultural Station. A good work done by the school.⁴⁰⁷

The scheme provided the opportunity for schools within the jurisdiction of the Akyem Abuakwa state to engage their students in agricultural education through grants and monitoring by Agricultural Officers.

The year 1951 was a watershed in the historiography of the development of education in colonial Ghana. This is because from 1951 forward, educational policies in the Gold Coast were engineered and implemented by Africans. The 1951 Constitution conferred on Kwame Nkrumah, the power to formulate and implement developmental policies which included education.⁴⁰⁸ Consequently, the Accelerated Development Plan of Education was proposed and adopted by Nkrumah “to help develop a balanced system working towards universal primary education as rapidly as consideration of finances and teacher-training allowed, but maintaining at the same time proportionate facilities for further education for

⁴⁰⁶ Interview with Osei Wiafe, 83 years, a former pupil whose school benefitted from the scheme, at his residence, Kukurantumi on 26th March, 2016, at 2: 45 pm.

⁴⁰⁷ For a full description of the farms under the scheme, see PRAAD, Koforidua, ERG. 4/1/3.

⁴⁰⁸ After the 1950 elections, Kwame Nkrumah was appointed Leader of Government Business under the 1951 Constitution. Consequently, he became the Prime Minister in 1952. With this, the country became internally self-governing. See, F. K. Buah, *A History of Ghana*, Oxford: Macmillan, 1998, p. 160.

those most fitted to receive it.”⁴⁰⁹ Simply put, the Accelerated Development Plan of Education sought to expand education by enrolling more children at the primary level.

The Accelerated Development Plan of Education produced quantitative progress rather than qualitative progress in the development of education. For example, between 1951 and 1957, primary and middle schools tripled because of the introduction of free and compulsory basic education by the government. Also, the number of secondary schools rose from 12 to 38. Realising the need to provide the necessary teaching staff, the government established 16 more teacher-training colleges from 1952 to 1954 thereby increasing the annual output of teachers from 791 in 1951 to 1, 680 in 1955.⁴¹⁰ One defect of the Accelerated Development Plan of Education was its inability to initiate a structural and curricular change in the educational system which produced more pen-pushers. The curricular of the pre-1951 educational system, therefore, remained unchanged and lingered to the time of independence.⁴¹¹

The establishment of the Kumasi College of Technology also provided the opportunity for more people to enroll at the university level to study Agriculture. The Kumasi College of Technology was established in 1951 and opened in 1952 with Engineering and Commerce as its first courses of instruction.⁴¹² In 1953, the

⁴⁰⁹ Gold Coast, *Accelerated Development Plan of Education, 1951*, Accra: Government Printing Department, 1951, p. 1.

⁴¹⁰ Boahen, *Ghana: Evolution and Change*, p. 178.

⁴¹¹ P. Foster, *Education and Social Change in Ghana*, London: Routledge, 1967, p. 183.

⁴¹² The founding of the Kumasi College of Technology can be traced to the report of the Bradley Commission which investigated higher education for the Gold Coast. The Commission recommended the establishment of a university college for the Gold Coast and even went further to suggest that a higher education centre be established in Kumasi. F. Agbodeka, *A History of*

Department of Agriculture was established to provide a number of *ad hoc* courses of varying duration for the Ministry of Agriculture. The college had a farm for teaching and research.⁴¹³ The Department of Agriculture organised short courses in Agricultural Mechanisation for selected agricultural assistants working on mechanised farm projects in the Ministry of Agriculture. Also, the Department of Agriculture engaged the first year students of the Agricultural Training Centre at Kwadaso for a year in elementary science courses. This provided the students the necessary scientific foundation on which to build their professional training in their respective schools. They returned to the college afterwards for the remaining two years of their training at the Agricultural Training Centre.⁴¹⁴

Furthermore, the Department of Agriculture of the Kumasi College organised and supervised a Rural Science course for post-elementary school pupils and Certificate 'B' teachers. This was done in collaboration with the General Studies and Education Departments of the Kumasi College. The duration of the programme was four years. Three years were to be spent at the college and the remaining one year was to be spent by the students in the Education Department of the college to sharpen their Rural Science Foundation, the pedagogical part of their training. The Rural Science Department taught subjects such as Agriculture and Horticulture Science, Poultry Science, Elementary

University of Ghana: Half Century of Higher Education (1948), Accra: Woeli Publishing Services, 1998; K. Osei Kwarteng, S. Y. Boadi-Siaw & D. A. Dwarko, *A History of the University of Cape Coast: Fifty Years of Excellence in Tertiary Education: (1962-2012)*, Cape Coast: Cape Coast University Press, 2012.

⁴¹³ The farm consisted of a poultry unit with birds, and rabbits, and a horticultural nursery and a vegetable plot, and a plot of maize, groundnut, rice, sweet potatoes and beans. G. M. Pitcher, *The Knot of Wisdom: A Chronicle of the University of Science and Technology, 1951-1976*, Kumasi: University Press, 1976, p. 18.

⁴¹⁴ Twum-Barima, *Development of Agricultural Education*, p. 123.

Agricultural Economics, Wood and Metal Work, Surveying, Farm Mechanisation and Building Construction.⁴¹⁵

On passing out, pupils received the normal Teachers' Certificate 'A' of the Ministry of Agriculture certifying the teaching of Rural Science subjects in rural schools in the country. Teachers with Certificate 'A' taught Nature Study, developed school gardens and schools farms and generally inculcated in the rural pupils an interest in agriculture. Some were appointed as staff of Teacher Training Colleges and Secondary Schools.⁴¹⁶

For teachers who had Certificate 'A' and desired to teach subjects such as Nature Study and also manage school gardens and school farms, a short course which lasted for one year was instituted by the Department of Agriculture for them. They were taught General Science, Agriculture and Horticultural Science, Poultry Science, Agricultural Economics, and Wood and Metal Work.⁴¹⁷

The existence of the Faculty of Agriculture in the Gold Coast University College and the Agricultural Training Centre raised some questions in the early stages of agricultural education in the Kumasi College of Technology. The question was how different the Department of Agriculture in the Kumasi College of Technology was going to be from the already existing ones in the University College of the Gold Coast and the other agricultural institutions since the graduates were appointed into the junior and senior staff of the Ministry of Agriculture.⁴¹⁸

⁴¹⁵ *Ibid.*

⁴¹⁶ *Ibid.*, p. 127.

⁴¹⁷ *Ibid.*

⁴¹⁸ *Ibid.*

These questions were raised by the Director of the government's Department of Agriculture in conjunction with the other heads of the various agricultural institutions. It was for this reason that the Department began to develop a programme which was different from the existing ones. To develop a course which was different from what was being taught at the existing agricultural institutions in the Gold Coast, the inadequacies, weaknesses and gaps in the offerings of the existing institutions were examined so that when a new agriculture course was introduced, it would be acceptable in the general practice of agriculture in the country and, at the same time, it would not belong to either of the other two institutions training regular agricultural personnel in the country.⁴¹⁹

Consequently, a two-year course for Agricultural Assistants who were staff of the Ministry of Agriculture was started in the Kumasi College. The course was designed to help field or laboratory assistants to gain promotion to the post of Senior Technical Officer. The junior ranks of Department of Agriculture and the government found the course to be very attractive. The course was, therefore, patronised because it made promotion to the position of Senior Technical Officer in the Ministry of Agriculture very short. Junior staff members did not have to wait much long to become senior officers before they retired. The mounting of this course prevented efforts by the Ministry of Agriculture and the other existing agricultural institutions in the colony to abolish the Department of Agriculture in the Kumasi College of Technology in 1956.⁴²⁰

⁴¹⁹ *Ibid.*

⁴²⁰ *Ibid.*

In 1955, an attempt was made by the Kumasi College of Technology to introduce a four-year post-secondary certificate course which would lead to a Diploma in Tropical Agriculture. Holders of this certificate were to be considered for appointment to the post of Senior Technical Officer in the Ministry of Agriculture. The proposed programme faced some challenges. Critics of the scheme argued that the duration of the course was too long and, therefore, would be too expensive.⁴²¹ The premise of their argument was that the British National Diploma in Agriculture, which was equivalent to the one proposed by the college, lasted for only two years. In response, the Department of Agriculture maintained that the proposed course was not different from the British National Diploma because the British Diploma had pre-entry practical work on farms which, when added to its duration of two years, becomes equivalent to that of the four years of the Diploma in Tropical Agriculture in the Kumasi College of Technology. Although a green-light was given by the government, the proposed course became real only in the early years of the post-colonial period.⁴²²

By 1957, the year that the Gold Coast became independent, Agriculture was taught in primary, middle, secondary, teacher-training colleges and the university colleges. For example, the curriculum of primary schools covered English, Writing, Arithmetic, Physical Education, Religious Instruction, Art and Crafts, Needlework (for girls), Ghanaian Languages, Nature Study (equivalent to Agriculture), Geography and History. For the middle school level, English, Mathematics, History and Civics, Geography, Hygiene, Arts and Crafts, Physical

⁴²¹ *Ibid.*

⁴²² *Ibid.*

Education, Gardening, Wood Work (for boys) and Housecrafts (for girls) were taught. The secondary schools had farms and university colleges also had Departments of Agriculture with farms to aid research and teaching.⁴²³ This made the development of agricultural education in the educational system in colonial Ghana almost complete. However, since the educational system of the Gold Coast was pyramidal in nature, only a few people came out as agriculturalists. This was because Agriculture did not form a part of the core subjects from the secondary school level. Most of the secondary schools saw Agriculture as an extra-curricular activity. For this reason a considerable number of students chose to read subjects that would lead them to acquire white collar jobs after school.⁴²⁴

Apart from agricultural education being provided at the various levels of the educational system, the Department of Agriculture of the colonial government also provided formal training for people who wanted to be agriculturalists. This was done at the training centres. The agricultural training centres provided an avenue for graduates from the primary schools and secondary schools to further their studies in Agriculture and thence be employed by the government to work in the Department of Agriculture.

Agricultural Education in Agricultural Training Centres

The Agricultural Training School in Kumasi, which was closed down in 1939 because of the exigencies of the World War II, was re-opened in 1946.⁴²⁵ It

⁴²³ See, *Education Department Report* 1957, p. 3.

⁴²⁴ Interview, Yaw Opoku-Asiama, 68 years, retired senior lecturer, Department of Crop Science, University of Cape Coast, at Cape Coast, on 24th March, 2016, 2:30 pm.

⁴²⁵ PRAAD, Koforidua, ADM. 31/6/238, "New Deal For Cocoa Campaign."

continued to provide its three-year course in Agriculture leading to the appointment of its graduates as agricultural assistants in the Department of Agriculture. The minimum requirement to enrol in the training centre was raised to the West African School Certificate or its equivalent, but because only few candidates with such qualification enrolled, people with Middle School Certificates were accepted.

The first year of the three-year programme consisted of instructions in basic science subjects and their application to agriculture at the training centre. Excursions were organised to give students the opportunity to visit agricultural and cocoa stations and laboratories of the Department of Agriculture of the colony as well as to factories, institutes and places of interest throughout the country.⁴²⁶ In the second year, the students were posted to an agricultural research station for practical training and experience in extension work. Regarding the third year, the students returned to the training centre to apply the sciences to the principles and practices experienced in the year of their attachment.⁴²⁷

Due to the fact that Kumasi inhabitants encroached on the lands of the Kumasi Agricultural Station,⁴²⁸ which hosted the Agricultural Training Centre, the Department of Agriculture acquired a plot of land at Kwadaso⁴²⁹ from the Asantehene, the paramount chief of Asante, for agricultural research and training in 1948. The land was designed to host, apart from the training school, other

⁴²⁶ Twum-Barima, *Development of Agricultural Education*, p. 126.

⁴²⁷ *Ibid.*

⁴²⁸ Kay, *The Political Economy of Colonialism in Ghana*, p. 232.

⁴²⁹ Kwadaso is located in the western part of Kumasi. The distance between Cadbury Hall to Kwadaso is 9.1 Kilometres. <https://www.google.com.gh/maps/dir/Cadbury+Hall+Road,+Kumasi/Kwadaso+Agricultural+College,+Kumasi,+Ashanti>. 11th May, 2016.

institutions such as the soil and crop research centres, thus, making it a central research station for the Ashanti Province. In 1951, therefore, the Agricultural Training Centre moved from Cadbury Hall, somewhere in Atonsu, to Kwadaso in Kumasi.⁴³⁰

In order to provide staff for the Cocoa Disease Control and Rehabilitation division of the Department of Agriculture, the training centre organised courses for staff of the colonial government's Ministry of Agriculture. Candidates were selected from the Field Assistants grade based on their record of work and by interview and examination to begin a three-year course at the centre. After completion, they were expected to help in the fight against the Swollen Shoot disease as Technical Field Assistants and Survey Officers.⁴³¹

In an attempt to increase the working staff of the colonial governments' Department of Agriculture to deal with the Swollen Shoot disease, the Bunso Agricultural School was established under the Department of Agriculture's Cocoa Division to train Field Assistants for the Swollen Shoot Disease Control Programme in 1950. In effect, the Bunso Plantation, abandoned by Achimota College because of lack of funds and the contingencies of World War II, was refurbished to host the school. Since the facilities built by the Achimota College at the Bunso Plantation were inadequate to host the proposed institution, two more dormitories, a dining hall, and a bungalow for the teachers with septic tanks

⁴³⁰ Interview with Alhaji Musah A. Bonuedie, Administrator of Kwadaso Agricultural College at Kwadaso on the 4th July, 2016 at 3:30 pm. See also, J. Kwarteng, and I. Kwarteng, (eds), *Setting the Grassroots on Fire: Agriculture and Sasakawa Global 2000 in Ghana*, Cape Coast: Zophai Publishers, 2012, p. 124.

⁴³¹ PRAAD, Kumasi, ARG. 3/15/41, "Cadbury Hall."

were built by the colonial government to replace the temporary camps built by Achimota College.⁴³²

The course of instruction was grouped into three, namely Probationer Field Assistant Course, Leading Field Assistant Refresher Course and Field Assistant Propagators Course. The Probationer Assistant Course was organised for new entrants who aspired to be Field Assistants. The course lasted for three months and after that the graduates were posted to communities as Field Assistants. The Leading Field Assistant Refresher Course was designed as a refresher course for existing assistants. This was to furnish them with new techniques in dealing with cocoa diseases. The Field Assistant Propagators Course lasted for four months.⁴³³ After the course, the graduates worked at the Department of Agriculture as Survey Officers and Technical Officers. They were trained in improved plotting methods. The school also organised a training programme in cocoa production techniques in cocoa growing areas and offered a training programme for Licensed Cocoa Buying Companies in cocoa production, extension methods and agricultural handling.⁴³⁴

The Survey Officers provided statistics on the development of cocoa production for the Department of Agriculture. This helped the Department to better understand the spread of the Swollen Shoot disease.⁴³⁵ The Technical Assistants analyzed the statistics on the development of cocoa production in a

⁴³²PRAAD, Cape Coast, ADM. 23/1/3238.

⁴³³ *Ibid.*

⁴³⁴ *Ibid.*

⁴³⁵ An interview with one informant revealed that students at the various training schools were taught Surveying and some employed as Survey Officers by the Department of Agriculture. This position cannot be substantiated since there is no documentation to support it.

given area and further gave suggestions as to how crop production could be stabilized or increased. To help in the cocoa rehabilitation process, they supervised the cutting down of infected cocoa trees by identifying the infected areas.⁴³⁶ The Bunso Training School also organized a ten-day programme for Produce Examiners of the Ministry of Trade and Labour. The Produce Examiners were given instructions on the Swollen Shoot disease, capsid and their control, pod disease and cocoa farm establishment and management.⁴³⁷

In order to increase the number of agricultural personnel in the Northern Territories of the Gold Coast, the Nyankpala Agricultural Training Centre was established in 1953. A two-year course, for which students were resident at the Nyankpala Training Centre,⁴³⁸ was designed by the centre to train local boys in the Northern Territories with a view to appointing them as Agricultural Instructors to serve on the District Councils. After completion, they were expected “to assist farmers change their traditional practice and adopt mixed farming and modern methods of crop culture.”⁴³⁹

Qualification for the two-year programme was the Middle School Certificate. In the first year, students studied General Biology, English, Arithmetic, Agricultural Surveying, Principles of Farm Mechanisation and Farm

⁴³⁶ Interview with Alhaji Musah A. Bonuedie, 57 years, Administrator of the Kwadaso Agricultural College, Kwadaso, on 4th July, 2016 at 3:30 pm.

⁴³⁷ B. Acquah, *Cocoa Development in West Africa: The Early Period With Particular Reference to Ghana*, Accra: Ghana Universities Press, 1999, p. 172.

⁴³⁸ The Nyankpala Agricultural Training Centre had a boarding facility for its students. Each student was given his own room. Each room was furnished with a table, a chair, a camp-bed, a book rack, a mosquito net, a bucket and a drinking water pot. Since there were no electric lights, lanterns and kerosene were supplied by the school. See PRAAD, Kumasi, ARG 8/1/165, “Department of Agriculture Quarterly Newsletter,” p. 2.

⁴³⁹ R. B. Bening, *A History of Education in Northern Ghana, 1907-1976*, Accra: Ghana University Press, 1990, p. 176.

Buildings, Soils, Economics, Horticulture and Meteorological Records. In the second academic year, Farm Mechanisation and Farm Building, Entomology, Plant Pathology, Veterinary Hygiene, Farm Management, Crop Husbandry, Surveying, Agricultural Surveys, and Principles of Plough-Farming were studied.⁴⁴⁰

It is important to note that the students were sponsored by their District Council to undertake the course. The students were given stipends while in training. For example, a total of 158 pounds, 76 pounds for the first year and 82 pounds for the second was given to each student.⁴⁴¹ The training centre had students from the District Councils of towns such as the Gonja, Mamprusi, Wala, Lawra, Tumu and Kessena-Nankani. They were absorbed after the training into their respective District Councils as Agricultural Instructors. The training centre also provided programmes for other government departments. For example, a one-year course was organised for trainees of the Forestry Department and teachers specialising in agriculture under the sponsorship of the Department of Education.⁴⁴²

In 1956, the duration of the training was extended to three years. This was to enable students to spend their second year on the field before returning to the centre for the final academic year. The training centre held refresher courses for the staff of the Departments of Agriculture and Forestry.⁴⁴³ It is important to note that, the District Council Agricultural Instructors were drafted into the staff of the

⁴⁴⁰ PRAAD, Kumasi, ARG 8/1/165, 'Department of Agriculture Quarterly Newsletter,' p. 2.

⁴⁴¹ Available documents indicate that the allowances for the students kept changing and also some of the allowances were used to pay for their "monthly mess subscription." *Ibid.*

⁴⁴² *Agricultural Department Report*, 1956, p. 34.

⁴⁴³ *Ibid.*, p. 55.

Department of Agriculture after attending a one-year Promotion Course after which they were selected by an examination and an interview.⁴⁴⁴ The aforementioned agricultural training centres played an important role in offsetting the notion that clerical work was the only blue-print to success in the Gold Coast. Many people took the advantages the studying of Agriculture provided, especially, when more men were needed to fight the Swollen Shoot disease.⁴⁴⁵ After the course, they were posted to cocoa communities to serve as Technical Field Assistants and Survey Officers in the Department of Agriculture.⁴⁴⁶

Apart from these developments, progress was also made in the transfer of agricultural knowledge outside the setting of formal education. Non-formal agricultural education was concurrently held to encourage farmers to adopt improved methods of farming and also deal with the menace of crop diseases. These measures were to position the colony as a source of raw materials to the metropolitan power during and after World War II.

Agricultural Education in the Non-Formal Sector

The beginning of World War II in 1939 saw the intensification and diversification of agricultural education by the Department of Agriculture of the Gold Coast to meet the war demands at both the internal and external fronts. Before the war, the policy of the entire agricultural economy was directed to suit the external demand for export crops. Food production in the colony was left to

⁴⁴⁴ Up to 1953, the best of the District Council Agricultural Instructors, were appointed after acquiring field experience as Agricultural Assistants in the Department of Agriculture on the recommendation of senior officers of the Department. See PRAAD, Kumasi, ARG 8/1/165.

⁴⁴⁵ *Ibid.*

⁴⁴⁶ *Ibid.*

propel on its own local momentum. However, with the outbreak of the war, the policy was changed and “anything near to food policy was enunciated.”⁴⁴⁷ A statement from the Department of Agriculture makes the position clear:

[There is] ...the need to reduce imports generally, especially of food stuffs, and so save shipping space, draw less on supplies vital to the United Kingdom and conserve foreign exchange... Consequently a growing proportion of the Department's efforts has been thrown into the campaign to increase the production of indigenous foodstuffs...⁴⁴⁸

To this end, agricultural education was directed to “increase the production of indigenous foodstuff, to stimulate the production of rubber and other export produce needed overseas and to encourage the production of other produce that will help to release the country from importing commodities from overseas.”⁴⁴⁹ In 1941, the colonial government launched a special food production drive throughout the Gold Coast in order to:

Increase the number of, and provide concentration near the larger market; encourage an adequate supply of foodstuff, for the native population with the aid of guaranteed prices for the disposal of surplus production; and provide the European population with regular and adequate supply of food as early as possible.⁴⁵⁰

The increased demand in food crops and livestock can be linked to the need to satisfy the European war institutions which emerged in the Gold Coast during the war: the Army, the Royal Air Force and Royal Navy, the Pan-

⁴⁴⁷ Hansen, “National Food Policies and Organisations in Ghana,” p. 41.

⁴⁴⁸ *Agriculture Department Report* 1942, p. 1.

⁴⁴⁹ *Ibid.*

⁴⁵⁰ PRAAD, Accra, CSO 8/1/314.

American Airways, and the Mercantile Marine.⁴⁵¹ There was also the need to increase food production to feed African troops because there had been a shortage in agricultural labour due to the recruitment⁴⁵² and lastly there had been a change in the consumption patterns in the Gold Coast (more wheat and rice being consumed than before).⁴⁵³ The Department of Agriculture took measures to grow certain vegetables, particularly those favoured by the Europeans such as, green pepper, carrots, lettuce, cabbage, cauliflower and radishes. The planting of these vegetables came with its own procedures. It is not surprising, therefore, to note that most of the vegetable farms and buying centres were situated in some of the agricultural stations in Aburi, Kumasi, Akyem Tafo, Asuansi, Kpeve, Tarkwa, and Tamale. The Achimota College Plantation at Bunsu was also used in the production of vegetables.⁴⁵⁴ Since agricultural stations served as buying centres of the vegetables, the knowledge and techniques in producing these vegetables were passed on to the people while agricultural officers inspected the vegetables that were meant for sale.

With respect to local staple crops, there was no direct intervention in production. Farmers were only advised to produce more of their staple food crops. This was because, the production of food crops had always been achieved through the initiative of the farmers. Farmers were “advised to confine their activities to crops and livestock which they knew would grow well in their districts.”⁴⁵⁵ The

⁴⁵¹ *Agriculture Department Report 1942*, p. 1.

⁴⁵² Hansen, “National Food Policies and Organisations in Ghana,” p. 42.

⁴⁵³ M. Owusu, “Agriculture and Rural Development Since 1935,” in Ali Mazrui & C. Wondji (ed), *Africa since 1935: General History of Africa-VIII*, California: Heinemann, 1993, p. 317.

⁴⁵⁴ PRAAD, Accra, CSO 8/1/314.

⁴⁵⁵ *Agriculture Department Report 1942*, p. 2.

call to grow more food crops can be linked to the shortages in imported processed food in the Gold Coast due to the war.⁴⁵⁶ Those who were affected by the shortage of processed foods were largely Europeans and a few Gold Coasters. This explains why primacy was given to the training of farmers to produce more “European vegetables” and cash crops.⁴⁵⁷

Agricultural education during World War II was intensified when the supplies of rubber from the Far East were cut off by the Axis powers late in 1941.⁴⁵⁸ The Gold Coast Agricultural Department, like others in the British Colonies, was accorded the responsibility of encouraging its farmers to increase the production of more rubber. An extensive work was done by the Department of Agriculture to educate farmers to produce rubber from the African rubber trees, *Funtumia* and from the rubber veins.⁴⁵⁹

To maintain and increase rubber production, the Department of Agriculture went further afield into forests and outlying areas. A school of instructors for rubber tappers was also opened at Konongo in 1942. The course, which lasted for a month, taught students how to tap and process rubber. The students were also taught how to search the forest for rubber trees and how to form and train gangs to work in their own districts. At the end of the course, 186 certificates were issued to students who passed. The certificate enabled them to

⁴⁵⁶ *Gold Coast Independent*, 18th May, 1943.

⁴⁵⁷ Interview with Dr. Prempeh Fiscian, Aged 67 years, retired senior lecturer, Department of Crop Science, University of Cape Coast, on 4th March, 2016, 11: 45 am.

⁴⁵⁸ T. E. Enim, *Essays on the Political Economy of Ghana*, Accra: Selwyn Publishers, 1987, p. 7.

⁴⁵⁹ *Ibid.*

obtain the assistance of chiefs to form gangs or work groups to search for rubber in forests under the jurisdiction of native chiefs.⁴⁶⁰

Agricultural education was expanded with the return of the ex-service men into the Gold Coast after World War II. Since the colonial government could not engage all ex-service men in gainful employment,⁴⁶¹ a Soldiers Settlement Scheme was designed by the Department of Agriculture to train all those who desired to go into farming. The scheme sought to transmit some techniques of agriculture to minimise the rate of unemployed ex-service men in the Gold Coast. Accordingly, the Bunso plantation was used to train the returned soldiers in the cultivation of cash crops such as cocoa, coffee, rubber and oil palm.⁴⁶² The scheme also sought to introduce some of the ex-servicemen to fishing. The scheme for resettling the ex-servicemen into the fishing industry was initiated by Dr. Ansah Koi, a prominent medical officer. In a letter to Lt-Col. Whitecombe, Officer-in-Charge of Resettlement of Ex-servicemen, Dr. Ansah Koi opined that:

As you invite suggestions re jobs for ex-servicemen in the Gold Coast, I wish to offer my own humbly suggestions as follows:

What about Fishing industry in this country since farming industry with its unstable economic prospect appeals little to the Ex-service man.

⁴⁶⁰ *Ibid.*

⁴⁶¹ Approximately 69,000 men served in the Gold Coast Regiment (G.C.R.) of the Royal West African Frontier Force (R.W.A.F.F.) during World War II, most in East Africa and about 30,000 in Burma. The majority were infantrymen, and almost one-third were labourers. About 40 per cent were tradesmen who were literate, a higher proportion than that found in other British colonial regiments. For those who applied for employment from the four Resettlement Offices, only 50 percent of those who applied had jobs. They, however, complained that the jobs were menial and the pay insufficient. See, Israel M. Adrienne, 'Ex- Servicemen at the Crossroads: Protest and Politics in Post-War Ghana,' *Journal of Modern African Studies*, Vol. 30, No. 2 (Jun., 1992), p. 361.

⁴⁶² *Agricultural Department Report 1946*, p. 19.

It would be an improvement of the country, if the Gold Coast government could participate or interest itself actively in the fishing industry, subsidise and make it a real first class business concern in the country, in such business, ex-servicemen could be absorbed with Government encouragement.⁴⁶³

The letter basically called for the need to diversify the agrarian economy of the Gold Coast through agricultural education. For this reason the scheme was extended to cover the training of ex-servicemen in fishing in the Gold Coast.

In the Northern Territories, the scheme trained the ex-servicemen in animal husbandry. Under the scheme, the returned soldier provided his own bullocks while the Department of Agriculture provided free training. At the end of the training, the department lent implements to the trainees. This was to help them start their own farms. If they worked well, the implements became their property at the end of a working year.⁴⁶⁴ However, the scheme was not patronised for various reasons. First, the scheme did not reflect the promise made by the colonial government at the time of recruitment in the army. Second, most of the soldiers were not farmers before going to the war, therefore, training them to become farmers became difficult. For those who returned to farming, an unexpected drought and low prices for farm produce discouraged them from continuing the scheme.⁴⁶⁵ Last, the scheme failed in the fishing sector because the colonial government did not have a department of fisheries to effectively administer the scheme in that sector.

⁴⁶³ "Letter from Dr. Ansah Koi to Lt. Colonel Whitecomb, Resettlement Officer, Accra," 10/9/1945 as cited in Irene Odotei, *Artisanal Marine Fishing Industry*, p. 50.

⁴⁶⁴ *Agricultural Department Report* 1946, p. 19.

⁴⁶⁵ Israel M. Adrienne, 'Ex- Servicemen at the Crossroads: Protest and Politics in Post-War Ghana,' *Journal of Modern African Studies*, Vol. 30, No. 2 (Jun., 1992), p. 361.

An important development in the non-formal sector was the introduction of agricultural education in the fishing industry. Prior to 1946, the fishing industry was developed and managed by local fishermen along water bodies in the interior and the coast without any interference from the colonial government.⁴⁶⁶ This was because the marine economy was not on the agenda of the British government for exploitation.⁴⁶⁷

The initial step in developing the fishing industry occurred with the outbreak of World War II in 1939. The need to supplement the protein staples of the Allied forces hosted in the Gold Coast with fish in their diet caused a high demand for fish from the local fishing industry. However, since the fishing industry was at its primordial stage, the colony depended on canned fish which was scarce and expensive because of World War II.⁴⁶⁸ There were then calls for the establishment of a Department of Fisheries to regulate the fishing industry of the Gold Coast.⁴⁶⁹ Dr. Ansah Koi wrote that:

After all we have a Department of Agriculture, why can't we have a Director of Fishery or Director of Agriculture and Fishery combined who among his duties would advise fishermen in modern fishing technique knowledge and improvement and see to it that we have a modern run fishing industry.⁴⁷⁰

⁴⁶⁶ Rowena M. Lawson & Eric A. Kwei, *African Entrepreneurship and Economic Growth: A Case Study of the Fishing Industry of Ghana*, Accra: Ghana University Press, 1974, p. 52.

⁴⁶⁷ *Ibid.*

⁴⁶⁸ Irene Odotei, *Artisanal Marine Fishing Industry: A Historical Overview*, Legon: Institute of African Studies, University of Ghana, p. 52.

⁴⁶⁹ *Ibid.*

⁴⁷⁰ "Letter from Dr. Ansah Koi to Lt. Colonel Whitecomb, Resettlement Officer, Accra," 10/9/1945 as cited in Irene Odotei, *Artisanal Marine Fishing Industry*, p. 50.

Since the fishing industry was not interfered by the colonial government, any attempt, apart from training, would make it difficult in engaging the local fishermen in new methods of fish production.

The Department of Fisheries was established in 1946 to develop the fishing industry.⁴⁷¹ The establishment of the Department of Fisheries came with the introduction of mechanised fishing. At the early period of its establishment, the knowledge of regulating motor vessels was limited within the nucleus of the Department of Fisheries who were mostly Europeans. However, with Gold Coasters beginning to own their own motor vessels from 1954, training in mechanised fishing became important. This was because mechanisation brought investors, mostly traders and farmers, who had no knowledge of fishing into the fishing industry.⁴⁷² Odotei maintains that most of the fishermen showed gross ignorance in the choice of crafts imported from outside and in the running of the boats and these led to the destruction of the mechanised crafts. For example, it was “alleged that one operator filled his engine with palm oil.”⁴⁷³

Another challenge to the introduction of mechanisation in the fishing industry was the traditional belief system of the fishermen. The local fishing

⁴⁷¹ Before the establishment of the Department of Fisheries, two Englishmen, both scientists, Dr. G. R. Howart and Mr. F. R. Johnson pioneered the development of the fishing industry in the Gold Coast. Howart, who had an interest in the chemical and biological aspects of the sea, carried out weekly examinations of the sea water in Accra. Johnson on the other hand was interested in the socio-economic aspects of fishing. It is reported that he was the first to recommend mechanization of the industry. Also, the Prisons Department contributed to the development of the fishing industry by the inmates in order to feed the prisoners. See, Lawson and Kwei, *African Entrepreneurship and Economic Growth*, p.53; Odotei, *Artisanal Marine Fishing Industry*, p. 51.

⁴⁷² Odotei, *Artisanal Marine Fishing Industry*, p. 60.

⁴⁷³ *Ibid.*

industry, like any other African country, was hinged on spiritualism.⁴⁷⁴ Gold Coast fishermen attributed the success of their occupation to the work of spiritual deities. The introduction of mechanised fishing was, therefore, seen as a threat to their industry.⁴⁷⁵ With the introduction of mechanised fishing, local fishermen were of the view that mechanised fishing was not sanctioned by the gods and that the use of motor vessels would stir the anger of the gods. However, through education by the Department of Fisheries, *inter alia*, mechanised fishing received currency in the Gold Coast.⁴⁷⁶

The scheme to produce Native Agricultural Instructors, which failed to be implemented in the second-half of the 1930s because of financial constraint and divergent opinions on the feasibility of the programme, was instituted after the promulgation of the 1944 Native Authority Ordinance.⁴⁷⁷ The scheme for Native Agricultural Instructors was instituted to help the “Grow More Food Campaign” in the Gold Coast. Under the scheme, chiefs were to appoint indigenes, who were farmers with middle school certificates, to be trained by the Department of Agriculture at the various Agricultural Stations in the Gold Coast for a period of two-years. The courses were mainly practical in scope with very little theoretical

⁴⁷⁴ Lawson and Kwei, *African Entrepreneurship and Economic Growth*, p. 64.

⁴⁷⁵ *Ibid.*

⁴⁷⁶ *Ibid.*

⁴⁷⁷ This Ordinance was an updated version of the 1927 Native Authorities Ordinance. The first Native Authority Ordinance was passed in 1883. Bourget and Apter consider the 1944 Native Authority Ordinance as a revolution because of the changes it introduced into the colonial local government system. The objective for the introduction of the ordinance was to provide the avenue for ‘modernising’ local government. The chiefs continue to play their dual role as local government agents and traditional rulers of the state. Membership of the Native Authorities included government approved state council members, western educated Africans, representatives from special interest groups such as mining corporations and district agricultural committee. See, F. M., Bourget, *the Gold Coast: A Survey of the Gold Coast and British Togoland, 1919-1946*, London: Oxford University Press, 1949. D. E., Apter, *Ghana in Transition*, New Jersey: Princeton University Press, 1972.

training. The instructors were to tour farms and interview chiefs and farmers to know their perception on the food situation. Also, the instructors were to explain the need for growing more food crops, to find out what local difficulties existed, explain how the farmers could obtain technical assistance and report on suitable areas for extending farming.⁴⁷⁸

The Department of Agriculture also engaged the people in mechanised agricultural training. Since mechanised farming is a departure from the use of human and animal power to the use of machines in agricultural production,⁴⁷⁹ the transfer of the techniques that embodied mechanical farming became vital. Mechanical agriculture received a lot of attention during World War II because of the need to produce more food crops to feed the British forces in the Gold Coast. Also, the introduction of modern implements and machinery was considered as a way of revolutionalising the methods of agriculture. There was the opinion that the introduction of such implements and machinery was long overdue and that if the Gold Coast was to keep pace with other countries in agriculture, it must adopt the use of mechanical agriculture.⁴⁸⁰

The use of machines during the war time was not a problem, however, when personnel of the Allied forces departed from the Gold Coast, it became necessary to train more local personnel to operate and maintain the machines to ensure their continuous running.⁴⁸¹ Stated further, the training of mechanised

⁴⁷⁸ PRAAD, Cape Coast, ADM. 23/1/2997.

⁴⁷⁹ J. A. Kwarteng, and M. J. Towler, *West African Agriculture: A Textbook for Schools and Colleges*, London: Macmillan Press Ltd, 1994, p. 176.

⁴⁸⁰ PRAAD, Accra, CSO. 8/1/218, "Introduction of Modern Implements and Machinery in Agriculture and other Industries."

⁴⁸¹ PRAAD, Cape Coast, ADM. 23/1/3026, "Mechanised Agriculture."

farmers was seen as a way of controlling soil erosion and soil degradation. The Department of Agriculture saw mechanised agriculture as a relief for farmers in swampy areas and riverine flood lands, where the soil was difficult to till but suitable for the cultivation of cereal grains such as rice.⁴⁸² In the Northern Territories, agricultural mechanisation was engineered to achieve soil conservation. It was realised that in most parts in the north of the country, sheet erosion and gully erosion had assumed serious proportion.⁴⁸³

Consequently, ploughing demonstrations were held in the various districts along the coast and in the savannah areas in the Northern Territories. For example, a ploughing demonstration was held at Agbosome and Tegbe in the south-eastern part of the Gold Coast in 1950. Also, the Gonja Development Company⁴⁸⁴ organised a ploughing demonstration at Damongo in the northern part of the Gold Coast in the same year. To further introduce farmers to mechanised farming, the Department of Agriculture acquired a wide range of processing machinery for use in its stations. They included threshers and winnowers for soya, rice, cow-peas, corn-shellers, palm kernel crackers, palm fruit pressers, groundnut-shellers, rice hullers and corn millers.⁴⁸⁵

The use of newspapers, radio, and cinema vans were important in the dissemination of agricultural information. Newspapers such as *The Gold Coast Spectator*, *The Gold Coast Leader*, *Gold Coast Independent* and *Gold Coast*

⁴⁸² *Ibid.*

⁴⁸³ S. La Anyane, *Ghana Agriculture: Its Economic Development from Early Times to the Middle of the Twentieth Century*, London: Oxford University Press, 1963, p. 156.

⁴⁸⁴ The Gonja Development Company, formed in 1950, was a limited liability company in which the Agricultural Development Corporation had a controlling interest. The Company, which was based in the Northern Territories, had a scheme for large-scale mechanized agricultural production. See S. La Anyane, *Ghana Agriculture*, p. 169-171.

⁴⁸⁵ PRAAD, Cape Coast, ADM. 23/1/3026.

Times presented in their editorials and articles the need for both government and individuals to take a serious look at the menace of the Swollen Shoot disease. Although newspapers were known for their political agitation, they raised important questions about the development of agriculture. For example, in the editorials of *The African Morning Post*, the need to cut all affected trees was explained to farmers and cocoa farmers were encouraged to cooperate with the Department of Agriculture.⁴⁸⁶

Radio broadcast provided opportunities for the Department of Agriculture to communicate directly with the people on agricultural issues. This was evident, especially during World War II, because radio became one of the ways of rallying support for the war in terms of inducing the people to grow more food and raw materials to support the Allied forces. The Gold Coast Wireless News, which was known as Station ZOY, was used in transferring information concerning the eradication of the swollen shoot disease. Articles, newsletters and news items on the Swollen Shoot diseases were broadcasted to enlist the support of the people in the fight against the disease.

In addition to radio, films became well-developed tools of agricultural training. A film on crop diseases such as the Swollen Shoot and its control was prepared by the Department of Information and in some places mobile cinema units were established to transport film programmes to outlying towns and villages.⁴⁸⁷ The mobile vans had staff from the Department of Agriculture on

⁴⁸⁶ *The African Morning Post*, 2nd October, 1941.

⁴⁸⁷ The Gold Coast Information Department is said to have operated the most successful wartime mobile cinema unit in West Africa, using four vans to conduct tours which by the end of 1941 had

board. The potential audience for the film programmes were often increased by an effective advance notice system which informed chiefs of the scheduled arrival of the cinema van crew.⁴⁸⁸ Chiefs notified their people when a film presentation would take place. Full advantage was also taken of local market days to announce schedules to those who had travelled in from outlying villages. It is important to note that, the novelty of films shown at the market and community meeting places and sports fields of small towns led to high attendance. For many in the audiences, seeing the films represented their first viewing of a motion picture. Primarily and most importantly, films served as an enticement, producing large audiences avidly interested in the new art form and its impressive technology.⁴⁸⁹

In preparation for the programmes, the cinema unit often spent the mornings prior to the evening presentations in consultation with the chief and elders of the host village. These community leaders were informed of the government's policies on agriculture and the role that they ought to play lending the dignity and weight of their positions to the scheduled programme. Before a film show was started, issues concerning agricultural production were enumerated by the agricultural staff from the government to the people in the vernacular language. Also, speeches were delivered by chiefs, elders and prominent farmers. After a film show, people asked questions and were answered by staff of the Department of Agriculture using illustrations from the film. Whenever a film was

shown films to over 500,000 people. Wendell P. Holbrook, "British Propaganda and the Mobilization of the Gold Coast War Effort, 1939-1945," *The Journal of African History*, Vol. 26, No. 4, World War II and Africa (1985): pp. 347-361.

⁴⁸⁸ *Ibid.*

⁴⁸⁹ See letter from the governor to the Secretary of State for the Colonies, 31 December 1941. PRAAD, Accra, ADM. 1/2/264.

shown, many, including chiefs, trooped to market centres during the night with enthusiasm, and early in the morning, the film about Swollen Shoot or any agricultural issue became the talk of the day.⁴⁹⁰

The media houses played an important role in the development of agricultural education. The media, especially the cinema van, was very attractive and the fastest way by which agricultural information was transmitted to people. However, it is important to note that the use of these information strategies were limited in some communities which were not motorable. Also important is the fact that apart from radio broadcast not being nationwide, it was not free, listeners subscribed at the end of every month for a fee of five shillings.⁴⁹¹

In the aftermath of World War II, the Department of Agriculture faced challenges in curbing the spread of the Swollen Shoot disease, producing more foodstuffs to contain the food situation and the training more agricultural staff to enhance its operations. By the end of 1945, the rate of the spread of the Swollen Shoot disease was found to be about tenfold in five years.⁴⁹² A number of reasons can be adduced to explain the rapid spread of the disease. First, the shortage in the working force of the Department of Agriculture caused the spread of the Swollen Shoot disease. With the inception of World War II, most of the senior staff (European) were called to the various theatres of war, weakening the staff number of the department. For example, at the beginning of World War II, the editor of

⁴⁹⁰ *Ibid.*

⁴⁹¹ P. A. V. Ansah, *Ghana Broadcasting Corporation: Gold Jubilee Lectures*, Tema: Ghana Publishing Corporation, 1985 p. 7.

⁴⁹² *Agricultural Department Report 1946*, p. 12.

The Gold Coast Farmer was called into the British Army and this eventually led to the abatement of the publication.⁴⁹³

Also, the closing of agricultural training centres in the Gold Coast led to a shortage in the cadre of the junior staff who mostly engaged the farmers in agricultural education. In 1939, the Agricultural Training School in Kumasi and the Achimota School Plantation in Bunso, which was in its embryonic state, were closed down because of the inception of World War II. Prospective youth during the war were sent to the Agricultural School at Vom in Nigeria for training. Between 1939 and 1945, the Agricultural School at Vom trained only three Gold Coast agricultural staff members.⁴⁹⁴ The effect of the shortage in personnel was evident in how the infected cocoa trees were cut. The lack of field staff in the Department of Agriculture led to the use of untrained people who were not knowledgeable in cutting infected cocoa trees. Since it took a trained person to detect the symptoms of the Swollen Shoot in the earlier stages of infection, uninfected cocoa trees, which were identified by untrained people, were marked for cutting and many were cut down.⁴⁹⁵

In the early stages of the cutting of the infected cocoa trees, local farmers could not resist the gangs employed by the Department of Agriculture to carry out that duty because they were afraid they would be prosecuted if they resisted the cutting out process.⁴⁹⁶ However, when the situation became worse, there were clashes between some local farmers and the cutting out gangs employed by the

⁴⁹³ *Agricultural Department Report* 1956, p. 29.

⁴⁹⁴ *Agricultural Department Report* 1946, p. 14.

⁴⁹⁵ "Report of the Commission of Enquiry into Disturbances in the Gold Coast, 1948," p. 51.

⁴⁹⁶ Dennis Austin, *Politics in Ghana, 1946-1960*, London: Oxford University Press, 1964, p. 64.

Department of Agriculture.⁴⁹⁷ If trained staff were available, they would have explained to the farmers, in simple terms, that cutting out of infected trees was the only possible remedy to the problem. This would have prevented friction between government personnel and cocoa growers who saw their long-term investments of capital and labour being physically destroyed by the colonial authorities.⁴⁹⁸

The Cocoa Research Station (CRS) which, in 1944, became the West African Cocoa Research Institute (WACRI),⁴⁹⁹ failed to transmit its research finding(s) to the farmers via the Department of Agriculture.⁵⁰⁰ By design, the CRS, which was established in 1938 and later became WACRI, was to collaborate with the Department of Agriculture in educating farmers about their research findings.⁵⁰¹ Thus, a gap was created between the research institute and the farmer. Failure by the Department of Agriculture to design more educational programmes to inform the farmer about the nature, rate of spread and effect of the disease led to the fabrication of false rumours one of which read thus:

Britain intends to sell the Gold Coast to the United States but wished to ensure the death of the cocoa industry to avoid subsequent competition. [Also,] [t]he large importing firms, such as the United Africa Company, are starting big plantations in the Far East or East Africa, and were anxious to reduce West African production.⁵⁰²

⁴⁹⁷ *Ibid*, p. 66. See also *The West African Monitor*, 29th August, 1948.

⁴⁹⁸ Interview with Nathan Adu-Gyimah, retired lecturer, Department of Agricultural Economics and Extension, UCC, on 11th March, 2016, 2: 00 pm.

⁴⁹⁹ The West African Cocoa Research Institute had sub-stations in Ibadan, Nigeria and Freetown in Sierra Leone. Acquah, *Cocoa Development in West Africa*, p. 73.

⁵⁰⁰ "Report of the Commission of Enquiry into Disturbances in the Gold Coast, 1948," p. 50.

⁵⁰¹ Interview with Dickson Agyapong, 38 years, Technical Officer at the Social Science and Statistics Unit, CRIG, Tafo, on 3rd May, 2016 at 11: 30 am.

⁵⁰² "Report of the Commission of Enquiry into Disturbances in the Gold Coast, 1948," p. 53.

This rumour was one of the most powerful propaganda instruments which aroused bitterness among cocoa farmers and subsequently gingered nationalistic fervour in the Gold Coast.⁵⁰³ A counter reaction to this propaganda would certainly be through education.

Furthermore, the Department of Agriculture was preoccupied with other equally important agricultural programmes which were strategic to the war effort.⁵⁰⁴ For this reason, it was not in a position to give the necessary attention to the eradication of the Swollen Shoot disease considering the shortage in personnel.⁵⁰⁵ For example, the Department of Agriculture was more occupied in engaging farmers in producing other cash crops such as rubber and oil palm and the production of food crops to alleviate the food pressure on the colonial government due to the influx of Allied forces in the Gold Coast. The only pragmatic measure taken to tackle the Swollen Shoot disease was when the CRS was transformed into the WACRI. However, this move was too late to fight the spread of the disease. For example, a plant pathologist in the Department of Agriculture, who observed a farm at Koransang, near Mangoase in the Eastern Province, found that between 1939 and 1944, the Swollen Shoot disease killed 74 percent of the trees planted between 1904 and 1914.⁵⁰⁶

⁵⁰³ Francis K. Danquah, "Rural Discontent and Decolonization in Ghana, 1945-1951," *Agricultural History*, Vol. 68, No. 1 (1994), p. 9.

⁵⁰⁴ Francis K. Danquah, "Sustaining a West African Cocoa Economy: Agricultural Science and the Swollen Shoot Contagion in Ghana, 1936-1965," *African Economic History*, No. 31 (2003), pp. 43-74.

⁵⁰⁵ Interview with S. Akuamoah-Boateng, Aged 59 years, senior lecturer, Department of Agricultural Economics and Extension, University of Cape Coast, on 11th March, 2016.

⁵⁰⁶ PRAAD, Accra, ADM 5/3/49, "Report and Proceedings of the Cocoa Research Conference Held at the Colonial Office, May- June, 1945."

The aforementioned reasons, which can be summarized as the result of lack of agricultural education, coupled with other political, economic and social factors contributed to the 1948 Riots which became a land mark in Ghana's history.⁵⁰⁷ It is therefore tenable to suggest that the lack of agricultural education was, in no small way, a contributing factor which ignited the 1948 riot. The Watson Commission recommended, among other things, that attention should be given to the training of more agricultural staff to curb the Swollen Shoot disease, and to open new agricultural institutions.⁵⁰⁸

The aftermath of the 1948 Riot saw the modelling of agricultural education to help in ameliorating the agricultural fortunes of the Gold Coast. A Cocoa Rehabilitation Programme called "Cocoa Campaign" was designed by the Department of Agriculture to deal with the menace of the Swollen Shoot disease. Under the programme, agricultural education was used to explain to the people, the need to cut out infected cocoa trees.⁵⁰⁹ The Cocoa Campaign had a demonstration team that toured cocoa areas such as Twifo Praso, Jukwa, Krobo, Abriem-Esiam, and Anyinam. The effectiveness of the campaign resulted in farmers "visiting area and divisional offices for advice on improved planting methods, pest control and planting material."⁵¹⁰ The team also gave instructions on post-harvest agricultural farming. For example, in 1950, farmers were engaged in extensive instruction regarding the best method of keeping, fermenting and

⁵⁰⁷ Danquah, "Rural Discontent and Decolonization in Ghana, 1945-1951," p. 14.

⁵⁰⁸ "Report of the Commission of Enquiry into Disturbances in the Gold Coast, 1948," p. 50-58.

⁵⁰⁹ Consequent upon the Report of the Commission of Inquiry into Disturbances in the Gold Coast in 1948, three scientists, G. H. Berkeley from Canada, Walter Carter from Hawaii and E. Van Slogteren from Holland visited the Gold Coast. Their report into the swollen shoot of cocoa endorsed the Department of Agriculture's policy of cutting out infected trees. See, Anyane, *Ghana Agriculture*, p. 162.

⁵¹⁰ PRAAD, Cape Coast, ADM 23/1/3026.

drying cocoa. The campaign was effectively supported by an illustrated brochure entitled, *Kofi the Good Farmer*.⁵¹¹

The 1951 Constitution of the Gold Coast made the development of agricultural education to be controlled by Gold Coasters. This was because the British gave the Convention Peoples Party (CPP) the power to form a quasi-self government with Kwame Nkrumah as the Prime Minister.⁵¹² Consequently, the Department of Agriculture became the Ministry of Agriculture. The ministry's divisions became departments. The departments included: Agriculture, Animal Health, Fisheries, Forestry, Soil and Land Use Survey, and Tsetse Control. Mr. A. Casely-Hayford became the first Minister of Agriculture.⁵¹³

The new Ministry of Agriculture had two major tasks, provision of more food and the containment of the Swollen Shoot disease. In dealing with the former task, the Ministry of Agriculture continued the "Grow More Food Campaign" by stationing agricultural officers to serve as advisors in the various agricultural stations in the Gold Coast. The advisors encouraged the farmers on the need to produce more food crops. The campaign received support from chiefs and organisations. For example, staff from the Sanitary, Broadcasting, and Agriculture departments together with some private groups in Swedru took up the call and made farms covering an area of about 600 yards by 1200 yards.⁵¹⁴

⁵¹¹ *Kofi the Good Farmer* is a well-illustrated brochure on the best methods of keeping, fermenting and drying cocoa. It was published by the Gold Coast Cocoa Marketing Board.

⁵¹² D. E. K. Amenumey, *Ghana: A Concise History from Pre-Colonial Times to the 20th Century*, Accra: Woeli Publishing Services, 2011 p. 209.

⁵¹³ *Agricultural Department Report*, 1952, p. 21.

⁵¹⁴ PRAAD, Cape Coast, ADM. 23/1/2997.

In dealing with the Swollen Shoot disease, Kwame Nkrumah introduced the “New Deal for Cocoa Campaign” in 1951 and implemented the recommendations of the various committees of inquiry into the Swollen Shoot control policy. In the deal, a total of ten shillings were given to farmers for every cocoa tree cut down; four shillings for every tree cut down and two shillings for three years for replanting a new tree.⁵¹⁵ It is important to note that, replanting grants were paid on the condition that farmers replanted their cocoa in lines and followed the advice of the Department of Agriculture.⁵¹⁶ Although the “New Deal for Cocoa Campaign” was not different from earlier measures in the handling of the Swollen Shoot disease, the use of education brought about a significant difference.⁵¹⁷ Hence, in transferring the policy of “New Deal for Cocoa Campaign” to the people, the use of the media was instrumental. For example, Kwame Nkrumah first outlined the policy in a radio broadcast to the nation on June 28, 1951⁵¹⁸

Again, cinema vans were used to show films in outlying cocoa communities especially in the Eastern Province where the Swollen Shoot disease had affected cocoa production. For example, in 1952, cinema vans showed films in places like Osiem, Busoso, Asamankese, Anyinam, Apedwa, Kyebi, Kade, New Juaben, Kukurantumi, Kpeve, all in the Eastern Region. In Ashanti, the cinema vans toured Ejisu, Tepa, Tanosu, Mampong, Bekwai, Techiman, Dormaa,

⁵¹⁵ Boahen, *Ghana: Evolution and Change*, p. 176.

⁵¹⁶ PRAAD, Cape Coast, ADM. 23/1/3238, “Cocoa Diseases and Pest Ordinance.”

⁵¹⁷ *Daily Graphic*, 4TH July, 1953.

⁵¹⁸ Kwame Nkrumah, *Ghana: The Autobiography of Kwame Nkrumah*, London: Panaf Books, 2002, p. 153. See also, Danquah, “Rural Discontent and Decolonization in Ghana, 1945-1951,” p. 18.

Brekum, and Sunyani. In the Central and Western Regions, films were shown at Twifo-Praso, Fosu, Jukwa, Esikuma, Wiawso, Juaboso, Goaso, Mim and Tarkwa.⁵¹⁹

Also, to engage city dwellers in the campaign, films about Swollen Shoot were shown by the Nkrumah-led government in commercial cinema centres in Accra, Kumasi, Cape Coast and Sekondi-Takoradi for free. Since there was the popular misconception that the British government wanted to wipe out the cocoa industry in the country, the films stressed on replanting and advertised grants for cutting of infected cocoa trees.⁵²⁰ Before and after a film show, personnel of the Agriculture and Information Departments interacted with the viewers on the “New Deal for Cocoa Campaign.” Also, papers written in vernacular about the Swollen Shoot were issued by the Vernacular Literature Board.⁵²¹

In containing the disease, more field staff were employed by the Ministry of Agriculture. By the time that the “New Deal for Cocoa Campaign” came into operation, the country had two of its training centres functioning. Both Bunso Training College and the Agricultural Training School in Kwadaso were producing Field Assistants and Survey Officers. New agricultural officers were posted to serve in places where the “New Deal for Cocoa” Campaign had not reached. The staff explained to the farmers the need to cut out infected trees. The work of the agricultural staff in cocoa areas was not limited to the handling of Swollen Shoot disease. They demonstrated how to spray insecticides on young

⁵¹⁹ Gold Coast, *Department of Information Report* 1953, Accra: Government Printer, p. 32.

⁵²⁰ PRAAD, Kumasi, ARG. 1/12/1/28, “Committee to Enquire into Methods of Cutting Out of Cocoa Trees Infected with Swollen Shoot.”

⁵²¹ *Ibid.*

cocoa trees in order to prevent capsid attack. For example, in 1952, staff of the Department of Agriculture in the Eastern Province provided demonstrations on the use of insecticides such as *kumakate*⁵²² in communities such as Apedwa, Kwaman, Asamankese, Kade and Busoso.⁵²³

Agricultural education was also patronised through the activities of farmers' organisations. Although such organisations were concerned with the marketing of their produce, they also had the aim of engaging their members in the problems which faced crop production. For example, one of the issues which formed the basis for farmers' agitations in the late 1940s was "their opposition to the methods used by the government in the fight against the swollen shoot diseases through the compulsory cutting out of cocoa trees."⁵²⁴ To this end, therefore, farmers' organisations saw education as a tool to achieve their aims. A classic example of these organisations was the United Gold Coast Farmers Council (UGCFC)⁵²⁵ which was founded in 1953. Its primary intention was:

To educate the general and the farming public of the aims and activities of the Council, the good intentions of the Government towards farmers, the use farmers should make of the scientific discoveries of the Agricultural Department and WACRI on the fight against cocoa diseases, the working public of the Cocoa Marketing Board, Cocoa Purchasing Company and the Agricultural Development Corporation and their help to the

⁵²² Kumakate is the local name for Capsid Bug insecticide.

⁵²³ PRAAD, Cape Coast, ADM. 23/1/3238.

⁵²⁴ B. Beckman, *Organising the Farmers: Cocoa Politics and National Development in Ghana*, Uppsala: The Scandinavian Institute of African Studies, 1976, p. 75.

⁵²⁵ The United Gold Coast Farmers Council can trace its roots to the Ghana Farmers Congress which was founded in 1949 by Ashie Nikoi and John Ayew, both activists of the CPP in the early years of 1950. The CPP operated through the organization of the Council. See, Beckman, *Organizing the Farmers*, p. 52.

farmers, and means by which the country's agriculture can be developed.⁵²⁶

The UGCFC, which was pro-CPP, sought to use film shows and newsletters to achieve their aims. The council established a propaganda unit with two vans and three officers. The duty of the unit was to keep farmers informed of the aims of the UGCFC concerning the development of agriculture in the Gold Coast. The UGCFC also purchased a cinema van and showed films about agriculture to farmers as well as the public to convince them to take agriculture seriously.⁵²⁷

In containing the spread of the Swollen Shoot disease, the WACRI and the Bunso Plantation conducted demonstrations on how to identify infected cocoa trees and contain them to chiefs, farmers and students. From 1951, the number of farmers and school children from all parts of the Gold Coast who visited WACRI increased day after day.⁵²⁸ On such visits, the visitors were able "to see for themselves that diseases and pests of cocoa can be controlled, that cocoa farms can be maintained and rehabilitated successfully, and that improved varieties of cocoa are being produced for the benefit of farmers."⁵²⁹ For example, in 1954, 2,641 farmers of whom 46 were chiefs were conducted around WACRI and the Bunso Plantation. In addition, 864 students and 78 teachers visited WACRI.⁵³⁰

The effectiveness of the "New Deal for Cocoa Campaign" was witnessed when the farmers' resistance to the removal of infected trees waned and the

⁵²⁶ PRAAD, Cape Coast, ADM. 23/1/1985.

⁵²⁷ *Ibid.*

⁵²⁸ Report, WACRI, 1951.

⁵²⁹ *Ibid.*

⁵³⁰ *Agricultural Department Report 1954*, p. 32.

number of diseased trees removed. For example, the Department of Agriculture cut down 40 million trees in 92, 321 cocoa farms by 1954.⁵³¹ Having contained the spread of the Swollen Shoot disease, a policy called “Cocoa Extension Campaign” was launched in 1955. The “Cocoa Extension Campaign” was designed to improve the growing skills and management techniques of farmers. Both the “New Deal for Cocoa Campaign” and the “Cocoa Extension Campaign” were concurrently run by the Ministry of Agriculture.⁵³²

In accordance with the Cocoa Extension Campaign, Cocoa Stations were established in key cocoa communities. The stations were administered by the Technical Assistants and Survey Officers of the Department of Agriculture. Cocoa Stations were established to increase cocoa production by carrying out trials and experiments on cocoa growing and, in particular, on pest and disease control, offering practical advice and demonstrating to farmers, improved methods of cocoa cultivation and serving as a base for cocoa extension work throughout the station area.⁵³³ Cocoa Stations were sited in places such as Assin-Fosu, Wiawso, Asikuma, Bunku, Bunsu, Apedwa, Biono, Oyoko, Bechem, Goaso, Juaso, Praso, Kpeve, Pankese, and Mamfe-Akuapem in 1955. Improved planting materials were distributed to farmers at each station. For example, from March, 1955 to September, 1956, 3, 133,928 Amazon seedlings and 44, 464 Amazon Pods of cocoa were given to farmers for planting. In collaboration with WACRI, the Department of Agriculture introduced new cocoa varieties to the

⁵³¹ PRAAD, Accra, ADM. 5/4/126, “Report of the Cocoa Conference, 1955.”

⁵³² PRAAD, Cape Coast, ADM. 23/1/3238.

⁵³³ *Ibid.*

local farmers and taught them how to multiply them by using the “double leaf cutting” technique.⁵³⁴ It is instructive to note that the Cocoa Extension Campaign also used the same media strategy of education which was first used by the New Deal Cocoa Campaign in the dissemination of its agenda.⁵³⁵

Having contained the spread of the Swollen Shoot and its related diseases through electronic and print media, the Department of Agriculture resumed the publication of its annual journal, *The Gold Coast Farmer*. The publication of *The Gold Coast Farmer*, which started in 1932 and stopped with the outbreak of World War II in 1939, resumed in 1956.⁵³⁶ The reason for the delay was the shortage of staff. It took ten years after World War II before the position of Editor-Librarian was filled. The first post-war issue was under the amended title *The New Gold Coast Farmer*. With its aim of publication unchanged, that is to serve as a means of disseminating agricultural information to agriculturalists, efforts were made to have it widely circulated in the Gold Coast. Copies were sent to every middle school in the colony, Department of Social Welfare and Community Development, the Produce Inspection Division of the Ministry of Trade and Labour and the Forestry Department. *The New Gold Coast Farmer* was sold through the offices of the Department of Agriculture and also at a number of bookshops and stores. After World War II, the proposed Twi version of the

⁵³⁴ *Ibid.*

⁵³⁵ *Agricultural Department Report 1956*, p. 23.

⁵³⁶ *Ibid.*

journal was not introduced. With the attainment of independence, the publication became *The Ghana Farmer*.⁵³⁷

Conclusion

In the formal sector of agricultural education, the period under review did not see any major change in the curriculum in order to embrace more aspects of agriculture. The establishment of the University College of the Gold Coast and Kumasi College of Technology provided the pinnacle of the development of agricultural education from the primary school to the university level. Under the quasi-self government of Kwame Nkrumah, 1951-1957, agricultural education did not receive much development in terms of restructuring the educational system to embrace more vocational subjects such as agriculture. His government focused on expanding basic education all over the country. Moreover, the agricultural training centres controlled by the Department of Agriculture provided formal agricultural education which led to the recruitment of the junior staff of the Department of Agriculture.

In the non-formal sector, agricultural education was engineered to achieve two things: produce more food and cash crops for the colony and the metropolitan power, and contain the Swollen Shoot disease through agricultural extension programme. These were prosecuted through the adoption of modern systems of information technology such as radio, newspapers and films, and the work of field staff of the Department of Agriculture.

⁵³⁷ *Ibid.*

CHAPTER FIVE

CONCLUSION

It is axiomatic to say that post-colonial Ghana is faced with the challenge of sending its people “back to the land” so as to provide staple and cash crops in order to deal with challenges such as food shortage, food importation and unemployment. This study, among other things, speaks to our understanding of why Ghana has not been able to effectively exploit its agricultural resources through the use of efficient agricultural education. This finding is as a result of providing critical answers to the research problem which was philosophical and practical in nature.

The historical significance of this study lies in the fact that, it set out with the basic objective of exploring the evolution and change in agricultural education in colonial Ghana. This was to fill a gap, vocational and especially the agricultural gap, in the historiography of the development of education in Ghana. Based on primary and secondary sources, the study has been able to arrive at the conclusion that the colonial system played an important role in the development of agricultural education. Nonetheless, the study has also provided support for the view that agricultural education in colonial Ghana was designed to serve the colonial interest. The attainment of this objective is a marked contribution to the historiography on the development of education in colonial Ghana.

Prior to this thesis, the literature on education in Ghana was, to some extent, silent on the development of the vocational and industrial aspects of education, specifically agricultural education. The existing historiography only

gave the general summary of the development of the various types of education in Ghana. Again, prior to this research, the historiography of the development of agricultural education was limited to the pre-colonial period, leaving the colonial and post-colonial periods unresearched. This study has therefore provided information on the agricultural aspect of the development of vocational education in colonial Ghana.

Dividing the area of study into formal and non-formal sectors of agricultural education, this work has examined the development of agricultural education from the primary level to the tertiary level, making the study of the development of agricultural education in the school system one that encompasses all levels of the educational structure. Equally important, is the contribution of the study to the history of agricultural education organised by government institutions in the formal sector. Prior to this research, there was paucity of documents on the development of agricultural education conducted by the colonial agricultural institutions such as the Departments of Agriculture, Veterinary and Education.

The literature on agricultural extension in Ghana is largely theoretical in nature. Works on agricultural extension in Ghana are mostly conducted by agricultural extension researchers, and their works are theoretical in nature. Again, most of their work falls within the spheres of post-colonial Ghana. To those who want to know the historical background to the development of agricultural extension in Ghana, this thesis presents an inquisitorial perspective on the evolution and change in agricultural extension in Ghana during the colonial period.

The development of agricultural education in colonial Ghana saw the introduction of new improved methods in farming which emerged from colonially induced Western science and technology meant to foster the production of cash crops. The improved methods, which further enhanced the technique of growing crops in straight lines and at specific intervals, were passed on to farmers. Shifting cultivation was, to a large extent, replaced with permanent large-scale farming. This was possible because of the introduction of organic fertilisers in farming communities from the beginning of the twentieth century. Technologically, the need to cultivate large quantities of cash crops and, also, reduce human labour in cash crop production, led to the introduction of mechanised farming. Consequently, through agricultural education, cash crops such as cocoa, rubber, and palm oil became the backbone of the colonial economy.

Stated further, the Gold Coast, as a result of colonial intervention, became one of the major sources of raw materials to the global capitalist economy. From the first part of the twentieth century to the attainment of independence in 1957, colonial Ghana became the leading producer of cocoa in the world. Apart from this, the colony was known for the production of other cash crops such as rubber, palm oil, coffee, kola and so on, making the Gold Coast largely a cash crop economy. Since cocoa production eclipsed other cash crops, the economy of the Gold Coast became a mono-crop economy which limited the full potential of the country's agricultural sector.

Agricultural education played an important role in sustaining the colonial economy. The agricultural economy of colonial Ghana faced a lot of challenges

from pests and diseases. These challenges were largely contained because of agricultural education. For example, the spread of the Swollen Shoot disease in the 1940s was ameliorated by measures put in place by the Department of Agriculture. By the end of colonial rule in 1957, cocoa production remained a key foreign exchange earner for Ghana.

Added to the economic change brought about by colonial rule, is the fact that cash crop production led to the emergence of *nouveau riche* in colonial Ghana. Thus, agricultural education made ordinary farmers ascend the social ladder in their communities. Since the introduction of improved methods in crop production led to an increase in cash crop production, those who took advantage of the techniques that came with agricultural education harvested high yields.

A panoramic view of the nature of agricultural education in colonial Ghana shows that agricultural education was geared towards the growing of cash crops and the development of horticulture. The people who designed Western agricultural education failed to create a curriculum which would consider the *flora, fauna* and *pharmacopoeia* needs of the people. The weight of agricultural education fell on the production of cash crops and horticulture instead of producing staple food crops for the people.

Consequently, the educational system failed to consider the development of the indigenous *pharmacopoeia* in the agricultural curriculum. Africans' knowledge in agriculture went beyond the conventional notion that agriculture was the production of food and cash crops. As a matter of fact, an African farmer was, to a large extent, also a herbalist. Had the development of agricultural

education combined the indigenous and Western perspectives of agricultural education, post-colonial Ghana would have developed its pharmaceutical industry considering its vast forest reserves and corps of local farmers.

Again, agricultural education for the production of food crops would have positioned the colony as self-sufficient with respect to local food staples. For example, by the end of colonial rule, cash crops accounted for nearly 85 percent of the value of exports. In many ways, exports duties on cash crops provided sufficient revenue to finance an aggressive food import policy. The basic food requirements in urban and cash crop producing areas were satisfied by the importation of staples such as rice from British Burma, Dutch Indonesia, and India; wheat from America, and dried fish from Scandinavia.⁵³⁸ Thus, the period saw a halt in the development of local staples.

Agricultural education failed in eroding the notion that agriculture was a subordinate occupation to literary training. Basically, agricultural education, like the other vocational and technical subjects, was introduced to offset the notion that vocational occupation was manual and, therefore, not rewarding as clerical work. However, agricultural education could not achieve this objective. For those who studied agriculture in the universities and agricultural training centres, only a few were employed by the colonial administration. They worked in agricultural institutions and departments as assistant officers. The rest, most often, did not go “back to the land” but found themselves in institutions as clerks or messengers.

⁵³⁸ I. Adam, “Agriculture,” *The Culture of Dependency: Proceedings of the Ghana Academy of Arts and Sciences*, Vol. 34, 1993, p. 127.

Agricultural education failed to achieve its original aim, in the formal sector, of sending school leavers “back to the land.”

The structure for the development of agricultural education in colonial Ghana was pyramidal in nature. Agriculture was taught in all primary schools using school gardens at the base of the colonial agricultural educational system. At the secondary level, not all the secondary schools taught Agriculture in their schools because most of them gave attention to courses in arts, science and commerce. Thus, one could only further one’s studies in agriculture at the departmental training centres. This means that the number of agricultural students was reduced immediately after primary education. The absence of tertiary institutions in the Gold Coast prior to 1950 also meant that only a few could receive instruction in agricultural education at the university level. For example, it was only in the 1950s that the study of agriculture began at the university level. Before 1950, recipients of higher education in agriculture had to travel outside the Gold Coast colony for agricultural education at the tertiary level.

Although the effect of agricultural education in colonial Ghana had both positive and negative sides, the negative impact of agricultural education in colonial Ghana outweighed the positive. This position stems from the fact that the positive impact of agricultural education on the development of colonial Ghana was unintended. Agricultural education was designed to serve the British colonial system of economic exploitation and not the economic advancement of Gold Coast. The positive effects were, therefore, incidental by-products of the British

colonial system. Undoubtedly, the negative effects outweighed the positive effects of agricultural education in the development of colonial Ghana.

In addition, this study has discovered some of the resilient vestiges of the nature of colonial education in postcolonial Ghana. In Ghana's quest to attain self-sufficiency through agriculture, she needs something different from the type of colonial agricultural education which gave primacy to the teaching of cash crop production and horticulture, and could not send agricultural students back to the land. The thesis argues that there is the need for postcolonial Ghana to review its educational system and embrace more vocational subjects, such as agricultural education, in order to meet the holistic needs of the people. Agricultural education must be a necessary tool in dealing with unemployment, food shortage, environmental degradation and food importation. Lastly, the research has, to a large extent, filled the vocational and technical lacunae in the historiography of the development of education in Ghana in general and colonial Ghana in particular.

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- Adu-Gyimah, Nathan, Aged 60, retired lecturer, Department of Agricultural Economics and Extension, University of Cape Coast, on 11th March, 2016.

Agyapong, Dickson, Aged 38, Technical Officer at the Social Science and Statistics Unit, CRIG, Tafo, on 3rd May, 2016.

Kyei Mensah, Aged 85 years, Cocoa Farmer, Osiem, 16th April, 2016.

Prof. J. A. Kwarteng, Aged 68 years, retired professor, Department of Agricultural Economics and Extension, University of Cape Coast, on 17th March, 2016.

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Dr. S. D. Boateng, senior lecturer, Department of Agricultural Extension, University of Ghana, Legon, on 21st April, 2016.

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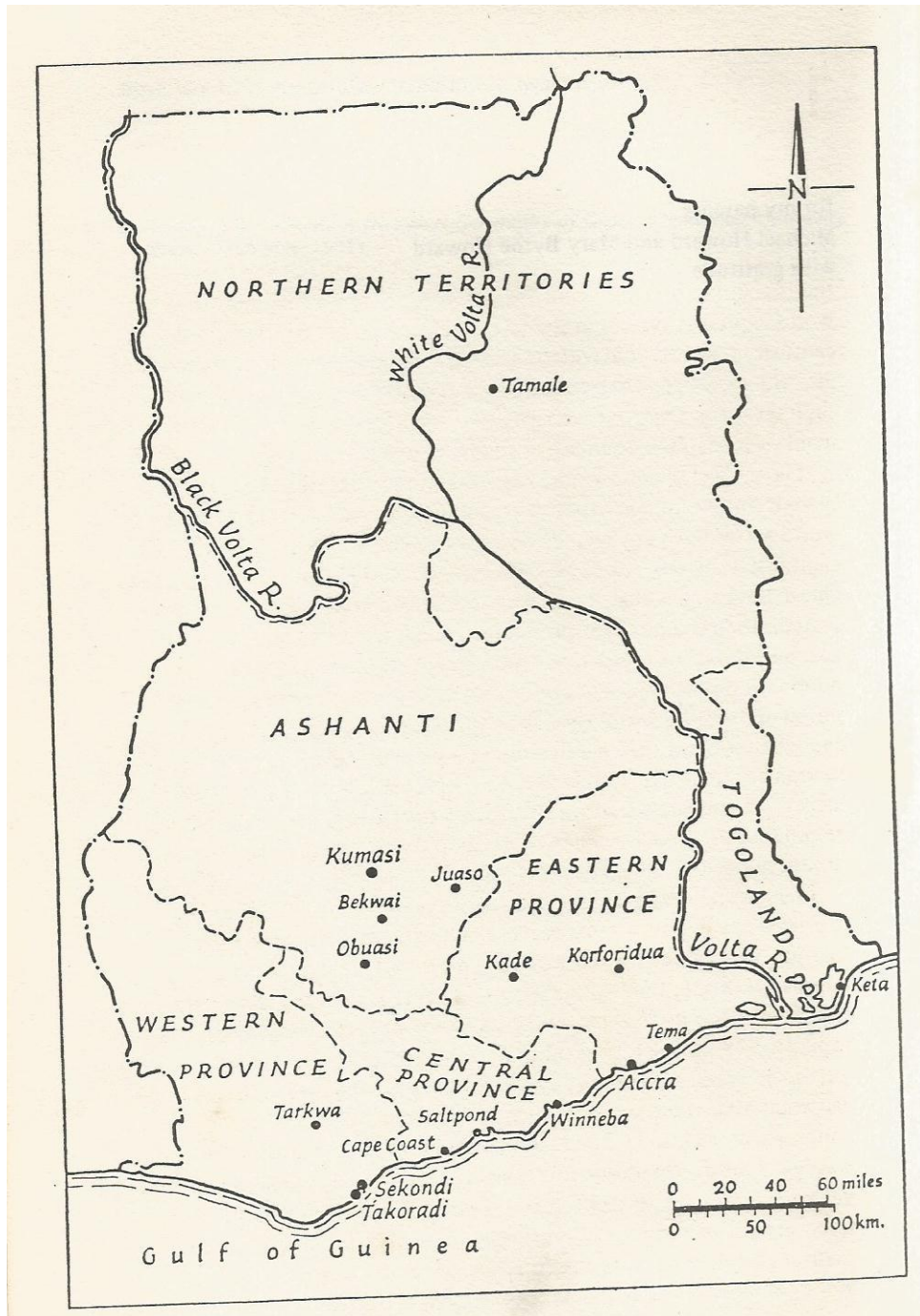
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APPENDICES
APPENDIX I
COLONIAL GHANA



Source: Rhoda Howard, *Colonialism and Underdevelopment in Ghana*.

APPENDIX II

CURRICULUM OF THE VETERINARY SCHOOL

SYLLABUS.—FIRST YEAR.

I.—ELEMENTARY PHYSICS AND CHEMISTRY.

A.—PHYSICS.

- a.* Mechanics :—Forms of matter, units of length, area, volume, weight, levers, principle of Archimedes, indensity, fluid and atmospheric pressures.
- b.* Heat :—Mercury thermometer, radiation of heat, change of state, specific heat and conduction.
- c.* Light :—Laws of reflection and refraction, dispersion of light, lenses and prisms.
- d.* Magnetism :—Natural and Artificial.

B.—INORGANIC CHEMISTRY.

- e.* General Principles :—Solution, evaporation, filtration, decantation, distillation, crystallisation, and sublimation.
- f.* Chemistry of air and water.
- g.* Chemical study of the following :—Oxygen, hydrogen, chlorine, Hydro-chloric Acid, Nitrogen, Nitric Acid, Carbon, Carbon dioxide, Phosphorus, Sulphur, Sulphuric Acid and Magnesium.
- h.* General knowledge of :—Sodium, Potassium, Calcium, Zinc, Mercury, Lead, Antimony, Bismuth, Iron, Copper, Silver and Arsenic.

C.—ORGANIC CHEMISTRY.

- i.* Introduction :—General characters and composition of the organic compounds.
- j.* Paraffins :—Alcohols, Chloroform, Iodoform, etc.
- k.* Carbohydrates :—Starch, sugars, and cellulose.

2.—JUNIOR ANATOMY.

- a.* Osteology :—Composition and classification of the bones, description of each of the individual bones comprising the skeletons of the domestic animals.
- b.* Arthrology :—Classification of Joints. Description of Ligaments, cartilages, synovial membranes and tendons.

The bones and articulations of the horse will be described and those of the ox, sheep and pig will be compared with them.

3.—ELEMENTARY PHYSIOLOGY.

Muscles, tissues, nerve fat, circulation, respiration, urine, secretions, excretions, digestion, absorption, and lymphatics.

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4.—PRACTICAL PHARMACY.

The imperial and metric measures and their symbols. Individual instruction in pharmaceutical processes and dispensing. Writing and reading prescriptions. A practical acquaintance with the various drugs.

5.—MATERIA MEDICA.

Description. The pharmacopoeial preparations used in Veterinary Medicine as for West Africa, and their pharmacological actions, uses and doses. The forms of administering these medicines.

6.—ELEMENTARY BOTANY.

- a. The vegetative organs of a flowering plant :—Roots, stem and leaf. Buds and branching. General histology of roots, stem, and leaf.
- b. The plant cell :—Protoplasm and other cell contents. The cell wall.
- c. Fertilization :—The seed and its germination. Dispersal of seeds and fruits.
- d. Plant functions :—Composition of plants. Essential food substances. Water cultures, Gaseous and liquid absorption. Conditions for growth.
- e. Classification :—Mono and Dicotyledons.

7.—HANDLING OF DOMESTIC ANIMALS.

The points of the Horse and Cattle. The different methods of securing animals for surgical operations, dressing, method of administering medicine, bandaging, clothing, parts of a saddle, bridles, and grooming.

SYLLABUS.—SECOND YEAR.

1.—SENIOR ANATOMY.

- a. The special Anatomy of the horse. A systematic description of the muscles, the organs of digestion, respiration and reproduction; the urinary apparatus; the vascular, the lymphatic and nervous systems; the organs of special sense; the ductless glands, and the skin and its appendages.
- b. The structure of the ox, sheep and pig as compared with that of the horse.
- c. All students must dissect the body of the horse at least once during the year.

2.—PHYSIOLOGY.

A systematic description of muscle, nerve, absorption, excretion, circulation, nervous system, special sense ductless glands, locomotion, respiration, alimentation and urine.

3.—HYGIENE AND DIETETICS.

- a. Water, air, ventilation, drainage, disposal of excreta and carcasses, dipping and spraying work, care of the foot, watering and feeding, various foods, preparation of foods, general principles of breeding and cross-breeding, pregnancy, calving, rearing of young stock, and milk.
- b. Building of stables, and cow sheds. Site drainage, ventilation and fittings.

4.—CLINICAL DIAGNOSTICS.

- a. The diagnosis of diseases :—Symptoms, determining the diseased organ and to recognise the disease.
- b. Inspection, palpation, percussion, auscultation.
- c. General Examination :—Condition, temperament, conformation and diseases characterised by change in habits.
- d. The skin :—Condition of the coat, swelling and diseases of the skin.
- e. Examination of the conjunctiva :—Colour, swelling and discharge.
- f. Body Temperature :—The normal and sub-normal temperature, fever and general infectious diseases.

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g. Respiratory apparatus :—Respiratory movements, the breath, nasal discharge, nasal cavities and the sinuses, examination of the sub-maxillary glands, cough, percussion of thorax, auscultation of the lungs, and diseases of the respiratory apparatus.

h. Digestive Apparatus :—Examination of the buccal cavity, throat and oesophagus, rumination, faeces, and diseases of these apparatus.

i. Urinary Apparatus :—Way of passing the urine in health and disease, examination of the urine and urinary organs, elements of urine, and the diseases of these apparatus.

j. The Sexual Apparatus :—Mucous membrane of vulva and vagina, and the diseases of these organs.

k. The nervous System :—Functions of the nerves and the diseases of this system.

SYLLABUS.—THIRD YEAR.

1.—MEDICINE.

a. Definition of disease, its aetiology, semiology, course, diagnosis, prognosis, and the general principles of treatment, and complications.

b. Local Disease :—Diseases of the respiratory organ, thorax, circulatory organs and blood, digestive organs, abdomen, lymphatics, urinary organs, generative organs, nervous system, ductless glands and skin.

c. General Diseases :—Fever, their causes, symptoms, course, duration and treatment.

d. Epizootic Diseases :—Their history, method of spread, causes, symptoms, treatment, prevention and post-mortem.

e. Constitutional Diseases :—Rheumatism, Rachitis and sunstroke.

f. Intoxications :—Toxaemia, osteoporosis, osteomalacia, poisons, vegetable, mineral and venom.

2.—SURGERY AND OBSTETRICS.

A. Definition of surgery and its branches :—Disinfection, antiseptics and disinfectants, Disinfection of the hand. Preparation and disinfection of the operating part.

Sterilization of the instruments and dressing material. Preparation and manner of securing the animal for different surgical operations. Anaesthetics and the uses of common surgical instruments. Prevention and arrest of haemorrhage. Sutures and their uses. Drainage material and their uses. Treatment of wounds.

Treatment after operation. Bandaging and dressing wounds. Massage Inflammation, suppuration, ulceration, gangrene. Tumours. Pyaemia. Septicemia. Contusions. Burns. Scalds. Injuries and diseases of bones, joints, muscles, tendons, ligaments, bursae, blood-vessels, nerves and skin. Surgical treatment of the diseases of the skull, face, eye, ear, teeth, tongue, pharynx, oesophagus, trachea, poll, neck, withers, back, chest, abdomen, limbs, genital organs, and tail.

B. Obstetrics :—Estrus or heat, fecundation, insemination, gestation, signs of pregnancy, and abortion. Normal parturition, care of the new-born, malpresentation of the foetus, maternal and foetal dystokia, retention of foetal membranes.

Obstetric operations, accidents and disease in and after parturition. Diseases of the new-born animal.

3.—MATERIA MEDICA, THERAPEUTICS AND TOXICOLOGY.

Division of Materia Medica, characters of drugs, color, smell, taste, solid, powder, liquid.

Therapeutical actions, uses, and doses.

Incompatibility. Forms and method of administration.

Toxicology :—The classification of poisons, their characters and tests. The symptoms of poisoning and antidotes.

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4.—AGE AND SOUNDNESS.

Ages :—To identify age of domestic animals.

Examination :—Lameness, eye diseases, general constitution and other diseases.

Certificate :—Way of writing the certificate.

5.—PATHOLOGY, BACTERIOLOGY AND PARASITOLOGY.

A. General :—Causes of the diseases, inflammation, necrosis, gangrens, atrophy, hypertrophy, healing of wounds, anaemia, hyperaemia cedema, dropsy, infiltration, embolism, haemorrhage.

Special :—Diseases of the Alimentary canal, urinary apparatus, lungs, pleura, liver, spleen, peritoneum heart, blood vessels, blood, nervous system and skin.

B. Bacteriology. General :—The morphology and biology of bacteria, classification, reproduction, sperulation, motility, conditions of growth, culture medica, sterilisation, staining methods, immunity, toxins, serums, vaccines and antiseptics.

Special :—Anthrax, Contagious Bovine Pleuro-Pneumonia, Epizootic lymphangitis, Fowl Cholera, Glanders, Rinderpest, Strangles, Tetanus, and variola.

C. (a) Parasitology. General :—The discussion of the pathogenic protezoa belonging to the following orders, their classification, methods of life, reproduction and the means by which they are spread throughout the body, or any organ, or tissue.

Piroplasma. Trypanosmata, Amoeba, Nuttalia:

(b) Helminthology :—Trematoda, Cestoda and nematoda. Description and recognition of the helminths of West Africa.

(c) Entomology :—The description of the parasitic insects of West Africa belonging to the order Diptera and Hemiptera.

N.B. —Students will practice simple laboratory methods applied to Pathology, Bacteriology and Parasitology. They will receive practical instructions in post-mortem examinations, and also to collect and preserve helminths and insects.

6.—SANITARY SCIENCE.

A. (a) General Introduction :—Infectious Diseases, Incubation, dissemination, prophylaxis and control.

Disinfectant. Disposal of manure and carcasses. Sanitary cordons. Quarantine.

(b) Meat inspection. Inspection of animals before slaughter, methods of slaughtering-dressing of carcasses, methods of inspection, normal and abnormal appearances of the meat of different animals, organic diseases, infectious diseases communicable to man, infectious diseases not communicable to man, parasitic diseases and auto-intoxication.

(c) Milk Hygiene :—Appearance of average sample of milk and butter, Babcock's test. Handling of Milk. Diseases communicable to man transmitted by milk. Definition of Pasteurized milk. Sour milk. Specific gravity of milk.

7.—EQUITATION.

General. Instructions will be given in riding throughout the course, and students will be expected to be competent riders at the practical examination.

W. P. B. BEAL,

Principal Veterinary Officer.

20th June, 1923.

Source: *Veterinary Department Report, 1923*

APPENDIX III

EXAMINATION QUESTIONS FOR STUDENTS AND TEACHERS FOR CERTIFICATE IN AGRICULTURE

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PART VI.

APPENDICES.

- A—The Questions set at the Examinations of Students and Teachers for Certificates in Agriculture.
- B—The Results of the Examinations in Agriculture.
- C—The Questions set at the Examination of Students and Teachers for Certificates.
- D—The Results of, and the Report on the Examination of Students and Teachers for Certificates.

APPENDIX A.

The Questions set at the Examinations of Students and Teachers for Certificates in Agriculture.

EXAMINATION IN AGRICULTURE.

Course—July, 1908.

Three hours allowed to answer the Questions.

1. Briefly describe how you prepare land for sowing vegetable seeds.
2. How do you sow Beans, Cabbages, Carrots, Radishes and Cocoa ?
3. How do you make and plant Cuttings ?
4. What do you mean by planting "at stake," how should it be done ?
5. How would you eradicate (1) fungoid, (2) insect pests ?
6. How do you tap Ofruntum rubber trees ?
7. What is Otokotakar (*Bauhinia reticulata*) and what is its use ?
8. How do you make straight lines in the bush ?
9. How do you ferment Cocoa ?
10. Why do you *cut* the cocoa pods from the trees ?

EXAMINATION IN AGRICULTURE.

COURSE—DECEMBER, 1908—JANUARY, 1909.

Three Hours allowed to answer the Questions.

1. What is a seed ? What are the conditions necessary to make it grow ? Would large seeds like Para rubber or Cocoa require the same conditions as seeds of, say, Cotton or Tobacco ? (10).
2. What is the use of water to plants ? What means would you employ to conserve the moisture in the soil in the dry season ? (10).
3. Does a soil become exhausted by repeated cropping ? What crops exhaust the soil most ? (8).
4. What means could you employ to make the soil more fertile ? (10).
5. What are the principal rubber producing plants found growing wild in the jungles of the Gold Coast (either English or Native names) ? Which one produces the best rubber ? (8).
6. What is the best way to prepare rubber from the latex of *Funtumia* ? (10).
7. Is Cocoa a good crop to grow in the Gold Coast ? How wide apart should the trees be planted ? Should they be pruned ; if so, why ? (12).
8. How long should Cocoa beans be fermented ? If you examined a sample of cured cocoa how could you tell if it had been long enough fermented ? (12).
9. What is the best way to plant Cotton ? Is it important to have this crop ripening during the dry season ; if so, why ? (10).
10. Mention some fibre plants that could be grown in the Gold Coast (either English or Native names) ? How do you prepare the fibre of Sisal Hemp ? (10)

Source: PRAAD, Accra, ADM 5/1/63

APPENDIX IV

THE CURRICULUM FOR TEACHERS STUDYING AGRICULTURE

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APPENDIX E.

THE CURRICULUM OF STUDY IN AGRICULTURE FOR
SCHOOL TEACHERS.

CURRICULUM OF STUDY IN AGRICULTURE FOR SCHOOL TEACHERS.

I.—*Lectures on the following subjects treated in an elementary manner and illustrated by simple experiments.*

ATMOSPHERE—Constituents; Necessity for air to reach the roots of plants as well as leaves.

SOIL—Formation; Classification; Suitability of special kinds for different plants; Essential elements for plant nourishment in an available form; Conservation of moisture by surface tillage and mulching; Necessity for humus; Exhausted by repeated tilling.

WATER—Constituents of rain and soil water; Capillary attraction.

BOTANY—Structure and uses of the various plant-organs; Fertilization; Germination of seeds; Respiration; Ash of plants; Importance of nodules in the Leguminosæ.

WEEDS—Why injurious; Value of for manurial purposes.

ROTATION OF CROPS—Why beneficial.

INJURIOUS INSECTS—Simple methods for exterminating them.

II.—*Practical work in the Garden.*

Seed sowing; thinning and transplanting.

When and how to plant.

Use of the various garden tools.

Pruning; Grafting; Propagating; Digging.

Preparation of crops for market.

Source: PRAAD, Accra, ADM 5/1/63

APPENDIX V

1905 EXAMINATION QUESTIONS FOR TEACHERS STUDYING AGRICULTURE

EXAMINATION OF TEACHERS FOR KNOWLEDGE IN AGRICULTURE.

THEORETICAL COURSE.

1. What are the principal distinctions between a stem and a root? Briefly described the uses of these organs.
2. Of what use are leaves to plants?
3. What substances do plants take as food from (a) the soil and (b) the atmosphere?
4. When a branch is cut off a plant the leaves upon it soon begin to droop, explain why this happens?
5. Why do green plants require light?
6. What happens if a cut, sufficiently deep to reach the wood, is made all round the stem of a plant? Give reasons for your answer.
7. What are Stomata? Where are they found, and what is their use?
8. What are the functions of root-hairs? Where are they found?
9. Describe the germination of any seed? What conditions are required to encourage germination?
10. How is soil formed? What is meant by "Poor soil"?
11. Give an account of any insects which are destructive to plants in this Colony.

PRACTICAL COURSE.

1. Describe the different methods by which plants may be propagated.
2. What steps would you take to improve "poor" or "worn-out soil" in a school garden?
3. Why are weeds injurious to cultivated plants? What are the best methods to employ to get rid of them?
4. What is the object of budding and grafting? Briefly describe these operations.
5. How would you lay out a school garden?
6. What is pruning? Why and when should it be performed?
7. What is meant by green-manuring? Why are some plants more valuable for this purpose than others?
8. Give a list of gardening tools and mention for what purposes they are used.
9. Describe the best method for propagating cocoa, the Funtumia rubber tree, pineapple, orange, rose.

Source: PRAAD, Accra, ADM 5/1/60

APPENDIX VI

A COCOA FARM COMPETITION ADVERTISEMENT

ARG 1/12/1/29

THE

**Gold Coast Agricultural
and
Commercial Society.**

Ashanti.

A Cocoa Farm Competition

open free of charge to farmers in the Western Province of Ashanti and the Coomassie District of the Eastern Province will be held in 1924.

Prizes.

FIRST £20.	SECOND £15.	THIRD £12.	FOURTH £10.
	FIFTH £5.	SIXTH £3.	

Conditions.

1. Farmers wishing to enter the competition must notify their District Commissioners or the Provincial Superintendent of Agriculture, Coomassie, not later than June 1st. 1924.
2. Farms entered for the competition must contain more than 500 trees.
3. Judging will be carried out by the Officers of the Agricultural Department who will consider the following points:—
Preparation of land and general attention, spacing of trees, Weeding, Mulching, Pruning, Treatment of Pests and Diseases, Draining, Provision of fermenting boxes, and general care in preparation of the cocoa.

T. J. S. SMELLIE,
Acting Provincial Superintendent.

Source: PRAAD, Kumasi, ARG1/12/1/29

APPENDIX VII

1908 RESULTS OF THE EXAMINATION IN AGRICULTURE

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APPENDIX B.

THE RESULTS OF THE EXAMINATIONS IN AGRICULTURE.

THE LIST OF THE NAMES OF SUCCESSFUL CANDIDATES AT THE EXAMINATIONS IN AGRICULTURE.

July Course.

No.	Name.	School.	MARKS GAINED.		Total.
			1st Course.	2nd Course.	
1	Francis S. Codjoe... ..	Roman Catholic School, Cape Coast	58	70	128
2	John Albert Eshun	Roman Catholic School, Saltpond	40	59	99
3	William Darkoo	Wesleyan School, Aburi	33	64	97
4	Christian Gati	Bremen Mission School, Peki Blengo.	40	54	94
5	Peter Y. Mortoo	Roman Catholic School, Quittah	42	40	82

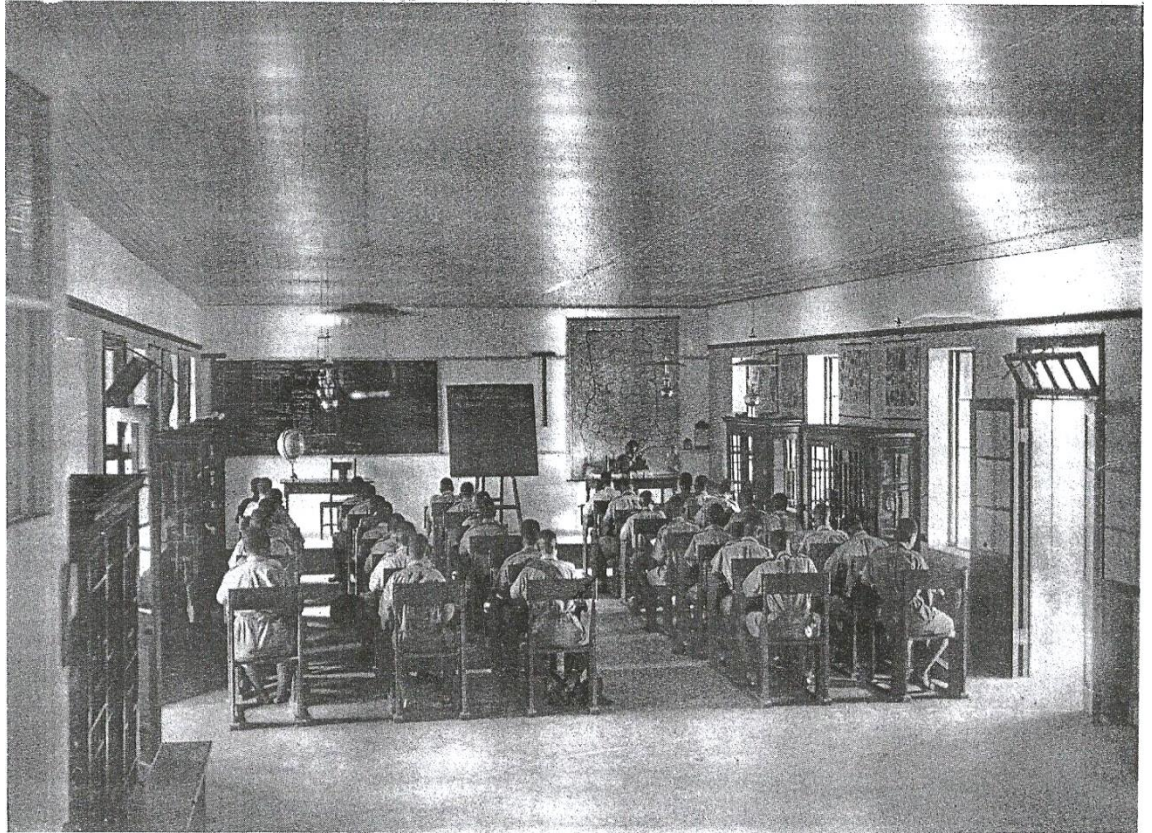
December, 1908—January, 1909, Course.

1	Seth C. Fianko	Basel Mission Seminary, Akropong	78	60	138
2	Abednego C. Asare	" " " "	52	61	113
3	Wilhelm C. Yirenkyi	" " " "	50	59	109
4	Charles E. Opong	" " " "	58	48	106
5	Albert E. Sainpong	" " " " Abetifi	41	58	99
6	Theop. S. Adu	" " " " School, Kibbi ...	44	40	84
7	Emil Ameyibo	Bremen Mission School, Tsibu ...	33	51	84
8	George T. Pabi	Basel Mission School, Abetifi ..	43	40	83
9	Zacc. Labi... ..	Bremen Mission School, Peki Avetile	36	46	82
10	C. D. Amuah	Roman Catholic School, Cape Coast.	30	51	81
11	John N. Wiredu	Basel Mission School, Kibbi ...	26	54	80

Source: PRAAD, Accra, ADM 5/1/213

APPENDIX VIII

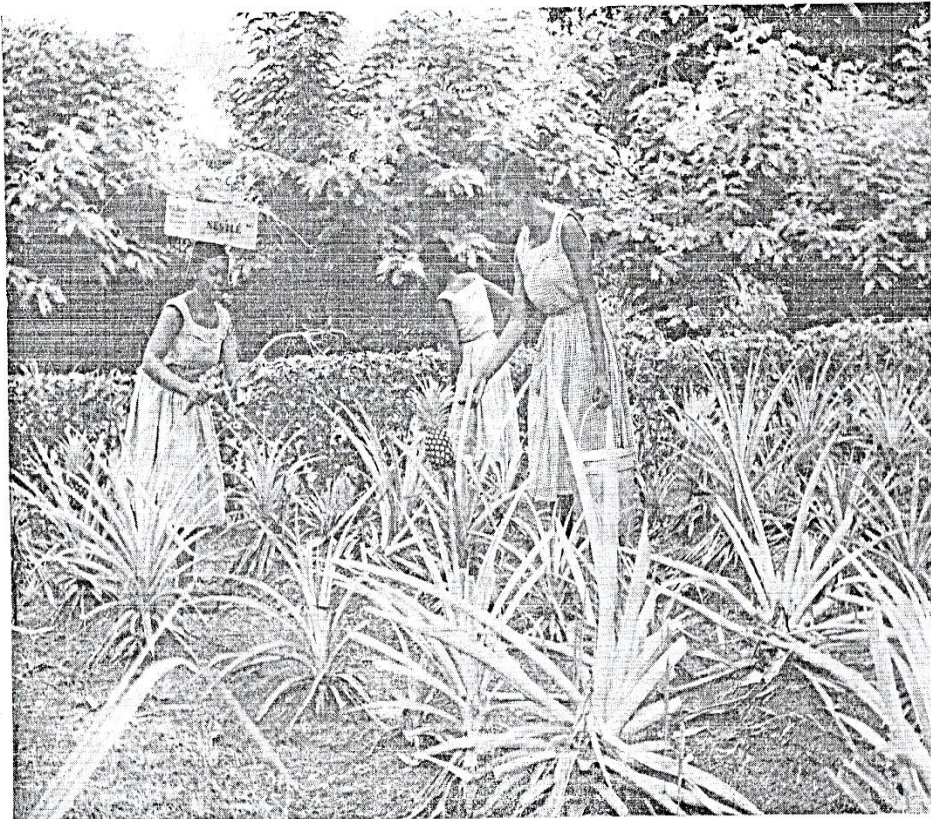
A LECTURE ROOM OF AGRICULTURAL TRAINING SCHOOL, KUMASI



Source: PRAAD, Kumasi, ARG 1/1/145

APPENDIX IX

ST. MONICA'S SCHOOL GARDEN



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Pupils of St. Monica's Secondary School in the School's Housecraft Garden

Source: PRAAD, Accra, ADM 5/1/403

APPENDIX X

STUDENTS HARVESTING FROM THEIR SCHOOL FARM



A Bumper Yam Harvest from a Middle School Garden

Source: PRAAD, Accra, ADM 5/1/201

APPENDIX XI

BUNSU AGRICULTURAL TRAINING SCHOOL IN 1956

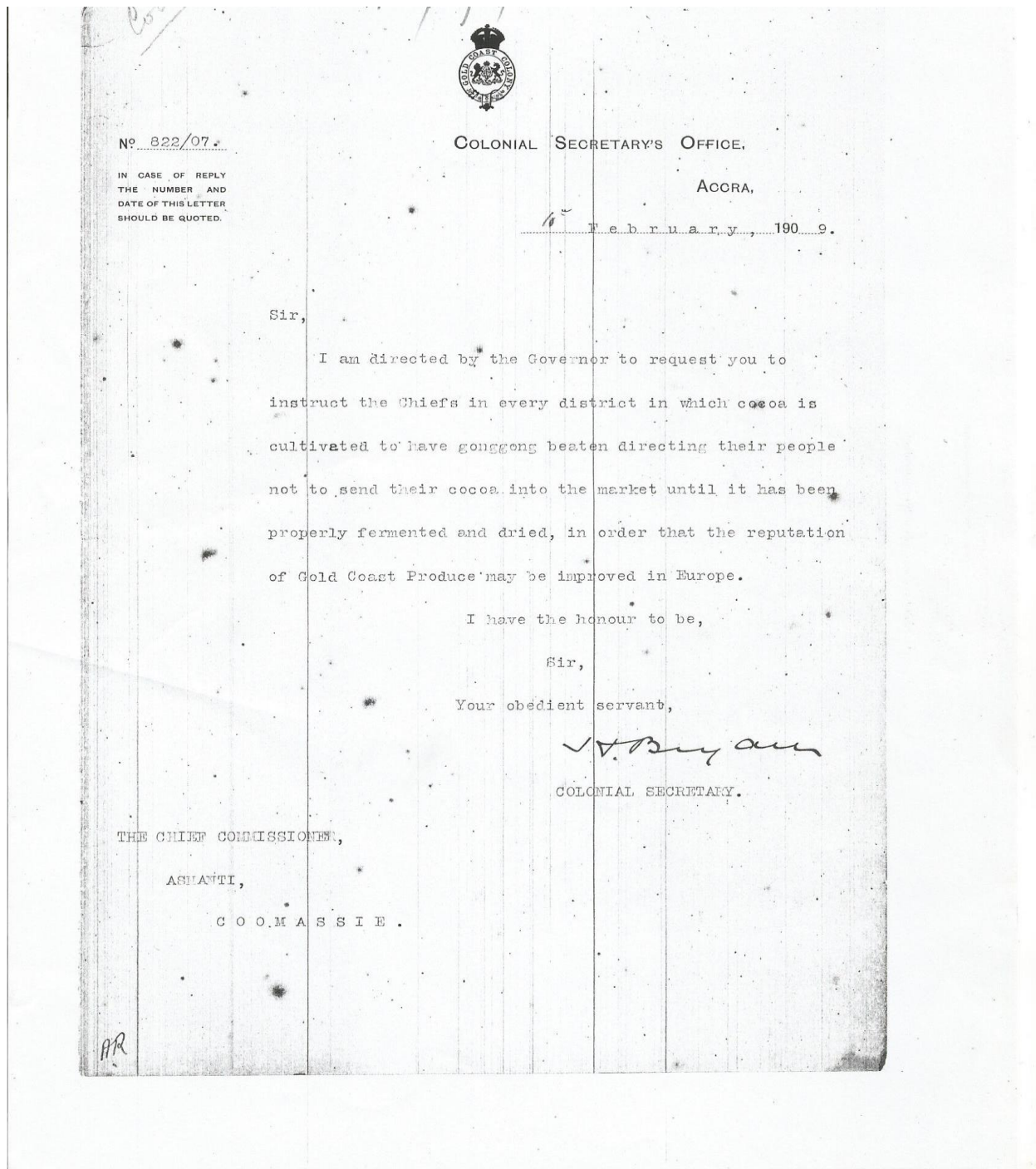


Probationary Field Assistants in a Classroom at the Bunsu Training School

Source: PRAAD, Accra, ADM 5/1/392

APPENDIX XII

A LETTER ON COCOA FERMENTATION IN ASHANTI



Source: PRAAD, Kumasi, ARG 1/12/14