AGRICULTURAL CHANGE IN SESHEKE DISTRICT OF WESTERN ZAMBIA, 1899-1964

BY

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DECLARATION

I, **Sakwiba Muyunda**, do hereby declare that this dissertation represents my own work and that it has not been previously submitted for a degree at this or any other University.

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APPROVAL

This dissertation of Sakwiba Muyunda is approved as fulfilling part of the requirements for the award of the degree of Masters of Arts in History at the University of Zambia.

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ABSTRACT

Agriculture and food security are major themes in Zambia and the world over. The people of Sesheke district have depended on agriculture for many years. This dissertation discusses agricultural change in Sesheke district of Western Zambia from 1899 to 1964. The study focuses on the traditional food crops the people of Sesheke district cultivated from 1899 to 1964 as well as the change from sorghum and millet to maize cultivation. Furthermore, the study examines the impact of this change on the food security of the area under review. The dissertation argues that before maize was introduced in Barotseland by the Portuguese in the 1800s. The people of Sesheke district grew cereal crops such as sorghum and millet. Maize was grown alongside sorghum and millet when it was introduced in Sesheke district. It was from the 1950s when the people of Sesheke district started to grow more maize than sorghum and millet. The change was gradual such that at the time of independence in 1964 a considerable number of Sesheke farmers were still growing sorghum and millet. The dissertation demonstrates that a number of factors such as the availability of market for maize, colonial policies, bird attacks on sorghum and millet, introduction of ploughs and many others made the people of Sesheke district to change from sorghum and millet to maize cultivation. The change to maize production caused food insecurity at certain times because if maize failed, the farmers of Sesheke had no any other crop to depend on. Moreover, maize was susceptible to natural disasters such as drought and many others. The study further discusses various strategies used by the people of Sesheke in order to avert hunger, as well as the importance of cattle in ensuring food security. Some of the strategies include fishing which was also a normal economic activity, wild fruits, works such as road construction and maintenance were sources of income and many more.

Key words: *Agricultural change, traditional food crops and food security.*

DEDICATION

This dissertation is dedicated to my mother Ms. Esther M. Sansala, my late father Mr. Progress Rex Muyunda and my wife Margaret Njobvu. My mother helped me to complete both my secondary and college education after the death of my father. My wife was a source of inspiration during my dissertation writing process when things were difficult.

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TABLE OF CONTENTS

LIST OF FIGURES

ABBREVIATIONS

BOMA	British Overseas Military Administration
BSA	British South African Company
DC	District Commissioner
GRZ	Government of the Republic of Zambia
NAMBOARD	National Agricultural Marketing Board
NAZ	National Archives of Zambia
NR	Northern Rhodesia
NWR	North Western Rhodesia
PWD	Public Works Department
RNLB	Rhodesia Native Labour Bureau
WNLA	Witwatersrand Native Labour Association
ZRT	Zambezi River Transport Service
ZSL	Zambezi Sawmills Limited

GLOSSARY

1. Luyana	Original Lozi people
2. Malozi	The people of Barotseland
3. Silalo	Chiefdom
4. Induna	Councilor
5. Silalo Induna	Chief
6. Lyaluyi / Lealui	The summer palace of the Litunga
7. Litapa	Clay- gardens
8. Sishanjo	Drainage gardens
9. Mazulu	Mound gardens
10. Mikomena	Raised beds
11. Litongo	Margin gardens
12. Matema	Forest gardens

CHAPTER ONE

INTRODUCTION

1.1 Introduction and Historical Background

This study is an attempt to discuss agricultural change in Sesheke district of Western Zambia from 1899-1964. The core of the study is to examine the dynamics of crop cultivation among farmers of Sesheke. The study argues that farmers in the district initially focused on the cultivation of sorghum and millet but over time began to cultivate maize as well. The study investigates the factors which made farmers of Sesheke district change from sorghum and millet to maize production. It also examines the impact this change had on food security among the local people. These changes were brought about largely by the efforts of missionaries and governments.[1] This study seeks to investigate agricultural changes and the impact these developments have had on food security among these farmers.

Traditional crops such as sorghum, millet, tubers and many others were cultivated by Zambian farmers long before colonial rule was introduced into the territory. Archaeologists, during Iron Age excavations found that the early Zambian farmers cultivated millet and sorghum together with supplementary crops such as the Livingstone potato, yams and other vegetables.[2] Cereal crops provided the porridge which still forms the basic diet of most Zambians. Various relishes were also added to the staple diet, including garden vegetables and many species of wild seeds, roots and

[1] G. D. Kittler, *Central Africa: The New World of Tomorrow* (New York: Thomas Nelson Inc., 1971), p.93

[2] B. M. Fagan, "Early Farmers and Ironworkers (100 B. C to A. D .1500)" in B. M. Fagan (ed.) *A Short History of Zambia* (London: Oxford University Press, 1966), p.87.

fruit. Traces of the fruit of the fig, mobula, marula, and other plants have been found in ancient rubbish heaps.[3]

Before the arrival of Arabs and Europeans, most Africans lived on a diet consisting of greens supplemented with game from the bush and fish from the rivers and lakes. The Africans cultivated crops such as beans, millet, sorghum and the fruit of the palm tree. When the Hamites migrated to Equatorial Africa, probably in the fifteenth century, they brought with them their cattle, the banana tree, chickens, and goats.[4] The Portuguese and Arabs contributed new foods to the diet of the Africans such as corn maize, sweet potatoes, cassava, tomatoes, ginger, and many others which were obtained from the New World.[5] In addition, the Portuguese brought tobacco, pigs, ducks, pigeons, and pineapples to Africa. The Arabs introduced rice, cotton, sugarcane, onions, cucumbers, and lemons to Africa, while the Indians who came to Africa as labourers on the railroads brought tea plants with them.[6]

Mulenga. C. Bwalya explained that historians of Central Africa are generally agreed that by the beginning of the sixteenth century much of Zambia was occupied by farming people who were more or less ancestral in both cultural and physical sense to many of the present day inhabitants. He stated that:

> Between 1500 and the middle of 1800, both as a consequence of internal evolutionary tendencies and widespread human migration (and the concomitant imposition through wars or interchange of ideas and trade

[3] Fagan, "*Early Farmers and Ironworkers (100 B.C to A.D. 1500)",* p.87.
[4] Kittler, *Central Africa*, p.94.
[5] Kittler, *Central Africa*, p.94.
[6] Kittler, *Central Africa*, p.94.

> goods) many changes were experienced in the forces and relations of production of the people.[7]

Bwalya further explained that previously only sorghum and millet were the basic grain crops which were cultivated purely for subsistence purposes before a wider variety of crops and methods of production emerged.[8] Traditional crops such as millet, sorghum and eleusine were major crops in the Bemba and Luba kingdoms. Beans and where possible cowpeas, which were purely of African origin, were widely cultivated and everywhere they were important items of local menus.[9] Indigenous crops have always played a major role in ensuring food security because they were an important part of the diet of an African. According to Lovejoy Malambo, in 1985 the Zambian people grew the following crops :(a) food grains comprising of maize, wheat, sorghum and millet ;(b) vegetable oils which consisted of groundnuts; and (c) minor crops that included cassava, fruits and vegetables.[10] In their pre-war survey of Northern Rhodesia, Trapnell and Clothier recorded over one hundred (100) different food plants in African cultivation.[11]

The early staples for the Luyana (Malozi) people which included finger millet, sorghum and several varieties of tubers were supplemented in the eighteenth century by flint maize and sweet potatoes. By about 1850, all the crops from America such as maize, cassava, sweet potatoes, groundnuts and sugarcane, were abundant in the Lozi flood plain (the annual flooding of the Zambezi River). The adoption of exotic crops tended to increase overall food production, since the new crops could usually be cultivated in

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[7] M. C. Bwalya, "Rural Development and Agricultural Transformation in Northern Zambia. A Study of the Historical and Contemporary Sources of Agricultural Backwardness in Mpika", PhD Thesis, University of East Anglia, 1980, p.76.

[8] Bwalya, "Rural Development and Agricultural Transformation in Northern Zambia", p.76.

[9] J. Vansina, *Kingdoms of the Savanna* (London: The University of Wisconsin Press, 1966), p.21.

[10] L. M. Malambo, "Rural Food Security in Zambia." PhD Thesis, Michigan State University, 1987, p. 34.

[11] D. McMaster, "Agricultural Geography," in J. I. Clarke (ed.), *An Advanced Geography of Africa* (Amersham: Hulton Educational Publications Ltd, 1975), p.348.

addition to the old ones.[12] Such diversification reduced the risk of total crop failure and hence of famine. When Livingstone reached Barotseland in the 1850s, he also found sugar cane, Egyptian arum, cassava, pumpkins, melons, beans, and groundnuts being cultivated.[13] This growth in the variety of crops was paralleled by an increase in the types of gardens being prepared. In Sesheke district, farmers grew a variety of crops such as groundnuts *(Ndongo*), maize (*Mbonyi*), kaffir corn or sorghum (*Makonga*), bulrush millet (*Mauza*), millet (*Lukesha*), cucumbers (*Lungwatanga*), watermelons (*Mahapu*), edible gourds (*Malaka*), mottled pumpkins (*Namundalangwe*) and the common pumpkins (*Mapusi*).[14]

Sorghum and millet were the predominant cereals over most of Africa before the introduction and widespread cultivation of maize. As late as 1973 – 1977 these two crops still accounted for 43 per cent and 23 per cent of all major staples produced in Sub – Saharan Africa. However, from 1971 to 1981, per capita production of the two crops declined by 15 per cent. This decline contributed to the steadily deteriorating food situation that affected most African countries.[15] This decline has been directly linked to the introduction, adoption and widespread cultivation of maize in some parts of Africa. The question one would ask, therefore is, "why has there been such a decrease in sorghum and millet production in most African countries including Zambia?"

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[12] A. Roberts, *A History of Zambia* (London: Heinemann, 1976), p.142.
[13] L .Van Horn, " The Agricultural History of Barotseland, 1840-1964," in R. Palmer and N. Parsons (eds.), *Roots of Rural Poverty in Central and Southern Africa* (London: Heinemann, 1977), p.145.
[14] I. M. Nzila, "The Zambezi Sawmills: A Study of Forest Exploitation in the Western Province of Zambia, 1990-1968", MA Dissertation, University of Zambia, 1987, pp. 2 – 3.
[15] D. H. Andrews, L. K. Mughogho and S. L. Ball, "Sorghum and Pear Millet Production in Africa: Problems and Prospects with new varieties,'' in D. L. Hawksworth (ed.) *Advancing Agricultural Production: Proceeding of CAB's First Scientific Conference Arusha, Tanzania* (London: Commonwealth Agricultural Bureaux, 12-18 February, 1984), pp.85-86.

Richard Hall noted that the first farmers in Zambia grew cereals such as sorghum and millet. He was however quick to point out that it was evident from the increasing production for sale by African farmers that maize in 1965 was replacing millet.[16] C. Stephen Lombard and Alexander Hugh Carmichael Tweedie pointed out that after Zambia's independence from colonial rule, maize in many ways dominated Zambian agriculture and well over half the cultivated area in the country was planted with maize. Maize was the major cash crop, the major subsistence crop in many areas and was also the national staple food.[17] Njekwa Kamayoyo stated that:

> Some months after the end of the British South African Company (BSAC) administration in 1924, in Northern Rhodesia it was clearly stated that crops like sorghum and millet, which could be easily used for brewing beer, were not to be cultivated. In Lyaluyi area of Western Zambia, such a policy was implemented before the end of BSAC rule and several devices were used to fight a sorghum crop called *Munanana*. Initially it was through a discouragingly low price offered by whites including missionaries of Sifula for *Munanana*. Eventually, whites completely refused to buy all kinds of sorghum.[18] Maize however, was encouraged.

There were two areas where farming was done in Sesheke district of Western Zambia. These were the plain and the forest areas. This kind of environment was found almost everywhere in Barotseland because the Zambezi river passed through most of the districts of the area. Therefore, even the crops that were cultivated were the same except in a few isolated cases. The Mbunda people migrated into Barotseland from Angola in the nineteenth century and introduced a method of bush cultivation. It was also believed that gardens outside the floor of the plain were not adopted by the Luyana to any degree

[16] R. Hall, *Zambia* (London: Pall Mall Press, 1965), p.27.
[17] C. S. Lombard and A. H. C. Tweedie, *Agriculture in Zambia since Independence* (Lusaka: Neczam, 1974), p. 20.
[18] N. Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi area: 1890-1924", M A Dissertation, University of Zambia, 1989, p.76.

until after the Kololo occupation of Barotseland from 1840-60.[19] Many Luyanas fled into exile in the south and north-west, and it was during this period that they became familiar with the techniques of bush cultivation. Following their return to the plain after the defeat of the Kololo, a number of Malozi people who lacked mound sites moved permanently to the margin of the flood plain, from where they exploited sites in the outer plain and the bush. Different types of fields were cultivated by the Malozi people such as *Matema, Litongo, Litapa*, *Saana, Lishanjo* and the mounds where different crops were raised.[20] David C, Mulford pointed out that Barotseland's own economy remained inwardly looking, almost wholly centered on the vast flood plain which stretches northwards from Sesheke district along the upper Zambezi.[21]

1.2 Area of Study

The study focused on Sesheke district of Western Province formerly called Barotseland, under North Western Rhodesia. Sesheke means "the place full of sand".[22] Sesheke is a border district in the Western Province of Zambia. It is found on the northern bank of the Zambezi River and forms the border with Namibia's Caprivi Strip. Sesheke district was formed in 1903 and was then a sub – district of the "Falls".[23]

In 1905, Sesheke became a separate district under a District Commissioner and was itself sub –divided, and Njoko was the name of the sub – district in charge. This sub –

[19] Van Horn, "The Agricultural History of Barotseland, 1840-1940," p.146.
[20] M. Gluckman, "The Lozi of Barotseland in North- Eastern Rhodesia," in E. Colson and M. Gluckman(eds.) *Seven Tribes of Central Africa* (Manchester: Manchester University Press, 1961), pp. 1-68.
[21] D. C. Mulford, *Zambia: The Politics of Independence 1957-1964* (London: Oxford University Press, 1967), p.21.
[22] I. M. Eldridge, "Short History of the Sesheke District" in W.V. Brelsford (ed.), *The Northern Rhodesia Journal* vol.3, (1956 – 1959) (Northern Rhodesia Society), pp. 174-176.
[23] National Archives of Zambia (NAZ), KDE 2/44 Circular – Historical Extracts- District Commissioner's Office, Sesheke 31st January, 1936.

district was done away with after two years and the whole district was controlled from the office at Sesheke. In 1911, Sesheke was again turned into a sub – district and included in the Barotse district which was under the Resident Magistrate at Mongu.[24]

For the purpose of administration, traditionally Barotseland was divided into *Silalos* or areas. Each *Silalo* was controlled by an Induna, who had the power to settle some cases arising within his boundaries. This *Silalo* or area organisation was used by Lewanika, under the free labour system (tribute labour) to call on large bodies of men to labour on his lands, or on his canal or irrigation works.[25] *Silalo* (singular) and *Lilalo* (plural) was an administrative area. The Silalo had an induna who was its political, administrative and judicial head. A Silalo had a number of villages (Minzi). Munzi (singular) had an induna who was its political, administrative and judicial head.

The first advent of Malozi to Sesheke district is said to have been Malozi Paramount Ngombala Alias Imusunga who came down the Zambezi and up the Mashe (Chobe) before the Makololo invasion in 1864. He subjugated the local tribes and left representatives at various parts. The following were the tribes found in Sesheke district: Malozi, Matotela, Masubiya, Mafwe, Mambowe, Mankoya, Matoka, Mashanjo, Makwengo, Mambunda and Ma-wiko.[26] Sesheke district in this study includes the present day districts of Mwandi and Mulobezi.

[24] NAZ, KDE 2/44 Circular, 1936.
[25] NAZ, KDE 2/44 – History of Barotseland, 1900 – 1936.
[26] NAZ, Sesheke District Note Book vol. 2, 1936 – 1954.

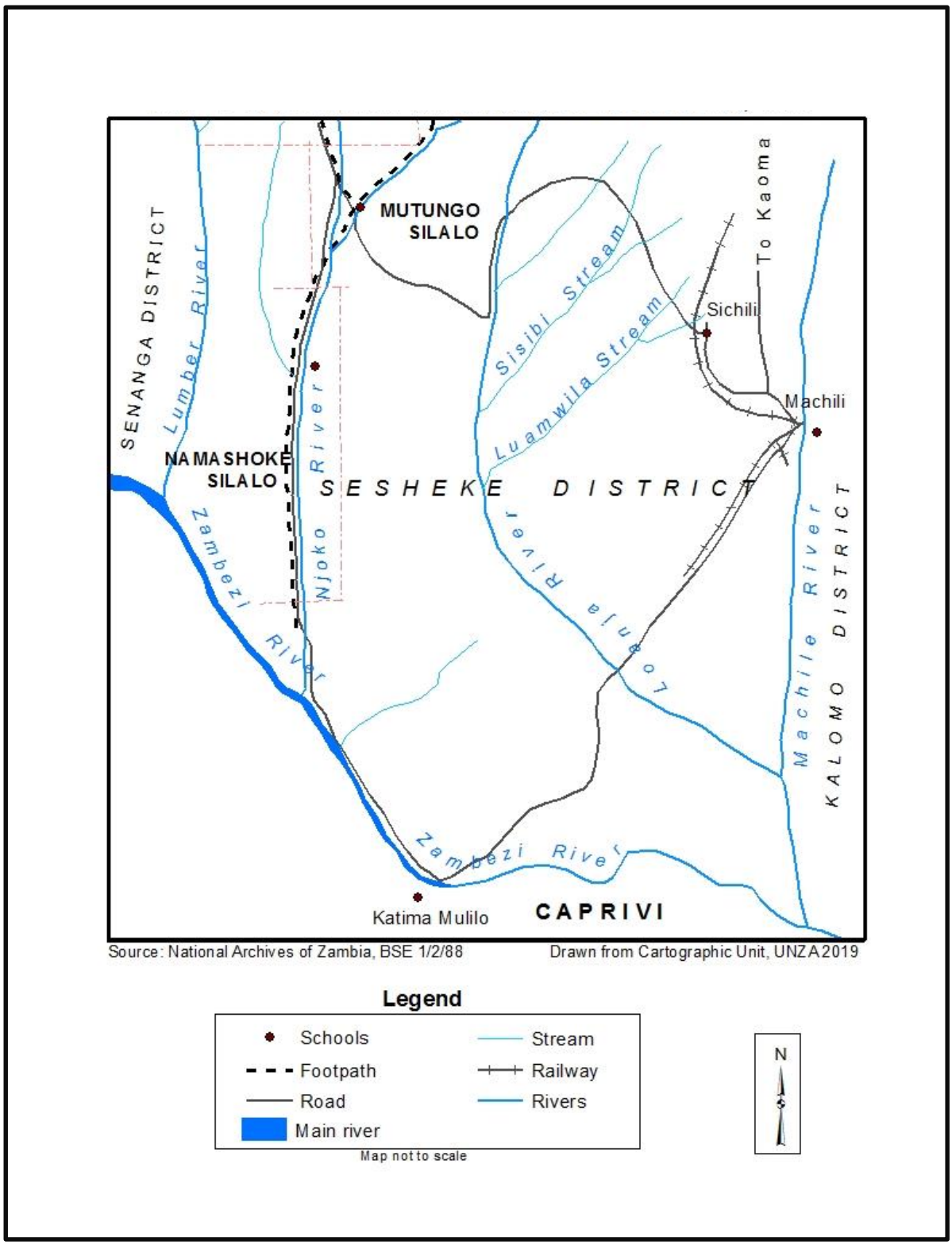

Figure 1: Sesheke Map Showing Some Areas, 1957

1.3 Statement of the problem

Different scholars have written on agriculture and food security in Africa because these are important aspects of the economy of any nation. Many African countries are finding it difficult to be food secure. In consequence, scholars are researching into aspects of food security in Africa. However, one important aspect that has been neglected and therefore needs more inquiry is the shifting crop culture in African agriculture. Hence, this study investigates factors which made the people of Sesheke district change from sorghum and millet to maize production. More importantly, the study examines the impact of this change on food security on the people of Sesheke district.

1.4 General Objective of the study

The general objective of the study was to examine the dynamics of crop cultivation among farmers of Sesheke district and investigate the factors which made them change from sorghum and millet to maize production.

1.4.1 Specific Objectives of the Study

1. To discuss the traditional food crops the people of Sesheke district cultivated from 1899 – 1964,
2. To investigate the factors which made people change from sorghum and millet cultivation to maize production, and
3. To examine the impact of the change from sorghum and millet to maize production on the food security of the people of Sesheke district.

1.5 Rationale of the study

Despite measures put in place to improve rural livelihoods, food insecurity has continued in all parts of Zambia and Sesheke district in particular. This study therefore, aims at investigating why there was a change from sorghum and millet to maize cultivation and the impact this shift had on the food security of the area. It is hoped that this study will contribute to the history of food security in Zambia and that more scholars will be motivated to make further investigations on the broad topic of agriculture and food security. I chose the period 1899 because it was the year when the British government passed the North-Western Rhodesia Order in Council which gave absolute administrative powers to the British South Africa Company (BSAC) in the area. A number of changes such as taxation were introduced and the economy of the Lozi people drifted to that of money economy.

1.6 Literature Review

Several studies have been done on agricultural change and food security in Zambia. However, work still needs to be done on agricultural change and food security in Sesheke district. The literature available on agricultural change will be important in this particular study.

James MacCann discussed the introduction and spread of maize in Africa between 1500 and 1999. He observes that the first reference to maize's introduction to Africa might have been that of an anonymous Portuguese pilot in 1540, who described its already well-established cultivation on the Cape Verde Islands. Maize appeared in West Africa's Gold Coast (Ghana) in the early seventeenth century. By the late eighteenth century the

cultivation of both millet and sorghum declined dramatically against maize. Maize therefore, had become the principal cereal crop in the region.[27] MacCann also argues that by the last decade of the twentieth century a tidal wave of maize engulfed Africa supplanting historical African food grains like sorghum, millet and rice.[28] This study has brought out important information on the history of maize in Africa and its adoption to the exclusion of traditional crops of sorghum and millet. Our study will investigate the factors which made the people of Sesheke district change from sorghum and millet to maize production. We feel this was not the focus of McCann's study hence the need to feel in the gap.

Eira Punt has examined the African agricultural development in Southern Rhodesia (Zimbabwe) during the years 1890 to 1950. He argued that changes were invoked in the economic base of the African agricultural sector, arising from early contact with the whites. Punt paid special attention to the inter-war years because it was during those years that there evolved a definite policy for the administration of the African sector. He further stated that, changing trends in the white agricultural sector played a major role in the formation of Native Policy. The land policy as well as government legislation played a role in determining changes in African agriculture. He observed that prior to the arrival of the whites the principal crop was *rupoko* (finger millet). Soon after white settlement, the acreage of maize expanded at the expense of finger millet in order to meet the requirements of mines.[29] This study is important to ours because it has highlighted on the factors which made the people of Zimbabwe to shift from sorghum and millet to

[27] James MacCann, Maize and Grace: History, Corn, and Africa's New Landscapes, 1500-1999, *Comparative Studies in Society and History* vol.43, no.2 (April, 2001) (Cambridge University Press), pp. 246-272

[28] MacCann, *Comparative Studies in Society and History* vol.43.

[29] Eira Punt, "The Development of African Agriculture in Southern Rhodesia with particular Reference to the Interwar years", MA Dissertation, The University of Natal, 1979, p.22.

maize cultivation. Our study focuses on agricultural change in Sesheke district and the impact it had on the food security in the area which was not discussed by the scholar under review.

Cathrine Cymone Fourshey's study on Maize and British agricultural policy in South Western Tanganyika from 1920 to 1960 is of great significance to our topic. She examined the concerted efforts of British officials and policy makers that led to maize becoming a central crop in the Tanganyika Territory. Fourshey explained that the British promotion of maize was found in colonial- era circulars, advertisements, agricultural and marketing policies and government warnings published between the 1920s and 1960s. British ideologies and attitudes towards crops were expressed in discourses that promoted maize as more nutritious, better tasting, higher yielding, and technologically more suitable and scientifically developed than African grains-sorghum, bulrush millet and eleusine.[30] She further explained that individual growers, traders and consumers of Southwestern Tanganyika did contest particular policies and their enforcement, yet ultimately the repeated messages about maize as simultaneously food and cash crop and exportable led Tanganyikans to embrace the crop, despite its shortcomings.[31] The study has shown that it took a long time and tremendous effort by the state to convince the people of Southwestern Tanganyika to turn to maize cultivation. Fourshey has not explained in details the short comings of maize cultivation among the farmers. Our study focuses on the impact on food security of the change from sorghum and millet to maize production.

[30] Cathrine Cymone Fourshey, "The Remedy for Hunger Is Bending the Back: Maize and British Agricultural Policy in Southwestern Tanzania 1920-1960", *The International Journal of African Historical Studies* vol.41, no.2 (2008), pp. 223-261.
[31] Fourshey, *The International Journal of African Historical Studies* vol.41.

Lovejoy Malambo's work on rural food security in Zambia is important because he has discussed both indigenous and exotic crops that were cultivated in Zambia. He wrote on crops such as sorghum, millet, wheat, maize, cotton, soya beans, sunflower, groundnuts, coffee, sugar, tea, cassava and vegetables.[32] His study provides insights into food security problems in Zambia from a rural household perspective. His analysis of the food grain production and distribution system in Zambia, followed by an investigation of rural household's food production and disposal behaviour, including the utilisation of on farm storage facilities, shows that households undertook various actions to guard against poor food harvests. These included storing more grain than what was required in a single season and growing of vegetables and other cash crops to raise income. People also practised mixed cropping or selling animals, beer, and fish. He further stated that by 1985, maize was the major food grain produced in Zambia and that it was also the main staple food commodity. The most common reason given by the farm households for growing maize that Malambo brought out was the need to provide food for the family, followed by the need to raise money.[33] Zambians had always provided food to their families before maize was introduced. His study is vital to our topic because it highlights issues of food security in rural households and examines why maize became a major food grain in Zambia. Our study will concentrate on the impact of the change to maize production on food security of the people under review. While Malambo based his research findings on the data he collected from a sample of 132 rural households in Mumbwa district, our study will investigate agricultural change in Sesheke district.

[32] Malambo, "Rural Food Security in Zambia", p. 34.
[33] Malambo, "Rural Food Security in Zambia", p.146.

Eugene Leone Hermitte's work is rich on the agricultural history of Barotseland while Max Gluckman provides detailed information on African agricultural systems of Western Province. Hermitte and Gluckman examined the crops that were cultivated in Barotseland. The crops they cited included sorghum, sweet red sorghum, red sorghum, beans, sweet potatoes, sweet reed, finger millet, Livingstone potato and maize which later became the staple crop of the Lozi people.[34] Our study will focus on the shifting crop culture of the people of Sesheke district which was not discussed by these two scholars.

Iven M. Nzila discussed the crops that were traditionally grown in Sesheke district. His work is very important to our study because it has identified crops which were specifically cultivated by the people of Sesheke district.[35] However, his area of study was the Zambezi Sawmills and forest exploitation in the western province of Zambia. He did not discuss agricultural change and food security in Sesheke district but only mentioned the crops cultivated by the people of Sesheke district in passing. Our study explores agricultural change and food security in Sesheke in detail.

John Kittler maintained that before the introduction of new crops by the Arabs, Europeans and Indians, people of Central Africa cultivated millet, sorghum, beans and many other crops. He also mentioned that, changes in African farming were brought about by foreigners as they introduced new varieties of crops.[36] Kittler's study is vital because it informs us on the crops that were foreign and those that were indigenous to our country. Our study investigates how the new crops affected the cultivation of

[34] E. L. Hermitte, "An Economic History of Barotseland, 1800 – 1940." PhD Thesis, The North Western University, p.31 and M. Gluckman, "Barotseland and the Barotse people." In E. Colson and M. Gluckman (eds.), *Seven Tribes of British Africa* (Manchester: Manchester University Press, 1959), p. 11.
[35] Nzila, "The Zambezi Sawmills," p. 34.
[36] Kittler, *Central Africa*, pp.93 – 94.

traditional crops such as sorghum and millet. This study, therefore discusses in detail agricultural changes that occurred in Sesheke district and the impact these changes had on food security in the area.

While John Kittler focused on the introduction of new crops in Africa, Laurel Van Horn and Andrew Roberts discussed food security and early staples of Barotseland. They discussed the early staples grown by the Luyana (Malozi) people such as finger millet, sorghum and several varieties of tubers which were supplemented in the eighteenth century by flint maize, cassava, groundnuts, sugar cane, tomatoes and sweet potatoes.[37] Roberts stated that long distance trade made possible a kind of agricultural revolution by stimulating the adoption of American crops. These crops tended to increase overall food production, since the new crops could usually be cultivated in addition to the old ones.[38] Van Horn and Roberts have shown that the introduction of maize and other crops played a supplementary role in the sense that the new crops led to increased overall food production because they were grown alongside old ones. The two have not indicated the factors that made the adoption of new crops possible among the people of western province. Our research focused on establishing the impact of the referred to agricultural revolution on the local crops and food security of the people of Sesheke district.

Donald Bwalya documented aspects of agricultural change in the Northern Province of Zambia. He analysed the agricultural policies and practices of both the colonial and post – independence Zambian governments between 1948 and 1978. His main focus was on maize production in Kasama district. Bwalya pointed out that, maize production in Kasama during the colonial rule was low because of the absence of male labour, markets

[37] Van Horn, "The Agricultural History of Barotseland 1840 – 1964", p.145 and Roberts, *A History of Zambia*, p. 11.
[38] Roberts, *A History of Zambia*, p. 142.

and communication networks, and also maize was not the staple food for the people. He also discussed the agricultural policies of the Zambian government from 1964, which made maize become a major cash and staple crop to the exclusion of other crops such as cassava, sorghum and millet.[39] This work is important to our study, as it gives the reasons why maize cultivation in Kasama could not pick up until 1964. However, Bwalya's work has not shown how the exclusion of crops such as sorghum, millet and cassava from major crops impacted on the food security of the people of Kasama district. Therefore, this study endeavours to fill up the gap in this area.

Njekwa Kamayoyo's work on the anatomy of economic underdevelopment of Lyaluyi between 1890 and 1924 is important when discussing agricultural change and food security in Sesheke district. Kamayoyo noted that during colonial rule, crops such as sorghum and millet which could be easily used for brewing beer were not allowed to be grown in Bulozi.[40] He stated that the BSAC fought the brewing and drinking of beer because it was comparatively easier to obtain money by selling beer than by going to work outside Bulozi as a migrant labourer. He further explained that if local beer brewing was allowed to flourish, it would have created scarcity of labour in Southern Rhodesia and consequently wages would rise against the wishes of the whites. Whites who had businesses exchanged their goods for maize only. The whites were instructed not to buy *Munanana* and other sorghum grains. This forced the Malozi people to change to maize production. The study is important to our work as it brings out the reasons which compelled the Malozi people to venture into maize cultivation. The study has not, however explained how the change to maize production and the elimination of

[39] D. H. J. Bwalya, "Agricultural change in the Northern Province of Zambia 1948 – 1978: A case of Maize Production in Kasama District", M A Dissertation, University of Zambia, 1989, p. v.
[40] Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi Area, 1890 – 1924", p. 76.

traditional beer impacted on food security of the people. This proposed study will discuss how the change from sorghum and millet to maize production impacted on food security of the local people.

Kafuba Mboma's study on the changing role of women in agriculture in Kalabo district in the period 1906 to 1986 is vital to our study. He examined the changing role of women in agriculture in the context of the impact of colonialism and penetration of capitalism. Mboma brought out one area in which Kalabo women made a mark and that was their increased involvement in beer brewing and selling. Women organised *Lubile* (big working combinations) which was a form of hired labour paid for in kind, namely beer.[41] This study gave insight on the important role played by women in agriculture and how they strove to ensure food security. Our study will demonstrate how agricultural change in Sesheke district affected food security in the area.

Chewe M. Chabatama's study on the food security of North-Western Province of Zambia is relevant to our study. He argued that, in spite of the colonial state neglect and suppression at certain historical times, most of the peasant farmers of North-Western province remained relatively food secure in colonial Zambia largely due to their initiative, industriousness and resilience.[42] His work is important because it informs us on how the peasant farmers in North-Western province remained resilient and were able to produce food even in the face of suppression during colonial rule. This study focuses on why the introduction of maize as a cash crop in Sesheke district of Western province

[41] K. Mboma, "The changing Role of women in Agriculture: A Study of Kalabo District, 1906 – 1986." M A Dissertation, University of Zambia, 1991, p. v and p. 59.
[42] C. M .Chabatama, "Peasant Farming, the State and Food Security in North – Western Province of Zambia, 1902 -1964" , PhD Thesis, University of Toronto, 1999, p.1.

led to the exclusion of certain crops such as sorghum and millet, thereby impacting negatively on food security of the district.

Bennett S. Siamwiza's study on the history of famine in Zambia is illuminating to our study. He looked at the causes of famine, its severity and the location of each famine stricken area examined. He further investigated the social impact of famine, survival strategies and external help. He explained that, the colonial policies of labour migration, taxation and administrative controls on which famine was blamed in other parts of Africa during the early colonial period, cannot be held responsible in Zambia.[43] Siamwiza also stated that in 1915 there was famine in the Western province, and it was the arid district of Sesheke that suffered privation. Parts of the district were so badly affected that some people died of starvation. The importance of this study to ours cannot be over - emphasised because it brought out the causes of famine and coping strategies people used when faced with food insecurity. It has, as well elaborated on the fact that colonial policies did not contribute to famine in Zambia. In fact, it appears throughout his work that the colonial period had little if anything to do with famine in Zambia. Siamwiza attributed famine to natural disasters. Our study will critically investigate the reasons why farmers of Sesheke have persisted in maize cultivation to the exclusion of traditional crops bearing in mind that the area under discussion is an arid area as indicated by Siamwiza.

Kenneth Vickery and Samuel Chipungu noted that among the Tonga people of Southern province, there was a tendency towards maize monoculture. Sorghum, millet, various vegetables, cucurbits and root crops declined in relative importance and new varieties of

[43] B. S. Siamwiza, "A History of Famine in Zambia, 1825 – 1949", PhD Thesis, University of Cambridge, 1998, p. vi, 143 and 166.

maize began to displace the older ones. The demand for maize from imperial markets was, assuredly a major, perhaps the primary reason for these shifts, though not the only one. Ploughs appear to have been increasingly adopted, more profitable maize was replacing traditional sorghum, and new techniques were being experimented.[44] These works are significant to our study because they provide an insight into the shifts in agricultural activities which were brought about by new developments such as new crops, new technologies and ready market for certain crops during the colonial period. This study investigates how the change to maize cultivation impacted on traditional crops and food security of the people of Sesheke district.

Muntemba, Maud Shimwaayi's study on rural underdevelopment in Zambia and specifically looking at Kabwe Rural District from 1850 to 1970 is important to our study. He argued that underdevelopment owes its origins to the historical relations between capitalism and the rural economies of Zambia, were capitalism historically comprised: international capital represented by the mining and secondary industries, settler capital and after 1964, national capital consisting of the local bourgeoisie and politicians. Muntemba examined the underdevelopment of Kabwe Rural in the context of capitalism and rural economies. He further explained that the underdevelopment of Kabwe Rural District was directly linked to the producers' inability to raise their productivity. The capitalist success to control African Labour and other means of increasing labour's productiveness undermined productivity in the peasant sector. He also stated that in order to secure a constant flow of sufficient labour, capitalist groups forced rural into subsistence economies by creating Native Reserves. By forcing

[44] P. K. Vickery, "The Making of a Peasantry: Imperialism and the Tonga Plateau Economy, 1890 – 1936," PhD Thesis, Yale University, 1978, p.453, and S. N. Chipungu, *The State, Technology and Peasant Differentiation in Zambia: A Case Study of the Southern Province, 1930 – 1986*, (Lusaka: Historical Association of Zambia, 1988), p. 41.

productive labour out of the rural areas, they undermined labour supplies there; through control over marketing and other agricultural policies, they undercut peasant ability to adopt more productive and labour saving instruments of production.[45] He further noted that in precolonial days sorghum (which also had a higher nutritional value) was the most important grain which gradually took second place to maize and was completely supplanted after 1930.[46] This work has given an insight on the undervelopment of Kabwe Rural and why maize was widely grown in the 1930s displacing sorghum. Our study will examine the impact of the change from sorghum and millet to maize production on the food security of Sesheke district. We feel this was not addressed by the above scholar.

Dorothy Mwansa focused on the aspects of gender and agricultural development in Zambia. She investigated the dynamics of gender in agricultural development in Zambia from the British South Africa (BSAC) occupation of the territory in the 1800 to the first 26 years of the country's independence. Mwansa examined the impact of British South Africa Company and British Colonial Office (Crown government) policies on traditional farming systems of the country. She argued that, traditional gender roles in farming were distorted as a result of the formulation of certain policies by these two administrations.[47] Mwansa further stated that men, women, boys and girls worked side by side in agriculture. She further said that sexual division of labour was cardinal in food production.[48] The importance of this study to ours is that it has shed more light on the colonial policies which affected the gender roles. The study has also shown that

[45] M. S. Muntemba, "Rural Underdevelopment in Zambia: Kabwe, Rural District, 1850-1970", PhD Thesis, University of California, 1977, p. 10.
[46] Muntemba, "Rural Underdevelopment in Zambia", p.146.
[47] D. Mwansa, "Gender and Agricultural Development in Zambia, 1890-1900", PhD Thesis, University of Zambia, 2017, p. 1.
[48] Mwansa, "Gender and Agricultural Development in Zambia", pp.1-2.

complementary division of agricultural roles between males and females played a major part in ensuring food security. In other words there were specific works in agriculture which were done by a particular gender. For instance it was the role of men to clear large areas of land for cultivation. This involved cutting, stumping and lopping of branches. On the other hand, women did weeding, planting and harvesting. Our study pays attention to the agricultural changes in Sesheke district which were brought about by the colonial policies and how they impacted on the food security.

Jadwiga Lunkanty and Adrian Paul Wood discussed agricultural policy in the colonial Zambia. The two have explained on colonial penetration of the territory which began in the last decade of the nineteenth century through a series of treaties between the British South Africa Company (BSAC) and local chiefs. The study has shown that the policies that are affecting agriculture in Zambia today have their origin in the colonial period. The study stated that, the Maize Control Board (MCB) which was established in 1936 confirmed maize as the dominant starch staple for sale, through marketing arrangements, has generally encouraged the production of this crop rather than other staples, and so has helped change urban dwellers' food preferences away from their traditional crops, such as sorghum, millet, or cassava, towards maize.[49] This preference for maize was as the result of the agricultural experience which the settler farmers brought with them. The settlers were familiar with maize than sorghum and millet. The significance of this study to ours in that it has highlighted the government policies which favored the cultivation of maize than the other cereal crops. Our study will discuss the shift from sorghum to maize in detail and the impact it had on the food in the area under study.

[49] Jadwiga. L and A. P. Wood, "Agricultural Policy in the Colonial Period", in A. P. Wood et al (eds.), *The Dynamics of Agricultural Policy and Reform in Zambia*, (Iowa: Iowa University, 1990), p11.

1.7 Conceptual Framework

The concept of food security adopted by this study is based on the definition given by Malambo.[50] Food security, in this study means the ability of a country, regions or households to meet target consumption levels on a yearly basis in the face of fluctuating production, prices and household incomes. Malambo approaches the concept of food security from a broad perspective. He stresses the need by all classes in society to maintain consumption of essential foods at required levels. By so doing, food security is assured. We use his description of food security to determine whether Sesheke was food secure or not during the period under study.

1.8 Research Methodology

This study employed a qualitative methodological approach. The initial phase of data collection involved research in the UNZA Library. The Special Collections section of the library was consulted. We obtained information from dissertations, theses, Northern Rhodesia Annual Reports, Occasional Papers, books, Journals and unpublished sources of information. Documents consulted provided information on the crops that were cultivated in Northern Rhodesia. Dissertations and theses provided works of various scholars on agriculture and food security. This was followed by research at the National Archives of Zambia. Sources which were consulted at NAZ included the following: Sesheke District Notebooks, Annual Reports, Monthly Reports, Secretariat files and Tour Reports. These sources were rich in information on crops which were cultivated by the people of Sesheke district, why they changed to maize cultivation, the farming systems, soil types, number of ploughs people had, market for the farm produce and the

[50] Malambo, "Rural Food Security in Zambia", p.6.

importance of cattle rearing in Sesheke district. The Ministry of Agriculture and Livestock at both Sesheke and Mongu offices provided important books and documents on agriculture in the district. These materials provided detailed information on the crops the people of Sesheke district cultivated.

The last phase of our research involved conducting oral interviews in Sesheke district. We interviewed both male and female respondents. These people provided vital information on the change to maize monoculture and the impact the change had on food security in the area. Among our respondents were peasant farmers who were old enough at the time of Zambia's independence to explain the changes which had taken place in agriculture in Sesheke district.

1.9 Organization of the study

The study is made up of five chapters. Chapter One is the Introduction. Chapter Two discusses traditional crops cultivated in Sesheke district. Chapter Three investigates factors which made the people of Sesheke district to change from sorghum and millet to maize production. Chapter Four examines the impact of the change from sorghum and millet to maize production on food security of the people of Sesheke district. Chapter Five is the conclusion.

CHAPTER TWO

TRADITIONAL FARMING IN SESHEKE DISTRICT OF WESTERN ZAMBIA, 1899-1964

2.1 Introduction

This chapter will first look at the farming systems, types of gardens and soils which made farming possible for the people of Sesheke district. We will also examine the cereals and other crops which were cultivated in the district. The chapter will further examine how roles in agriculture were divided according to gender. One of the important resources the people of Sesheke district depended on in their agricultural enterprise was the soil type. Hence, this chapter will explain in detail how the soil types and farming systems were used by the people of the district to produce a variety of crops.

2.2 Farming systems and types of gardens and soils

According to the Sesheke District Note Book, Trapnell and Clothier in their Report of the Ecological survey of North Western Rhodesia described the agricultural methods practised in Sesheke district as the Southern Kalahari System of which two variations were distinguished, the Southern Kalahari Woodland System and the Southern Kalahari Thicket System. Both were indigenous forms of bush cultivation, which either adopted the plains cultivation, as practiced in the Barotse Plain, or employed some related methods.[1]

[1] National Archives of Zambia (NAZ), 36/3/21, Sesheke District Note Book Vol. 2, 1936-54.

According to Eugene Leone Hermitte, four agricultural systems in the early nineteenth century were practised in Barotseland as follows: Northern Kalahari Woodland System, Southern Kalahari Woodland System, Southern Kalahari Thicket System and the Central Kalahari Plains System.[2] Gardens analogous to the plains were found among the Mashanjo and characteristically, amongst the Masubiya, with whom *Litapa* and *Mazulu* gardens were important. Plain gardens, notably, *Sishanjo* were introduced amongst the Matotela in the northern part of the district. In the narrow stream beds and on the edges of the river valleys were found the thick black peaty soil known as *Sishanjo*, which when drained could produce fine maize and other crops on what were known as *Mikomena* mounds.[3] Except with the Masubiya, bush gardens in the Southern Kalahari System were of primary importance, and were distinguished by bush cultivation of millet as a staple crop. Maize was grown as a second staple crop, where soil permitted.

The Southern Kalahari Woodland System was practised by the Matotela in the northern part of the district with bulrush millet as a main and traditional crop.[4] Maize was also grown where soil was suitable, and was a second staple in parts with millet. To the southeast also lived the Matotela, Toka and Nkoya people who also practised the Southern Kalahari Woodland System. In this system of cultivation, an area could be burned and then cultivated for two or three years, with yearly extensions. It was then left to regenerate completely. The staple crop was bulrush millet, with sorghum being added if the soil was sufficiently fertile. Cow peas, cucurbits, and groundnuts were interplanted with the staple crops. In grassland areas around dambos, groundnuts were sometimes

[2] E. L. Hermitte, "An Economic History of Barotseland, 1800-1940", PhD Thesis, The North Western University, 1973, p.102.
[3] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.
[4] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.

planted separately.[5] Soils were fertile enough in some spots, particularly along rivers, to support maize growing. Usually *Mukomena* (small raised beds of soil) were used for planting maize, and sweet potatoes were grown as subsidiary crops.

The other agricultural method was the Southern Kalahari Thicket System, in which maize was important and was practised amongst the Southern Mashanjo to the west of the Zambezi river, and an offshoot of this system was the thorn system of bulrush millet.[6] Hermitte also noted that to the south and southwest of the district, the Masubiya, Simaa, Shanjo, Mbukushu, and Mashi peoples also practised the Southern Kalahari Thicket System of agriculture. Usually, maize (during the first year), bulrush millet, and sorghum were intercropped on cleared forest land, although they were rotated in the Mashi river area. There was usually one long period of cultivation (of 5 to 7 years) and a rest (of 2 to 4 years), then a further cultivation (of 4 to 6 years), and finally complete regeneration.[7] On the bush plains between the rivers of the Mashi area, the cultivation periods were shorter and the rest longer. The soil was not fertile enough to grow maize except on anthills and other isolated spots of good soil. Throughout this area, subsidiary vegetable gardens were fairly small.

The Thicket System was also practised by the Malozi and Masubiya who cultivated sorghum and maize with bulrush millet in the alluvial sand soils carrying mixed acacia thicket in the south eastern wards.[8] It was in these south eastern wards that Chief Litiya and his army settled in 1896, when they moved from Kazungula, and subsequently most immigrant Malozi, except those indunas representing the paramount chief elsewhere in

[5] Hermitte, "An Economic History of Barotseland, 1800-1940," p.103.
[6] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.
[7] Hermitte, "An Economic History of Barotseland, 1800-1940," p. 103.
[8] NAZ, 36/3/26, Sesheke District Note Book Vol.2, 1936-54.

the district, settled in the area around Mwandi.[9] Litiya was at Kazungula for the purpose of preventing the Matebele from crossing the Zambezi River into Barotseland. He left Kazungula when the threat of the Matebele invasion was removed. Chief Litiya was the one who became paramount chief Yeta III in 1916.[10] Through the years, the south eastern wards (Mwandi area) became overpopulated, over stocked and over worked and the soil suffered accordingly. This led to the loss of the rich granaries in the Masubiya country on the south bank of the Zambezi River.

However, in other parts of Sesheke district, the population was sparse and the villages were scattered along the various streams where there was water. Bush gardens of bulrush millet were of primary importance and with Mawiko immigration, cassava became a staple crop.[11] Eugene Leone Hermitte explained that the Mawiko were immigrants from Angola who caused changes in Barotseland's agricultural system. They first moved to Balovale and northern Kalabo areas before 1920, then after, they moved east and south through Bulozi and Nkoya (now Kaoma) districts towards Sesheke. Wherever they went, they established forest gardens using slash and burn techniques (a place where branches have been cut for a garden) and emphasised cassava.[12] They were called Mawiko (people-of-the-west) by the Malozi because of the way they weaved their hair and sharpened their teeth. *Sishanjo*, *Sitapa* and *Litongo* soils were developed and most villages cultivated maize on these gardens. In other words, the district had ended up with two farming systems; namely the wetland based agricultural system which was practised along the plains and dambo areas and the upland based agricultural system.

[9] NAZ, 36/3/26, Sesheke District Note Book Vol.2, 1936-54.
[10] I. M. Eldridge, "Short History of the Sesheke District," in W.V. Brelsford (ed.), *The Northern Rhodesia Journal* vol. 3, (1956 – 1959) (Northern Rhodesia Society), pp. 174 – 176.
[11] NAZ 36/3/21 Sesheke District Note Book Vol.2, 1936-54.
[12] Hermitte, "An Economic History of Barotseland, 1800-1940," p.309.

The upland system was the major type of agriculture dominant in Sesheke district and it was dependent on rainfall.[13]

The historical experience of Malozi speaking peoples of Barotseland, now Western Province, shows that the highly complex micro-ecological conditions in the flood plain and upland facilitated the evolution of, perhaps the most complex and intense cultivation systems in pre-colonial Zambia. The Lozi people prepared not less than eight different gardens. The people of Sesheke district prepared gardens such as the *Litongo, Sitapa, Sishanjo, Mazulu, Mukomena* and *Matema* gardens**.** *Litongo* were dry margin gardens on sandy ridges within the flood plain. These soils were quite intensively cultivated. They were sub classified as moist and dry *Litongo*. The moist *Litongo*, for instance, were extremely fertile humus rich soils which were kept irrigated by perennial drainage along seepage lines.[14] These soils were heavily cropped with maize, cassava, fruit trees (like pawpaw and pineapples), sugar cane, tobacco and vegetables. The soils were cultivated in perpetuity and fertility was restored through deposition of silt during flooding and through cattle manuring.[15] The moist *Litongo* were small gardens, rarely reaching ½ acre in size, but permanently cultivated. Above this came the dry *Litongo*, on the firm sandy soils of the bush margins, and varying in size from ⅛ to ½ acre. Maize and sorghum were the chief crops, with bulrush millet on the upper part.[16] Often, this garden was manured with village refuse and cattle.

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[13] Republic of Zambia, District Development Coordinating Committee (DDCC): Sesheke District Situation Analysis (DSA), compiled by the DDCC Secretariat Sesheke, 23/03/2003. p.13.
[14] Gear M. Kajoba, "Vulnerability and Resilience of Rural Society in Zambia: From the view point of Land Tenure and Food Security, *"Working Paper on Social – Ecological Resilience Series* No 2008 – 003, March 2008, p. 8.
[15] Kajoba, "Vulnerability and Resilience of Rural Society in Zambia: From the view point of Land Tenure and Food Security," p.8.
[16] M. Gluckman and J.M. Winterbottom (eds.), "Human Problems in Britain Central Africa," *The Rhodes-Livingstone Journal*, 3, (Manchester: Manchester University Press. 1945), p.41.

In addition, *Sitapa* gardens were made on fertile clay soils in depressions where yearly flooding left new deposits of silt. The soil was very fertile, but this positive factor was counteracted by the great danger of flooding in these depressed areas. Thus, although these gardens could support maize as well as sorghum, there was a great risk involved.[17] Therefore, crops had to be harvested before the floods came and were grown on residual moisture and early rains. Soils were easy to till on account of their loamy texture and favourable structure. Furthermore, the soil had a high moisture holding capacity due to a high percentage of humus, high porosity, high percentage of silt and fine sand.[18]

All villages had *Sitapa* gardens on the transitional soil between the *Sishanjo* and the *Mushitu*, and the area could support a considerably increased population, since large areas were available for occupation. According to a Sesheke Tour Report of 1958, all villages except three in Mwandi Kuta, eastern half of Lower Loanja and Mabumbu wards planted *Sitapa* gardens which, given average rainfall would provide the first green mealies in the second half of December.[19] The danger of an early flood posed a threat to the value of the *Sitapa* type of garden, and there was need for a fast maturing grain. In other words, cultivation of the *Sitapa* was uncertain as it depended on residual moisture during seeding, early rainfall for crop growth and timely flooding to allow maturing and harvesting.

Drainage gardens (*Sishanjo*) were another type of gardens. *Sishanjo* cultivation was thought to have been invented by the Kwangwa people on the eastern margin of the Barotse Plain. It was also adopted by other tribes where suitable sites existed and was

[17] Hermitte, "An Economic History of Barotseland, 1800-1940," p.105.
[18] GRZ, Ministry of Agriculture and Co-operatives - Department of Agriculture - Adaptive Research Team Western Province, "Status of agronomy research in the wetland target areas." By Mukelabai Ndiyoi and Willem Heemskerk, Mongu, June, 1989, p.19.
[19] NAZ, BSE1/2/103, Sesheke District Tour Report, 1958.

found in the central loose sands and upland sandy region.[20] These were labour intensive gardens which involved the cultivation of seepage peats found along the dambo margins.[21] The gardens were made by excavating a lattice work or network of deep drainage canals which linked up with the main water courses and man-made canals. The grasses which were cleared and burnt facilitated the growing of heavy crops of maize and sweet potatoes. In 1935, in Lwamuloba area, there were extensive *Sishanjo* gardens and a few potatoes were cultivated.[22] These gardens were also cropped with millet, pulses and cucurbits. The *Sishanjo* gardens were cropped for longer periods. When properly drained, the soils were very productive. On the other hand, improper drainage could result into short growing seasons, shallow rooting conditions and reduction of the area under cultivation. Most villages had small *Sishanjo* gardens, but the only *Sishanjo* canalisation of any size was on the Namakala and Kanyimba streams in the Upper Machile ward, where some three miles of canal were dug in 1951.[23] A government official observed in 1940 that:

> Progress in cultivation of *Sishanjo* gardens was uneven. In some parts, more land was prepared for this system than in the past years, but unfortunately in other parts the people had allowed the canals to be choked with grass. The Balovale in Samakala village – a tribe unused to *Sishanjo* gardens – were gradually learning this method of cultivation, though cassava grew better in the forest gardens. Sakakuwa's people, who were sent by the paramount chief to hoe *Sishanjo* gardens on the Sonso River, had neglected them for years. Sakakuwa was urged to bring these gardens into use again in the season.[24]

[20] NAZ, MAG 2/ 9/10 - D. U. Peters Report: Survey of agriculture on Barotseland, 1951.
[21] Kajoba, "Vulnerability and Resilience of Rural Society in Zambia: From the view point of Land Tenure and Food Security," p.8.
[22] NAZ, SEC 2/558, Sesheke District Tour Report no.5, 1935.
[23] NAZ 36/3/21 Sesheke District Note Book Vol.2, 1936-54.
[24] NAZ, MAG 2/5/9, Sesheke District Tour Report no.14, 1940.

It was reported in 1940 that the Provincial Commissioner of Barotseland was pleased to note the success of the campaign for the cultivation of *Sishanjo* gardens in Sesheke district.[25] Planting in *Sishanjo* gardens before the on-set of the rains allowed crops to be reaped much sooner than when planted in the ordinary bush gardens.

There were also mound gardens (*Mazulu*). *Mazulu (plural)* refers to gardens that were prepared on mounds or anti-hills that occasionally occur in the Barotse plain.These provided the most prized gardens and the only practicable site for building. Since their number in relation to the population was strictly limited, they were highly valued.[26] The two most important gardens used on the floor of the flood plain and the rivers to the west were *Lizulu (singular)* and *Mukomena*, which made use of mounds to overcome the chief dangers of flooding and water logging. *Lizulu* refers to gardens on large natural elevations, principally ant-hills, and alluvial banks.[27] These were quite fertile, and with manuring, could be planted with maize, sorghum, and other crops in perpetuity. The *Lizulu* were the safest places in the flood plain. They were also important for cattle kraaling. Nevertheless, it should be noted that despite their elevation, these gardens often suffered from flooding. Thus, economic uncertainty was part of the way of life of the people of Sesheke in the early twentieth century.

Mukomena gardens consisted of beds created by hoeing, and were not associated with geographic features as much as *Lizulu*. They were made in moist areas just below *Sishanjo* gardens, around *Lizulu* sites and on dambo grasslands. The small mounds, about 1½ feet high and 6 by 20 feet in area, were created by using the soil from a

[25] NAZ, MAG2/5/9, Sesheke District Tour Report no.20, 1940.
[26] Kajoba, "Vulnerability and Resilience of Rural Society in Zambia: From the view point of Land Tenure and Food Security," p.8.
[27] Hermitte, "An Economic History of Barotseland, 1800-1940," p. 106.

surrounding trench.[28] The resulting mound was fertile because of the fresh soil and was properly drained by the trench. The most typical crop was the sweet potato, but other potatoes (such as *Sikuswani* and *Mang'alwe*) were also planted.

Mukomena (singular) and Mikomena (plural) gardens were subdivided into dry and moist *Mukomena*. The dry *Mukomena* were found throughout Central Barotseland. These were raised beds that were used for root crops, especially sweet potatoes. The moist *Mukomena* was prepared in the perennially moist humic sands. Two crops a year were obtained due to the continuous availability of moisture. Maize and sweet potatoes were alternated.[29]

According to the Sesheke District Note book of 1936-54, it was reported that in many places signs of old *Mikomena* mounds, probably dating back to the slave days, could still be seen along the Loanja, and a certain amount of development had been done along the valley edge. There was, however, room for an enormous amount of development along the main valley edges though this would entail a large system of canalisation, as it would probably be necessary to dig a wide main canal with side canals to drain off the annual flood and prevent it from ruining the *Mikomena* mounds. However, if maize was planted in September it would normally be reaped before the flood rose in January or February[30]

The other type of gardens was called the *Matema* gardens which were dry land gardens outside valleys, flood plains and dambos. These were upland gardens in which the forest and thickets were cleared with a greater emphasis on the cultivation of cassava and

[28] Hermitte, "An Economic History of Barotseland, 1800-1940," p. 106.
[29] Kajoba, "Vulnerability and Resilience of Rural Society in Zambia: From the view point of Land Tenure and Food Security," p.8.

[30] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.

bulrush millet. These systems of intensive cultivation that were practised by the Lozi on the Zambezi flood plain and on the upland made it possible for the cultivators to grow a wide variety of crops on a permanent basis. This contributed to ensuring relative food security. Fields were cultivated for about five years, followed by a long fallow period.[31]

To a great extent, the practice of these food production systems that facilitated continuous cultivation systems was sustainable and resilient as the communities enjoyed relative food security. When David Livingstone visited the Barotse Plain in 1853, he was quite impressed with the status of food security of the Lozi peoples. He observed that agro-ecological conditions in the present day Western Province were suitable and supported a wide variety of crops that included maize, millet, sorghum, cassava, sweet potatoes, beans, groundnuts, yams, melons and sugarcane.[32] He commented that the soil was extremely fertile and the people were never in want of grain, for by taking advantage of the moisture of the inundation, they could raise two crops a year.

In Sesheke district, different types of soil were found. There were the low and sand ridges, stretching northwards between the river valleys. These were undifferentiated Kalahari sands with low moisture content. Cassava did well, and millet and sorghum were grown with fair success.[33] The alluvial flood plain covered the south eastern corner of the district in the Machili basin, and in the adjoining areas of the Katongo and Simungoma wards. Maize and sorghum were the main crops, and the Central Kalahari Plains System of agriculture was practised.

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[31] Kajoba, "Vulnerability and Resilience of Rural Society in Zambia: From the view point of Land Tenure and Food Security," p.8.
[32] D. Livingstone, *Missionary Travels and Researches in South Africa* (London: Clowes & Sons, 1857), p.220.
[33] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.

The transitional sands covered approximately 1000 square miles in the southern part of the district on the eastern bank of the Zambezi River. The belt extended from Katima Mulilo to Mulobezi and there was a small strip on the Upper Njoko in the Kataba Forest. The vegetation was dominated by the Baikiaea Plurijuga or Rhodesian teak forests, which were known locally as *Mukusi Mutemwa*.[34] The transitional sands on which this type of vegetation was found generally allowed the cultivation of maize as well as bulrush millet under the Southern Kalahari Thicket System of agriculture.

Grey alluvial clays were found bounding the Machili basin and the Rhodesian teak in the Sankolonga ward. These unimportant clay deposits were largely left uncultivated and though they contained useful hardwood timbers, intact trees of sufficient size for commercial exploitation were rarely found. The small Sesheke flood plain extended from the Zambezi up the Machili River, and had a clay base carrying Mopani woodland. Similar but even smaller tracts were found along the Cuando (Mashi) River and various tributaries just north of Sesheke. These clay soils were agriculturally useless.[35]

The sandy soils in the district with their low moisture content made the growing of crops difficult and hazardous and it was only in a year of high and consistent rainfall that good crops were assured. However, the fuller development of the heavy black seepage soils found in narrow stream beds and on the edges of river valleys for maize and the growing of cassava as a famine crop in woodland areas eliminated the risk of widespread crop failure even in the worst year.[36] It is important to mention that agricultural practice was dependent on the type of soil and weather conditions.

[34] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.
[35] Hermitte, "An Economic History of Barotseland, 1800-1940," p. 77.
[36] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.

2.3 Cereal crops

The cereal crops that were cultivated by people of Sesheke district were sorghum, bulrush millet, finger millet and maize.

2.3.1 Sorghum (Sorghum bicolor)

Sorghum was one of the oldest, if not the oldest crop in the region. A sorghum variety referred to as *Makonga* was apparently the oldest, although the present *Makonga* might be somewhat different. It used to be a variety with big white grains and a semi compact head.[37] Due to its white grains and late maturity, it was very susceptible to attacks from birds. Sorghum was the most important cereal. Legends spoke of sorghum as the original food grain and it was the royal staple. The Kololo introduced two new varieties of sorghum (*Maelepu*) and *Munanana* but the white sorghum (*Makonga*) was the most common. According to Gwythian Isaac Thomas Prins, sorghum was seen in tribute brought to Sipopa, leader of the Kololo at Sesheke in 1864 and from the Totela of the Njoko River to Lewanika, the Lozi king twenty years later.[38] E.C. Tabler, also explained that between 1885 and 1888, George Westbeech travelled in Barotseland, and he indicated in his diary that at Sesheke, he found women pounding sorghum and maize in order to make coarse meal.[39] Sorghum was grown as an annual crop and normally sown quite late in January and harvested late towards the end of June.

The other varieties of sorghum which were grown in the outer plain were *Maelepu* and *Nalunyaze*. *Makonga*, *Nalunyaze* and *Maelepu* were collectively known as *Mabele*.

[37] GRZ, Ministry of Agriculture and Co-operatives-Department of Agriculture-Adaptive Research Planning Team, Western Province, 1989, pp.35-36.
[38] G. I. Prins, "Bulozi during the period of primary European contact, 1876-1896", PhD Thesis, The University of Cambridge, 1978, pp.2-3.
[39] E. C. Tabler (ed.), *Trade Travel in Early Barotseland* (London: Chatto & Windus, 1963), p.78.

Maelepu and *Nalunyaze* were both red; the grain of *Nalunyaze* was smaller than the grain of *Maelepu*. The *Makonga* was the biggest of the three varieties.[40] The flour of all these three varieties of *Mabele* was white regardless of whether or not the grain was red. The advantage of growing sorghum compared to most other crops was that it could withstand pests during storage. This crop was promoted especially in drought prone areas since it was a drought tolerant crop. Hence, the growing of sorghum could help improve food security in areas where drought and short rain periods were frequent.

Sorghum was principally a subsistence crop which could withstand the marginal conditions of poor soils and rainfall. It was a popular grain for village beer brewing, and indeed it was this characteristic that offered sorghum a place in commercial agriculture.[41] The beer made from sorghum was particularly rich in vitamin B. According to Henry Kangowa, a Sesheke peasant farmer, beer which was made from sorghum and millet was mild and it was considered as food.[42] The sorghum meal was also prepared into nshima (thick porridge). Stalks were often used as building, bedding, and fencing material. The stalks were also used to build granaries to store the variety of the grain crops harvested.

The major problems in sorghum production however were seed quality and bird attack. Out-crossing with wild sorghums caused degenerated plants *(Mufuka*), which had several heads per stem with small black grains. The earlier maturing varieties and the red

[40] N. Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi area, 1890-1924", M A Dissertation, University of Zambia, 1989, p.68.
[41] C. S. Lombard and A. H. C. Tweedie, *Agriculture in Zambia since Independence* (Lusaka: Neczam, 1972), p.37.
[42] Interview, Henry Kangowa (Sesheke Peasant Farmer), Silubu Village, Sesheke District, 20/05/2014.

seeded varieties could partially escape birds. These earlier varieties would, however, be easily attacked by moulds as they matured during the rainy period.[43]

2.3.2 Bulrush millet (Pennisetum typhoides)

According to Prins, Millet-*Mauza* (Lozi) and *Mangu* (Luyana) were also known as old crops grown in bush soils and wet soils in Buloziland.[44] Ndiyoi Mukelabai and Willem Heemskerk explained that bulrush millet was introduced in the early nineteenth century by the Mbunda people from the west. These people settled on both the west and east side of the flood plain and grew crops like bulrush millet and cassava on the sandy *Matema* soils.[45] Genetic variability of the crop in Western Province was low although several local varieties existed with different characteristics like the bristled type which was less attacked by birds. The crop was mostly grown at random by hoe on dry *Litongo* and *Matema* gardens, but could occasionally be found on *Saana*, *Mazulu* and plains *Litongo*. Normally, the crop was dry-seeded before the start of the rains in September and harvested in February. In the wet *Litongo,* it was sometimes sown even earlier.

Bulrush millet was one of the main staple foods which were cultivated by the people of Sesheke and it was used for Nshima. It was also used to prepare beer and was kept for seed.[46] In the upland area, millet was a staple crop. On the plain edge, it was grown by farmers with other garden types. Millet was often grown for malting purposes. Millet was normally stored unthreshed with its panicle. It was normally kept in the storage huts which stood from the ground on poles. These rounded huts were made from grass or

[43] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.36.
[44] Prins, "Bulozi during the period of primary European contact, 1876-1896", p.77.
[45] GRZ, Adaptive Research Planning Team, Western Province, p.37.
[46] Farm Data Hand Book: Crop and Livestock Budgets Region 1, Zambia - Agricultural Services Division, Food and Agriculture Organization of the United Nations, Rome, Italy, 1990, p.37.

millet stems. The crop was all consumed and only what was to be used for seed was retained. The crop did well in a wide range of soils and also under conditions of low rainfall. Millet was seldom grown as a source of cash.

2.3.3 Finger millet (Eleusine coracana)

It is believed that sorghum and finger millet must have been developed at the same time. Finger millet was one of the oldest African cereal crops. Finger millet was very drought resistant, but also tolerant to water logging; like sorghum, it could be transplanted.[47] Finger millet was called *Lukesha* in Lozi and *Luku* in Luyana. This crop was considered to be one of the oldest crops in the region and could have been brought by the Luyana ethnic group in the 17th century.[48] The varieties which were found in the flood plains were those adapted to wet systems. This water resisting crop was grown in the *Sishanjo* and wet *Litongo* and sometimes on *Mukomena*. The crop was grown from August until January, but sometimes was harvested as late as March (150-180 days). Finger millet was mostly used for malting purposes and beer brewing. It was an excellent crop for waterlogged areas. It was also an important subsistence crop in the higher rainfall areas and production was reported as normal and adequate for subsistence requirements.[49] In 1947 Mr. R. H. Fraser who was the Senior Agricultural Officer for Western Province was sent to Sesheke to make a preliminary survey of the agricultural conditions which necessitated famine relief in the district. One of the areas he visited was Mwandi. The

[47] H. Doggett," Cereal Production Needs and Achievements" in D. L. Hawksworth (ed.), *Advancing Agricultural Production in Africa : Proceedings of CAB'S First Scientific Conference Arusha, Tanzania* (London; Commonwealth Agricultural Bureaux, 12-18 February), 1984, p.51.
[48] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.37.
[49] Northern Rhodesian Government, *Annual Report of the Ministry of Agriculture including reports of the Department of Agriculture and Co-operatives and African Marketing* (Lusaka, Government Printer, 1962), p.2.

staple crop of the famine area was finger millet and Fraser found the grain bins of Mwandi village well stocked with it and people were making beer out of finger millet.[50]

2.3.4 Maize (Zea mays)

Prins explained that maize was introduced in Bulozi early enough to have acquired a distinct Luyana name *Mundale* and *Mbonyi* in Lozi and certainly before Livingstone.[51] Maize was introduced into Western Province around 1800 by the Portuguese and other traders from the West-coast of Africa. The crop gradually became important. In 1853, David Livingstone found that maize was already widely cultivated in Western Province.[52] Maize had the advantage of being grown on residual moisture and harvested very early to eat as green cobs in the hunger period of December – January or even earlier. It could also be harvested before the floods and it opened up the *Sitapa* gardens as a potential for agricultural production. Two main groups of varieties were recognised in the 1950s as early flint varieties and late maturing white dent varieties.[53] The early flint varieties were mostly grown on residual moisture in *Sitapa* and wet *Litongo* gardens and harvested before the rise of the floods in December or early January. The black, yellow and white grained flint varieties were widely grown in the Upper Zambezi area. These varieties were often eaten as green cobs to provide early food.

Late maturing white dent varieties, such as Hickory King and Salisbury White performed well under rain-fed conditions. They also did well in manure sites like dry *Litongo* and *Mazulu*. Ndiyoi Mukelabai and Heemskerk in 1989 explained that the old early maturing flint varieties had mostly disappeared in the Western Province and were

[50] NAZ, BSE 1/10/14, Sesheke District Tour Report no.7, 1947.
[51] Prins, "Bulozi during the period of primary European contact, 1876-1896", p.77.
[52] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.31.
[53] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.31.

replaced by higher yielding semi-dent varieties.[54] Maize was planted throughout the year. As soon as *Sitapa* and *Lutunda* gardens dried up, farmers would start planting maize, normally in June. *Sishanjo* gardens were planted in August; normally burning of some peat was done in order to release nutrients. The fertile *Mazulu* were sown in October or November just before the onset of the rainy season. The sandy dry *Litongo* were marginal for maize, but could sometimes be sown in January. All the different garden types needed different maize varieties.

Since maize was grown throughout the year in the wetland systems, there was a potential danger for development of pests and diseases over the years. In practice, the cold season, with occasional frosts was probably a protection against this. Early maize planted in August/September was reported to escape streak virus, which was found in maize as early as December.[55] Kalobolelwa was the main maize producing area in Sesheke district, with considerable quantities being produced in the Kaliki *Sishanjo* and in *Sitapa* gardens.[56]

2.4 Subsidiary crops

Groundnuts were one of the non-cereal crops which were cultivated by the people under discussion. A 1939 Sesheke Tour Report indicated that in the southern upper Loanja area, people were specialised in groundnuts cultivation.[57] In the Lusu area, a scheme was introduced in 1951 to stimulate groundnuts production as a cash crop.[58] In the upper Zambezi ward groundnuts production increased greatly between 1951 and 1953, and 100

[54] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.31.
[55] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.32.
[56] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.
[57] NAZ, MAG 2/5/9, Sesheke District Tour Report no.2, 1939.
[58] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.

bags were purchased in 1953.[59] In 1954, groundnuts were cultivated extensively on the firmer bush soils of Sesheke and a fair crop was harvested, and surpluses marketed at Mulobezi and Livingstone.[60]

This crop was grown on dry *Litongo* and on *Matema* gardens, mainly during the first year of the rotation. Groundnuts were sown early depending on the variety, but large seeded varieties were sown before the rains started.[61] Groundnuts were established on virgin land, whenever possible just after clearing and burning. Apparently, groundnuts adapted very well to poor soils. They were sown on flat land. The major constraints to the cultivation of groundnuts were the soil fertility and termites. Groundnuts were also affected by pests and diseases. Rosette disease was universal and in certain areas, mineral deficiency symptoms were quite common. However, nematodes could be avoided through crop rotation. The demand for groundnuts was very high because it was a multi-purpose crop. The crop was good for relish. Groundnuts were often mixed with cereals, but could be found in pure stands on small plots. The reason why it was grown alone was for easy harvesting.

The other crop was Bambara groundnuts called *Lituu* in Lozi. The crop was one of the oldest in Western Province, since it was a typical African crop. It was especially suited for poor sandy areas and was not early maturing due to its photo-period sensitivity. The crop, in general was very popular with people of Angolan origin such as the Mbunda.[62] Varieties which were grown were mostly the white seeded type with a black eye around the helium. Red and black seeded types were also cultivated. The crop was grown from

[59] NAZ, 36/3/21, Sesheke District Note Book Vol.2, 1936-54.
[60] NAZ, MAG 2/5/49, Barotseland, Annual Report of the Department of Agriculture for the year 1954.
[61] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.39.
[62] GRZ, Adaptive Research Planning Team, Western Province, 1989, p.39.

September/October until harvesting in March. Bambara groundnuts were grown on small dry *Matongo* sites. They were also grown on *Matema*. It was very sensitive to acidic soils and phosphate deficiency.

Another crop cultivated by the people of Sesheke district was cassava. Cassava was important as a famine crop. It had obvious advantages in an area of uncertain rainfall. In 1932, a touring officer in the district explained to the people of Loazamba and Lower Machile native districts once again on the value of root crops such as cassava which they had been advised to cultivate for years past.[63] It was reported in 1933, in the Zambezi, Katongo and Mushe native districts, mealies, bulrush millet and cassava were the main crops in the order given.[64] In order to encourage the cultivation of cassava in Mabumbu ward, the government issued quite a lot of cassava plants in 1947 to the people of the area for planting.[65] According to the Sesheke Tour Report of 1958, villages belonging to Simungoma and Katongo wards agreed to resume or start growing cassava as a famine stand-by crop.[66] However, by 1961 very little cassava was grown in Simungoma. Instead, there were extensive maize gardens all over the ward.[67] In the same year, in Lower Loanja ward, the campaign to encourage cassava as a reserve crop failed chiefly owing to the depredations of wild pigs and other animals which came from the forest reserve.[68] There were certain groups of people who were associated with cassava growing. With the high percentage of Mawiko in Lwamuloba and Kamanga wards, the

[63] NAZ, SEC 2/557, Sesheke Tour Report no.1, 1932.
[64] NAZ, SEC 2/558, Sesheke Tour Report no.1, 1933.
[65] NAZ, BSE 1/10/14, Sesheke District Tour Report no.11, 1948.
[66] NAZ, BSE 1/2/103, Sesheke District Tour Report no.7, 1958.
[67] NAZ, SEC 2/574, Sesheke District Tour Report – Barotseland Protectorate no.1, 1961.
[68] NAZ, SEC 2/574, Sesheke District Tour Report – Barotseland Protectorate no.4, 1961.

staple crop was cassava.[69] Cassava was grown freely in the north and north east of the district as well as in the forest from Loanja to Katima Mulilo.

Two garden types were used for cassava production. More dominantly used were the bush fields or *Matema* and *Litongo* fields. The *Litema* garden in sandy soils was formerly cultivated only by the Mbunda and other western tribes, either on their own account or as slaves, for the Malozi. Cassava was the chief crop, with bulrush millet as an important subsidiary.[70] The *Litema* garden was cultivated for five years and then left for a period varying according to the pressure of population from five, ten, twenty to even thirty years. The *Matema* gardens were prepared upland in cleared forests and thickets, with greater emphasis on the cultivation of cassava.[71] This contributed to ensuring relative food security. In the seepage zone, besides the dry *Litongo*, sometimes wet *Litongo*, *Sishanjo* and *Mataba* were used for cassava production. Cassava tubers could be processed into cassava meal. Tubers could also be eaten fresh or roasted. Leaves were cooked as relish. It is important to mention that cassava was mainly grown to help in times of hunger when other crops failed. However, not everyone cultivated it.

The other crop which was cultivated by the people of Seshseke was beans. In Loazamba and Lower Machile native districts, a very good crop of beans was reaped in 1932.[72] Furthermore, in 1957 in Western Machile wards, beans was grown, but in insignificant quantities.[73] Beans was not a major crop in the Lozi farming systems. It was considered as a minor crop and was grown in small quantities. However, it did contribute to the

[69] NAZ, BSE1/2/103, Sesheke District Tour Report no.12, 1958.
[70] Gluckman and Winterbottom (eds.), "Human Problems in Britain Central Africa", p.41.
[71] Kajoba, "Vulnerability and Resilience of Rural Society in Zambia: From the view point of Land Tenure and Food Security," p .8.
[72] NAZ, SEC 2/557, Sesheke District Tour Report no.1, 1932.
[73] NAZ, BSE 1/2/88, Sesheke District Tour Report no.7, 1957.

protein requirements of the people when consumed. In rotation with cereals, beans improved soil fertility. All the beans cultivated by the people under discussion was consumed by the family. Beans and crops such as groundnuts were grown commonly as relish crops in Sesheke district.[74] However, some were retained as seed for the next farming season. Beans was stored in the storage huts which contained cereal crops.

Lastly, rice was also grown in Sesheke district though in small quantities. In 1940, a 'Muluvale' (a person belonging to the Luvale tribe) near the Nawinda Kuta had successfully grown a rice crop on the Njoko river and the District Commissioner advised other people on the Njoko to plant rice and assured them of a market both at Lilonga and Sesheke.[75] In 1948, the planting of rice in *Sishanjo* gardens in Sesheke district was begun by Mr. Bourne, the Agricultural Officer to counter the famine of 1947.[76] It was reported in 1949 that two villages on the Lwamuloba were growing rice in small quantities.[77] It was reported in 1960, that rice seed was being sold in the Mabumbu ward by an Agricultural Assistant. It was hoped that the crop would become a remunerative staple crop in the area.[78] In 1963, Mr. George Mabenga a Kuta Clerk had an excellent garden for rice of 30 plots (18 yards x 21 yards) at Siamunyemu village on the Luamuloba. His sister, Mrs. Orosho Kabanda and another man Antonio of Kabeta village also had rice gardens on the Luamuloba and it grew well.[79]

[74] NAZ, 36/3/21, Sesheke District Note Book vol.2, 1936-54.
[75] NAZ, MAG 2/5/9, Sesheke District Tour Report no.14, 1940.
[76] NAZ, BSE1/10/14, Sesheke District Tour Report no.3, 1948.
[77] NAZ, BSE 1/10/14, Sesheke District Tour Report no.3, 1949.
[78] NAZ, SEC 2/ 573, Sesheke District Tour Report no. 14, 1960.
[79] NAZ, BSE 1/2/128, Sesheke Tour Report no. 4, 1963.

2.5 Division of labour and Labour Migration

There were distinct differences in agricultural tasks performed by men and women: whereas men did the clearing and ploughing, women were mostly responsible for planting, weeding (hand hoeing) and harvesting. Children also participated in agriculture through bird scaring and other tasks assigned to them mainly by women. Mwansa explained how the division of labour was engaged in Barotseland's agricultural systems. She stated that:

> male labour was used primarily for opening canals and digging ditches. These were complex activities that could not be done by women. In the *matema* fields there was a lot of cutting, stumping and lopping of branches. Like in the 'slash and burn' method of cultivation, this was a specialised task which only men could perform. The Lozi women actively participated in farm activities like weeding, planting and harvesting.[80]

Furthermore, Mwansa explained that, in all the country's ethnic groups, boys and girls also participated in the agricultural activities. Girls helped out women with weeding and harvesting while boys were assigned tasks of scaring away birds and other marauding animals. In certain instances they also helped out with weeding and harvesting.[81]

The introduction of tax in Northern Rhodesia by the British government at the beginning of the twentieth century forced some men to go into migrant labour. In the North – Western Rhodesia, tax was fixed at one pound in 1902. The need to raise money for tax made the men-folk to look for job opportunities in the mines of Southern Rhodesia, Katanga and South Africa.[82] Though some men went out for work as migrant labourers, the agricultural activities which they performed needed to be done. According to

[80] D. Mwansa, "Gender and Agricultural Development in Zambia, 1890-1900", PhD Thesis, University of Zambia, 2017, p. 10.
[81] Mwansa, "Gender and Agricultural Development in Zambia, 1890-1900", p.10.
[82] Mwansa, "Gender and Agricultural Development in Zambia, 1890-1900", p.45.

Hermitte, the most important reason why agricultural production in Barotseland did not suffer from the negative effects of labour migration was that, women did most of the work in the traditional system, whether on the plains or in the forests. Men were primarily needed for just two purposes; cutting trees in the forests, and maintaining drainage canals in seepage zones.[83] Nevertheless, there was need for a large amount of male labour when trees and bush had to be cut and burnt. The main device used by women to meet the increased demand for labour, was to organise what was called *Lubile*. *Lubile* (big working combinations) was a form of hired labour paid for in kind, namely beer. *Lubile*, as a form of payment for labour was legalised by the 1914 'Proclamation on Kaffir Beer'. The Proclamation stated that, any person employing local Africans for manual labour could brew traditional beer and supply the same to the natives.[84] Some women who received money from their husbands used it to purchase millet, malted it and brewed beer for the purpose of *Lubile*. Hermitte further explained that with the absence of some men on migratory labour, any man could help his neighbour's wife through *Lubile*. Payment was also made for individual labour in form of money. In fact, if the man did not send his wife money and she was unable to make beer for *Lubile* groups, she could divorce her husband.[85] Therefore, it can be said that certain measures were put in place to cover up for those men who could have gone outside the territory to work.

Chondoka's study on the Senga people of Chama district in the North-Eastern Zambia shows that strategies were employed by women of migrant labourers to reduce their

[83] Hermitte, "An Economic History of Barotseland, 1800-1940", p. 275.
[84] K. Mboma, "The changing role of women in agriculture: A Study of Kalabo District, 1906-1986", M.A. Dissertation, University of Zambia, 1991, p.37.
[85] Hermitte, "An Economic History of Barotseland, 1800-1940", p. 276.

burden. One of which was to increase cooperative work groups through the Food-for work festivals. This was primarily to solicit male labour to perform tasks that were difficult for women.[86]

In contrast to other districts, in Sesheke most of the men worked within the territory and only a few went out for work in other territories. This made it possible for the majority of them to return to their villages and engage in farming. In 1926, 61 villages were visited in Sesheke district and it was observed that only a few men went out for work. Many people were selling produce which seemed to be a more desirable way of obtaining money to pay tax.[87] In 1928, 60 villages were visited and the number of able bodied males was 668. The number of those who went outside the territory for work was 31, while those at work within the territory were 194. Of the 194, the great majority were employed by the Timber Company at Livingstone. Those who were present were 443.[88] In 1929, 66 villages were toured in Mabumbu and Sankolonga native districts. The number of able bodied males was 748 and those at work outside the territory were 36. Those who were at work within the territory were 228 and the majority in this category were employed by the Timber Company at Livingstone. The number which was present in the district was 464.[89] A report of 1933 stated that the number of able bodied men in Zambezi, Katongo and Mashe native districts was 861, those who were at work within the territory were 189, those outside the territory were 55 and those not at

[86] Y.A. Chondoka, "Labour Migration and Rural Transformation in Chama District, NorthEastern Zambia, 1890-1964", PhD Thesis, University of Toronto, 1992, p. 100.
[87] NAZ, KDE 8/2/6, Sesheke Tour Report no. 3, 1926.
[88] NAZ, KDE 8/2/6, Reports of Journey's made by Mr. R.O. Ingram, Assistant Magistrate of Sesheke District, 1928.
[89] KD E8/2/6, Report of Tour made by Mr. John Gaunt, of Mabumbu and Sankolonga native Districts, Sesheke, 1929.

work were 617. People in these areas did not go to work if they could possibly avoid it, preferring rather to fish or hunt and thus obtain money for their tax and other wants.[90]

However, from the 1930s the majority of Sesheke residents got employment with the Zambezi Sawmills Company (ZSM) when it began its operation in the district.[91] Hence, the company helped to reduce further the number of those who went outside the district to seek employment. In 1948, in villages such as Lower Loanja, Sankolonga and Upper Machile, there were 890 men to 1189 women, and the general adequacy of food indicated sufficient agricultural manpower.[92] In 1950, many of those who had gone to work on the line of rail from Sesheke returned to their villages to prepare their gardens.[93] Hence, labour migration did not have a serious impact on the division of labour.

Women realised the need to enhance their role in production by engaging the labour of non-family members through *Lubile*. In some cases, those hired or participating in *Lubile* provided their own hoes. This was a mitigating factor in the case where an organiser of *Lubile* could not provide enough hoes. Women who could organise *Lubile* did lighten their agricultural tasks to a great extent.[94]

Hermitte pointed out that it was only after 1924 when the plough became more wide spread in Barotseland that the division of labour and agricultural techniques had to change. It then became even easier to compensate for the loss of men.[95] The introduction of the plough added a new agricultural task to men because ploughs were mainly used

[90] NAZ, SEC 2/558-Secretariate File no.19/NAT/5/4,1933.
[91] Hermitte, "An Economic History of Barotseland, 1800-1940", p. 268.
[92] NAZ, BSE 1/10/14, Sesheke District Tour Report no.12, 1948.
[93] NAZ, BSE 1/2/15, Sesheke District Tour Report no.7, 1950.

[94] Mboma, "The changing role of women in agriculture: A Study of Kalabo District, 1906-1986", pp.37-44.
[95] Hermitte, "An Economic History of Barotseland, 1800-1940", p. 276.

by men. Ploughs enabled people to cultivate larger pieces of land. *Lubile* was also organised for ploughing purposes by those without ploughs. It is important therefore, to point out that the contribution of both women and men in agriculture was very important in ensuring food security. This was evidenced by the fact that, if one's husband was absent for work, the wife of that particular man would depend on the labour of the men present in the village.

2.6 Conclusion

The chapter has examined the farming systems and types of gardens which existed in Sesheke district. Furthermore, the chapter discussed the different crops that were cultivated in the district. The chapter has shown that cereal crops such as sorghum, millet and maize were very important in the farming system of the district because they were the staple crops. It has also demonstrated that other crops such as cassava, groundnuts, beans, Bambara groundnuts and rice were cultivated by the people of Sesheke district. The chapter has also discussed the division of labour of the people in the district. The chapter has pointed out that labour migration did not pose a serious threat to the people of Sesheke district in the area of agriculture because few people worked outside the territory and measures were employed so that the men who were present did the work and they were paid either through *Lubile* or payment in monetary terms. In the next chapter we shall investigate the factors which made the people of Sesheke district change from sorghum and millet to maize cultivation.

CHAPTER THREE

FACTORS WHICH MADE PEOPLE CHANGE FROM SORGHUM AND MILLET TO MAIZE PRODUCTION

3.1 Introduction

This chapter investigates factors which made people of Sesheke district to change from sorghum and millet to maize production. In discussing this change, the chapter has noted that the people of Sesheke district did not shift from sorghum and millet to maize cultivation at once. Rather, the change was gradual to an extent that even on the eve of independence, a considerable number of people in the district were still growing sorghum and millet. Therefore, it was not the entire population which shifted completely to growing maize. The chapter further argues that maize was grown alongside sorghum and millet after it was introduced in Sesheke district. The chapter also demonstrates that the significant change from sorghum and millet to maize production started in the 1950s.

3.2 The adoption of maize

Sorghum and millet were the predominant cereals over most of Africa before the introduction and widespread cultivation of maize.[1] Maize, as indicated in the previous chapter was introduced in Western Province by the Portuguese around 1800 and it was cultivated with other cereal crops such as sorghum and millet. Gwythian Isaac Thomas Prins observed that immediately after the political turbulence of 1884 - 5, (this was the revolt against Lewanika in 1884 and Tatila Akufuna was put on the throne. However,

[1] D. H. Andrews, L. K. Mughogho and S. L. Ball, "Sorghum and Pear Millet Production in Africa: Problems and Prospects with new varieties," in D. L. Hawksworth (ed.) *Advancing Agricultural Production : proceeding of Cab's First Scientific Conference Arusha, Tanzania* (London : Commonwealth Agricultural Bureaux, 12-18 February, 1984), p.86

Lewanika was reinstated to the throne in 1885), people at Sesheke, one of the foci of unrest, were seen replanting cassava, beans, sweet potatoes, sorghum and maize in drained soil and millets on the sand.[2] These crops were important in the farming systems of the people of Sesheke district because of the role they played in ensuring food security of the area. In 1932, in Loazamba area, the food supply was adequate with a single exception of the village of Kabale and Mutelalizuko. A good crop of sorghum, groundnuts and beans was reaped but the drought which came from the 22nd December to 13th January spoiled the record crop of millet.[3] A Tour Report of 1933 explained that in the Zambezi, Katongo and Mashe Native districts, maize, millet and cassava were the main crops in the order given.[4] A 1939 Sesheke Tour Report indicated that crops of all kinds were abundant in the Upper Zambezi and Mashanjo and the available surplus was sold at prices below those of the previous year. However, the Katongo area experienced too heavy a rainfall for the millet crop and as usual was relying on the maize producing areas for its requirements.[5] In the same year, the maize gardens which were planted on the *Sishanjo* system in the Kanyimba valley provided a really fine sight.[6]

A government official noted in 1940, that the millet crop in the district withstood the comparative drought and hot sun of January and in parts almost ready for reaping, while in the Sanembo valley the people were already eating their maize crop.[7] It was observed in a Tour Report of 1946 that there was no cultivation whatsoever except for maize, sorghum and finger-millet in Sesheke district. In many cases, sandy hill-sides which

[2] G. I. Prins, "Bulozi during the period of primary European contact, 1876 – 1896," PhD Thesis, University of Cambridge, 1978, p.77.
[3] National Archives of Zambia (NAZ), SEC2/557, Sesheke Tour Report no.1, 1932.
[4] NAZ, SEC 2/558, Sesheke Tour Report no.1, 1933.
[5] NAZ, MAG 2/5/9, Sesheke Tour Report no. 3, 1939.
[6] NAZ, MAG 2/5/9, Sesheke Tour Report no.1, 1939.
[7] NAZ, BSE 1/10/14, Sesheke Tour Report no.2, 1940.

appeared suitable for cassava cropping were being sown with maize for the fourth or fifth year running.[8] In 1947, 59 villages that were visited which consisted of inhabitants of mixed Totela, Nkoya, Luchazi and Luvale origin were relying primarily on the cultivation of cassava, finger millet and a fair quantity of sorghum.[9] On 1st January, 1947, the agricultural induna, Mbongwana Nawa toured the wards on the Upper Machile which comprised Kanyimba, Lusibi, Lwamuloba, Kamanga, Ikwe, Ibolelo, Kwemba, Njoko and Loanja. The first thing he noticed was that food was plentiful. Maize, sorghum and millet were grown in these wards.[10] In 1949, in Loazamba and Loanja areas, the main crops were the usual maize, sorghum and millet.[11]

From the 1950s onwards, there was a marked swing to maize production, mainly at the expense of crops such as millet and sorghum by the people of Sesheke district. In other words, agriculture in the district was developing away from a purely subsistence industry, towards a cash crop industry. However, it is important to mention from the onset that the importance of maize was twofold, it was a staple food as well as a cash crop. In 1952, it was observed at a meeting between the Agricultural Officer and Chief Lubinda and the Mwandi Kuta which was held at Mwandi that many gardens were planted with maize when the ground was not suited to that crop. This was due to the Malozi preference for maize.[12] It was reported that in 1954, maize was the most important crop in the agricultural systems of the Malozi people. Maize, in rotation with groundnuts, also found favour with many cultivators on the firmer riverain sands of

[8] NAZ, BSE 1/10/14, Sesheke Tour Report no.5, 1946.
[9] NAZ, BSE 1/10/14, Sesheke Tour Report no.4, 1947.
[10] NAZ, BSE 1/10/14, Sesheke Tour Report by Agriculture Induna Mbongwana Nawa 1947.
[11] NAZ, BSE 1/10/14, Sesheke Tour Report no.5, 1949.
[12] NAZ, BSE 1/3/3, Record of a meeting between Agricultural officer and Chief Lubinda and the Mwandi Kuta, 1952.

Senanga and Sesheke districts.[13] It was reported in 1957 that in Mushukula, Loazamba and Kalundu areas, all the villages grew maize and there was a considerable surplus in the Lower Loanja where it could be sold. Most villages grew cassava, groundnuts and millet or sorghum as well.[14] In the same year, the populace in Mabumbu and part of the lower Loanja area was reported to be relying entirely on maize.[15] In Western Machile, in the same year, it was reported that the staple crop was mainly maize, but in a few villages it was millet.[16]

A tour report of 1958, indicated that the basic crop in Sankolonga and Machile areas was maize with a fair amount of bulrush millet and some sorghum.[17] It was reported in 1958, that in Sesheke district, the Kalobolelwa farmers continued to increase their acreages of maize. In spite of the floods, some 843 bags of maize were produced. Sorghum was also grown in some areas such as along the banks of the Zambezi but it had a limited market.[18] It was reported in 1958, that the staple food in the Mashi and Ngwezi areas was maize with minor quantities of millet and sorghum.[19]

It was reported in 1960 that in Simungoma area, the inhabitants practised a type of shifting cultivation as the predominant sandy soil was worked out after about five years of intensive maize cultivation.[20] In 1960, the Sesheke District Commissioner noted that the upper Zambezi area, even in a bad year produced considerable maize surpluses and

[13] NAZ, MAG 2/5/49, Annual Report of Barotseland Protectorate, 1954.
[14] NAZ, BSE 1/2/88, Sesheke Tour Report no. 3, 1957.
[15] NAZ, BSE 1/2/88, Sesheke Tour Report no.4, 1957.
[16] NAZ, BSE 1/2/88, Sesheke Tour Report no.7, 1957.
[17] NAZ, BSE 1/2/103, Sesheke Tour Report no. 15, 1958.
[18] NAZ, BSE 1/2/106, Department of Agriculture Barotseland Protectorate Annual Report of 1958.
[19] NAZ, BSE 1/2/103, Sesheke Tour Report no.5,1958.
[20] NAZ, SEC 2/573, Sesheke Tour Report no. 1, 1961.

there was a real interest in agriculture throughout the area.[21] In the same year, the staple food crop throughout the upper Machile area was maize although small quantities of millet, sorghum and groundnuts were also found.[22]

In 1961, the main crop in the lower Loanja area was maize, followed by sorghum, millet, groundnuts and cassava in that order.[23] While in Simungoma area, there were extensive maize gardens and in all the villages there was a good deal of optimism for the coming maize crop. Sorghum and millet were the subsidiary crops.[24] In 1962, the farming season in Machile and Sankolonga was all carried out in forest gardens as the terrain was unsuitable for *Sishanjo* cultivation found in most parts of the district. The main crop was maize but quantities of millet and some groundnuts were also grown.[25] In 1962, the Agricultural Supervisor for Sesheke reported that no shortages of maize were visualised in the year although most villages expressed fears of shortages. Sorghum was not planted on a vast scale like the previous year.[26] In the same year, the upper Zambezi area 1 and 2 cultivated maize, nuts and beans in quantity.[27] In 1963, maize was the main crop under cultivation in Sesheke district with a few amounts of sorghum and cassava shrubs.[28]

[21] NAZ, SEC 2/573, Sesheke Tour Report no.11, 1960.
[22] NAZ, SEC 2/573, Sesheke Tour Report no.4, 1960.
[23] NAZ, SEC 2/574, Sesheke Tour Report no.4, 1961.
[24] NAZ, SEC 2/572, Sesheke Tour Report no.1, 1961.
[25] NAZ, SEC 2/574, Sesheke Tour report no.5, 1962.
[26] NAZ, BSE 1/2/75, Monthly Report of February, 1962.
[27] NAZ, SEC 2/574, Sesheke Tour Report no. 7, 1962.
[28] NAZ, SEC 2/574, Sesheke Tour Report no.1, 1963.

3.3 Reasons for the change to maize cultivation

3.3.1 Availability of market for maize

It is important to mention from the on-set that though the significant change to maize cultivation began in the 1950s, some factors responsible for the change started far back in time. The introduction of money as a medium of exchange made people to grow certain crops which had market value or engage in certain activities which could help them acquire cash. According to Eugene Leone Hermitte, one of the major changes which took place in Barotseland in the 20th century was that money was substituted for traditional goods and services and the system operated by the Barotse was brought under British control. Agricultural production, businesses, the family, and social groupings changed in response to growing familiarity with the market economy.[29] Since money had become a medium of exchange, it was necessary for everyone to acquire it. Crops such as maize commanded market as a result it became the most cultivated cereal in Sesheke district. Laurel Van Horn explained that a considerable market in grain opened up in Barotseland after 1903, when the Rhodesia Native Labour Bureau became active in the area and was supplied with maize meal from the flood plain and cassava meal from the bush surrounding the plain, and from Balovale on the upper Zambezi.[30] By 1909, there was considerable trade by natives amongst themselves and with Europeans in Sesheke and Livingstone in the following articles: wooden basins, spoons, stools, hoes, axes, mats, baskets, corn, cattle, sheep and goats. The price of grain was at 25 shillings per

[29] E. L. Hermitte, "An Economic History of Barotseland, 1800 –1940," PhD Thesis, The North Western University, 1973, pp. 305-306.
[30] L. Van Horn, "The Agricultural History of Barotseland 1840 – 1964," in R. Palmer and N. Parsons (eds.), *Roots of Rural Poverty in Central and Southern Africa* (London, Heinemann, 1977), p.152.

bag.[31] A respondent explained that with the introduction of the money economy in Sesheke, maize had market and most of the people began to cultivate it more than the other cereal crops.[32] This position made the cultivation of maize superior to other cereal crops because it enabled the people of Sesheke district to acquire money. Another informant pointed out that to the people of Sesheke district, maize was money.[33] This implies that having maize was the same as having money. Hence, many people began to cultivate maize more than sorghum and millet.

Van Horn stated that after 1912, supplies in Barotseland were required not only for outgoing labour recruits but also for the employees of the Zambezi Sawmills.[34] Before 1915, the Malozi and in particular the ruling class were forced to reduce the types of crops under cultivation and concentrate on maize production, and they could meet the demand for grain.[35] By 1928, the European traders, missionaries, government officials and labour recruiters at Mongu were buying over 4,600 bags of grain. This quantity was so large that they turned to all regions of Barotseland for supplies.[36] A 1939 Sesheke Tour Report noted that the maize that was grown in the Kanyimba valley was sold to Zambezi Sawmills employees at the forest compound and Mulobezi.[37] In the same year, a large number of local Africans of lower Machile area which comprised 58 villages earned their living by selling their produce to the Zambezi Sawmills workers and to travellers on the Mongu – Livingstone road.[38] In 1935, the Sawmills in Sesheke were working to their maximum capacity and employed something between three and four

[31] NAZ, A 5/2/3, Sesheke Annual Report of April, 1909.
[32] Interview, Namasiku Kawina (Sesheke Peasant Farmer), Katema Village, Sesheke district, 20/05/2014.
[33] Interview, Kapala Twabe (Sesheke Peasant Farmer), Kanyamuna Village, Sesheke district, 20/05/2014.
[34] Van Horn, "The Agricultural History of Barotseland, 1840 – 1964," p.152.
[35] Van Horn, "The Agricultural History of Barotseland, 1840 – 1964," p.152.
[36] Hermitte, "An Economic History of Barotseland, 1800 – 1940," p.310.
[37] NAZ, MAG 2/5/9, Sesheke Tour Report no.1, 1939.
[38] NAZ, MAG 2/5/9, Sesheke Tour Report no.1, 1939.

thousand local people.[39] Therefore, it is important to mention that the Zambezi Sawmills provided a good market for maize because of the large numbers of its workers. This acted as a stimulus to maize production in the district.

Furthermore, in 1939, the people who lived on the tributaries of the Loazamba river sold their maize which they had planted on *Sishanjo* gardens as soon as it was reaped.[40] In 1940, the District Commissioner for Sesheke district noted that there were many stores in the district which were buying grain in excessive amounts and he wanted the government to come up with a policy which could help the people conserve their grain.[41] The District Commissioner further said that it would be interesting to know how Mulobezi traders, who were buying Sesheke grain, stand vis-à-vis the Maize Control Board, because the grain from the northern part of the district was sold to them.[42] In the same year, the Provincial Commissioner for Barotseland in response to the concerns raised by the Sesheke District Commissioner who wanted the restriction on the purchase of grain to be applied to the whole district not just within the radius of forty miles away from his office, said that Section 8 of the Maize Control Ordinance (page 750 of the Annual Volume) states that, no person unless duly authorised by the Board shall import into or export from any of the areas set out in the schedule maize or maize meal.[43] The reason for the restriction was that there were severe shortages of food almost everywhere in the district.[44] The point which is worth mentioning here is that the restriction seemed to be on maize than on the other crops. The reason for this was that maize was the most

[39] NAZ, SEC 2/558, Sesheke Tour Report, 1935.
[40] NAZ, MAG 2/5/9, Sesheke Tour Report no.2, 1939.
[41] NAZ, MAG 2/5/9, Sesheke Tour Report no.40, 1940.
[42] NAZ, MAG 2/5/9, Sesheke Tour Report no.40, 1940.
[43] NAZ, MAG 2/5/9, Sesheke Tour Report no.40, 1940.
[44] NAZ, MAG 2/5/9, Sesheke Tour Report no.40, 1940.

purchased cereal crop and this situation alarmed the District Commissioner who thought of measures to control the buying of maize from the district in order to avert hunger. This was the period of the Second World War. At this time, agricultural production had failed to meet the food requirements of the country. Food production during the war was affected by a serious shortage of agricultural implements due to difficulties in commercial shipping because of the war. The problem of shipping was so acute that material from overseas was taking as long as twelve and sometimes eighteen months to be delivered.[45] The Second World War led to the expansion of copper, zinc, cobalt and lead production in the country as part of the war effort. Increasing production required recruitment of a large African workforce.[46] Samuel Chipungu explained that:

> To increase the production of base metals during the war meant recruiting thousands of African labourers to work in the mines. This labour force had to be fed in line with the policy of keeping the productive capacity and economic structure here as intact as possible. And maize meal was the staple food ration offered to the African mine labourers in addition to small quantities of sources of protein, fat and salts.[47]

According to Alfred Tembo, during the war, "mining was linked to the agricultural sector because miners had to be fed….The size of the African labour force employed in the copper mines rose from 7,200 in 1933 to 24,000 in 1939 and reached 36,000 in 1943".[48] Since the labour that was employed on the Copperbelt during the Second World war was fed on maize meal, maize supplies had to be sourced from all the areas of the country including rural places such as Sesheke district. Chipungu pointed out that:

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[45] Bennet, S. Siamwiza, ''A History of Famine in Zambia, 1825 – 1949,'' PhD Thesis, University of Cambridge, 1998. p.297.

[46] Siamwiza, "A History of Famine in Zambia, 1825 – 1949", 1998. pp.297-8.

[47] S. N. Chipungu, *The State, Technology and Peasant Differentiation in Zambia : A Case Study of the Southern Province, 1930 – 1986*, (Lusaka: Historical Association of Zambia, 1988), P.62.

[48] A. Tembo, "The Impact of the Second World War on Northern Rhodesia (Zambia), 1939-1953", PhD Thesis, University of the Free State, 2015, p.203.

> The most notable trend during the period of the war was the continuing acceptance of maize by peasants in Northern Rhodesia as the main crop for cultivation. Consequently, marketed maize in some peasant areas of the country increased beyond the level reached at the end of the 1938 – 1939 season. In 1944, the Department of Agriculture reported that in addition to increased sales, abnormally large quantities of maize were being retained in the villages.[49]

Perhaps this was done in order to control food shortages resulting from overselling in rural places.

In 1946, an ex- Paris Evangelical Missionary Society teacher by the name of Anderson Mulawa from Simutwi village sold about 50 bags of maize to the Boma.[50] In 1950, the Sesheke District Commissioner put in place a buying agent in the upper Zambezi area and had bought 30 bags of maize at the time of the tour. However, it was thought that there could have been as many as 100 bags to be bought in this area and all the villages with a surplus were told to contact the buying agent.[51] That same year, the District Commissioner for Sesheke said that he was hopeful to be able to buy enough food from within the district to feed the staff and labourers employed at the Boma.[52]

In 1951, a food buying depot was set up at Nawinda, but only small quantities of maize and cassava were purchased.[53] It was reported in 1954 that the bulk of food in Sesheke district was produced in Kalobolelwa area, and in recent years between 200 and 500 bags of maize a year had been purchased.[54]

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[49] Chipungu, *The State, Technology and Peasant Differentiation in Zambia*, p.60.
[50] NAZ, BSE 1/10/14, Sesheke Tour Report no.2, 1947.
[51] NAZ, BSE 1/2/15, Sesheke Tour Report no.3, 1950.
[52] NAZ, BSE 1/2/15, Seheke Tour Report no.1, 1950.
[53] NAZ, BSE 1/10, Sesheke District Note Book vol. 2, 1954.
[54] NAZ, BSE 1/10, Sesheke District Note Book vol. 2, 1954.

In 1957, Sankolonga area produced a surplus of some 400 bags and the villagers had professed willingness to sell their maize to the Boma food buyer at Libebe village.[55] In the same year, a surplus of 500 bags of maize from Sesheke district were invaluable in helping to meet the needs of the Kalabo, Mongu and Senanga districts.[56] Furthermore, the District Commissioner for Sesheke district remarked that there was a vast local market at Kamanga and Namena wards which was provided by the Zambezi Sawmills Limited and Sichili Mission.[57] In 1958, approximately 800 bags of surplus maize were bought by the Boma from Mushukula, Launda and part of Lower Luanja wards.[58] In 1958, the Assistant District Commissioner for Sesheke said that in Mashanjo ward, food was plentiful and he estimated that a maximum of 150 bags of maize was available for purchase and discussions were proceeding with the Witwatersrand Native Labour Association Limited (W.N.L.A) for maize to be purchased and brought into the Boma.[59]

A 1960, report indicated that the upper Zambezi area supplied the Boma with most of its maize.[60] In 1961, in Kalobolelwa area, there was quite a considerable surplus of maize for sale. R.F. Sutherland Limited was granted a permit to purchase 1000 bags of maize in this area and at the time of the tour, they had bought nearly 600 bags through their Kalobolelwa store.[61] A 1963 monthly report for Barotseland, indicated that there was a local market in Sesheke district for maize surplus.[62] The availability of market for maize

[55] NAZ, BSE 1/2/88, Sesheke Tour Report no.6, 1957.
[56] NAZ, BSE 1/2/88, Sesheke Tour Report no.6, 1957.
[57] NAZ, BSE 1/2/88, Sesheke Tour Report no.7, 1957.
[58] NAZ, BSE 1/2/103, Sesheke Tour Report no.2, 1958.
[59] NAZ, BSE 1/2/103, Sesheke Tour Report no.5, 1958.
[60] NAZ, SEC 2/573, Sesheke Tour Report no.15, 1960.
[61] NAZ, SEC 2/574, Sesheke Tour Report no.8, 1961.
[62] NAZ, BSE 1/2/75, Barotseland Monthly Report of August, 1963.

in Sesheke district encouraged the change to maize cultivation because people were able to raise the money which was needed as a medium of exchange.

Some people of Sesheke district raised the money for tax from maize selling. In Barotseland, the first collection of the tax was on the first day of July 1904. A Hut Tax was to be paid in sterling coin but at the discretion of the collector, it was to be accepted in grain or stock, the value of such grain or stock being taken at the price then current at the nearest market at which such grain or stock could be disposed of.[63] A report of 1939 indicated that the upper Zambezi and Mashanjo people obtained money for tax by selling their grain.[64] To a certain extent, therefore the need for money to pay tax encouraged the change to maize cultivation.

3.3.2 Colonial policies

Certain policies during the colonial period encouraged the cultivation of maize than sorghum and millet. According to Kamayoyo, in Lyaluyi area of Barotseland, several devices by the British South African Company (BSAC) were used to fight against the cultivation of *Munanana* a kind of sorghum. Initially, it was a discouragingly low price offer by whites including missionaries of Sefula for *Munanana*. Eventually, whites completely refused to buy all kinds of sorghum meal. For instance, in 1919 when Barotse National School (BNS) faced the danger of closing down due to a shortage of food, the school could only buy mealie meal and cassava meal not *Munanana* or any other sorghum meal or millet meal.[65] In 1922, a white businessman by the name of

[63] NAZ, KDE 2/44, Minutes by His Excellency the High Commissioner, 1903.
[64] NAZ, MAG 2/5/9, Sesheke Tour Report no.3, 1939.
[65] N. Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi Area, 1890 – 1924," MA Dissertation, 1989, p.76.

Whitehead who was stationed in the mid-plain of Lyaluyi bartered his blankets for maize only because he was instructed not to buy *Munanana* and other sorghum grains.[66]

The cultivation of Sorghum and millet was discouraged because the crops were used for beer brewing, a practice which the missionaries and the colonial masters fought. In 1909, there was an increase in beer drinking in Sesheke and those in charge of the mission station regretted it and they hoped the administration would support them in fighting this vice which they considered to be part of their ministry and work of civilization.[67] In 1929, the Barotse Native Laws were passed which stated that:

> Any person who shall be found in possession of or drinking native beer, being drunk from beer, selling beer, or to be in possession of malted grain with intent of brewing beer, if a common person he shall be guilty of an offence and shall be liable to a fine not exceeding two head of cattle, if such man be a member of the royal family he shall be liable to a loss of his seat in the council. Also, any person who shall allow beer brewing within his or her premises shall be guilty of an offence and shall be liable to a fine not exceeding one head of cattle or a sum of money not exceeding three pounds.[68]

According to Njekwa Kamayoyo, the BSAC fought the brewing and drinking of beer because it was comparatively easier to obtain money by selling beer than by going to work as a migrant labourer. If the local beer occupation was allowed to flourish, it would have created scarcity of labour in Southern Rhodesia and consequently wages would rise against the wishes of the whites.[69] Southern Rhodesia was one of the territories the Barotse people went to work in the mines. In order to prevent the above situation from occurring, a deliberate policy was introduced by the colonial masters so as to stop the

[66] Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi Area," pp. 76 -77.
[67] NAZ, A 5/2/3, Sesheke District Annual Report of 17th April 1909.
[68] NAZ, KDE 2/44, The Barotse Native Laws, Custom and Administration, 24th August, 1929.
[69] Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi Area," pp.75-76.

people of Barotseland from cultivating sorghum and millet which could be easily used for brewing beer.[70] In this way, the colonial policies contributed to the change from sorghum and millet to maize cultivation in Sesheke district. When such measures of prohibiting the growing of sorghum and millet as well as brewing of beer were put in place, it meant that one of the sources of income which was beer selling was killed and this left the people with less option but to engage in maize cultivation which could enable them acquire money. It was reported in 1966 that the policy of the Department of Agriculture in the province did not change from the policy of the previous three years which was aimed at encouraging increased food production, particularly of maize. In 1965, there was an increase in the acreage of maize planted and higher plant populations per acre were achieved.[71] It is important to note that, throughout the colonial period the agricultural policies supported maize cultivation than the other cereal crops.

3.3.3 Introduction of ploughs

The introduction of ox-drawn ploughs led to the increase in the acreages of the farm lands for maize. In 1929, there were 93 ploughs in Mabumbu and Sankolonga areas.[72] It was reported in 1933 that in the Barotse Province, there was steady progress and an increased use of the plough, especially in Sesheke district.[73] In 1945, the plough was increasingly used in the vicinity of Sesheke and even up the W.N.L.A. labour route west of the Zambezi.[74] The plough led to increased acreages in Sesheke district in 1947/48,

[70] Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi Area," p.76.
[71] NAZ, BSE 1/2/135, Annual Report of the Department of Agriculture Barotse province for the year 1965-1966.
[72] NAZ, KDE 8/2/6, Report of Tour made by Mr John Gaunt, of Mabumbu and Sankolonga native districts, 1929.
[73] Northern Rhodesia Annual Report upon Native Affairs 1933.
[74] C. J. Lewin, *Northern Rhodesia – Agricultural and Forestry Development Plans for 10 Years* (Lusaka: Government Printer, 1945), p.26.

ultimately helping to avert famine.[75] According to Hermitte, before the plough was introduced in Sesheke people had begun to turn from grain to cassava because it could better withstand drought, however, they preferred eating grain, so when ploughs were imported, they abandoned their cassava gardens and ploughed larger grain fields instead.[76] In 1950, the District Commissioner for Sesheke district observed that there was a widespread use of ploughs in Kalundu, Mushukula and Loazamba areas.[77]

It is not easy to come up with the statistics of ploughs the district had in a particular year because the information which is available only shows the number of ploughs in certain wards of the district in some years. For example, a Tour Report for Sesheke of 1950 indicated that there were 41 ploughs in the lower Machile and 72 in Machile area. Only nine villages of the seventy two visited were without a plough, and several of them were able to borrow one.[78] In 1957, there were 145 single – furrow ploughs in Mabumbu area and 60 single – furrow ploughs in lower Loanja area.[79] In 1958, there were 91 ploughs in Loazamba area and 80 ploughs in western Machile area.[80] In the same year, there were 229 ploughs in Sankolonga area and 92 ploughs in lower Machile area.[81] It is important to state that as years went by, the number of ploughs in Sesheke district increased. For example, in 1950 the number of ploughs in lower Machile area was 41 but in 1958 the number had increased to 92. This entails that the more ploughs people of sesheke district

[75] NAZ, BSE 1/10, Sesheke District Note Book vol2, 1954.
[76] Hermitte, "An Economic History of Barotseland, 1800 – 1940," p.313.
[77] NAZ, BSE 1/2/15, Sesheke Tour Report no.10, 1950.
[78] NAZ, BSE 1/2/15, Sesheke Tour Report no.11, 1950.
[79] NAZ, BSE 1/2/88, Sesheke Tour Report no.4, 1957.
[80] NAZ, BSE 1/2/103, Sesheke Tour Report no.11, 1958.
[81] NAZ, BSE 1/2/103, Sesheke Tour Report no. 15, 1958

acquired, the more land they cultivated for maize. In the villages which were toured in Lower Loanja ward in 1957, there was a total surplus of about 250 bags of maize.[82]

In Southern province, the plough was adopted early and it played an important role in the Tonga agricultural systems. According to Chipungu, there were a number of technological changes in peasant agriculture in the Southern Province in the 1930s. One of them was the increased adoption of the ox-drawn plough.[83] Chipungu further explained that through ownership of a plough, the Tonga people were able to cultivate large tracts of land where they planted maize. This was the reason why the plough was preferred over the hoe.[84]

3.3.4 Bird attacks

The other reason which caused many people of Sesheke district to change from sorghum and millet to maize production was bird attacks on these crops. A 1940 report indicated that the usual complaints of gardens being attacked by birds and monkeys were heard in many villages throughout the areas toured but especially those in the Upper Loanja area.[85] In 1949, the abundance of birds in Sesheke district was a phenomenon. The poor rains had prevented grass from seeding in the open country, and birds concentrated in gardens. It was noticed in Machile and Lusibi areas that birds only left the gardens after a week's rain, and this was confirmed by reports from other areas.[86]

Prins also observed that, "the eclipse of sorghum in Barotseland was caused by the shortage of labour due to the decline of the extended family system, the growth of the

[82] NAZ, BSE 1/2/88, Sesheke Tour Report no.4, 1957.
[83] Chipungu, *The State, Technology and Peasant Differentiation in Zambia*, p. 34.
[84] Chipungu, *The State, Technology and Peasant Differentiation in Zambia,* p.42.
[85] NAZ, MAG 2/5/9, Sesheke Tour Report no.3, 1940.
[86] NAZ, BSE 1/10/14, Sesheke District Induna's Tour Report, 1949.

nucleus family, and consequently the dwindling number of people who were expected to scare birds from eating sorghum. Maize was much less susceptible to bird attack and thus the change to maize".[87] Scholars like Kamayoyo, however criticised Prins on this point and argued that there were enough people to scare birds away. Kamayoyo explained that one might also be tempted to assume that schooling had seriously deprived bird scaring of its main labour force as children did most of that work early morning until late in the afternoon when birds went to roost. Kamayoyo further stated that between the boys and girls, bird scaring was mainly a girl's domain even though both genders did the work together. Those who went to school were few.[88] Kamayoyo attributed the disappearance of sorghum only to the policies introduced during the colonial period which encouraged the shift to maize production.

However, Prins's observation that the shortage of people to scare birds also contributed to the change from sorghum and millet to maize cultivation cannot be overlooked. As time went by, the number of children who attended school increased and this could have affected bird scaring due to a reduction in the labour force. One informant pointed out that children who should have helped to scare birds started going to school in numbers. The school terms also had changed. By the time sorghum and millet reached the stage when they were attacked by birds, pupils would still be in school.[89] Peter Snelson also shows that the number of pupils who were going to school in Barotseland was increasing as years went by. He stated that:

> The opening of the normal school enabled the educational work of the Paris Missionary Society to expand from the

[87] Prins, "Bulozi during the period of primary European contact, 1876 – 1896," p.77.
[88] Kamayoyo, "Anatomy of Economic Underdevelopment of Lyaluyi Area," pp.71-72.
[89] Interview, Nangana Ndombo (Sesheke District Peasant Farmer), Lipumpu Village, Sesheke District, 21/05/2014.

> mission stations into villages. For the first twenty years, the only schools were on the mission stations themselves and the number of pupils did not exceed 400. By 1916, however, 11 village schools were in operation and enrolment had reached 800 pupils. This number had grown to 2300 in 1924 (41 Schools) and to 4600 in 1936, when the mission was running 73 schools. At the beginning, nearly all the pupils were boys, as the Lozi parents were most reluctant to permit their daughters to attend school. In 1916, a small boarding school for girls was opened at Sesheke and in 1926 a girls' central boarding school was started in Mabumbu in Sesheke district.[90]

Hermitte also observed that the educational system was enlarged considerably during the 1930s. For example, in 1938 the P.E.M.S had over 5,000 pupils enrolled in its Northern Rhodesian schools, the vast majority of whom were in Barotseland.[91] The above two scholars have shown that the enrolment for school going children was going up each year. Therefore, it is possible to conclude that the labour that was required in bird scaring became too much for the few people to bear due to passage of time as many children began schooling. Petulo explained that the issue of bird watching was tiresome. Cultivation of sorghum and millet meant that one had to abandon other works because of the troublesome birds.[92] The change to maize from sorghum was therefore also largely due to the greater protection from bird damage provided by the maize husks.[93] Maize was protected from bird damage by its leafy covering, while the exposed grain of sorghum and millet required labour for scaring birds.

The bird attack problem made the people of Sesheke to change to maize cultivation because people did not see any point in cultivating crops which would end up being

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[90] P. Snelson, *Educational Development in Northern Rhodesia, 1883 – 1945, Second Edition* (Lusaka: Zambia Educational Publishing House, 1974), p.47.

[91] Hermitte, "An Economic History of Barotseland 1800 – 1940," p.321.

[92] Interview, Petulo Mulibe (Sesheke District Peasant Farmer), Zambwe Village, Sesheke District, 14/11/2016.

[93] P.K. Vickery, "The making of a Peasantry: Imperialism and the Tonga Plateau Economy, 1890 – 1936," PhD Thesis, Yale University, 1978, p.454.

eaten by birds. It is also important to mention that, as the number of people growing sorghum and millet reduced, the few people who cultivated these crops faced a serious challenge in that it became difficult to do the task of bird scaring because the birds could concentrate on those few gardens. Muyoba rightly put it when she said that, if you cultivate sorghum and millet, you end up having a situation where all the birds will come to your field and finish everything.[94] Lifasi lamented that after the death of her husband the work of bird scaring was too demanding, and it was scarely for her to be in the bush alone because her fellow villagers had stopped cultivating sorghum and millet.[95]

3.3.5 Introduction of Hammer Mills

Maize production also received a boost and had an advantage over sorghum and millet following the introduction of hammer mills in the 1960s. Previously, people used to refine cereal crops with much labour because there were no hammer mills. Before the introduction of hammer mills in Sesheke, people used the traditional ways of refining cereals where a motar and pestle were used to grind these crops into a meal. However, this method needed more physical strength, it was tiresome and time consuming. The introduction of hammer mills, therefore, gave maize an advantage over sorghum and millet. In 1960, in Mabumbu ward a retired government servant owned two maize mills.[96] In 1961 there were milling facilities at Katima Mulilo.[97] Mutemwa pointed out

[94] Interview, Muyoba Namonda (Sesheke District Peasant Farmer), Mulimambago Village, Sesheke District, 17/05/2014.
[95] Interview, Lifasi Libala (Sesheke District Peasant Farmer), Lipumpu village, Sesheke District, 21/ 05/ 2014.
[96] NAZ, SEC 2/573, Sesheke Tour Report no.14, 1960.
[97] NAZ, SEC 2/574, Sesheke Tour Report no.7, 1961.

that, there was also a hammer mill at Sesheke boma before independence in 1964.[98] Hammer mills gave a processing cost advantage to maize over small grains, since maize could be dumped into the hopper for grinding, while millet and sorghum husks required de-hulling first.[99] Therefore, the introduction of hammer mills made it easy to process maize into meal. The labour which was required to remove the sorghum husks was more than that which was needed to refine maize into its final stage. Kambole explained that a hammer mill was brought to Mwandi between 1965 and 1966. Hammer mills relieved the people of Mwandi from the labour which was involved in pounding the grains into meal.[100] It must be pointed out that the introduction of hammer mills just added importance to maize cultivation because the labour which was required in processing maize into a meal was reduced and as they became wide spread through the passage of time, the advantage of maize production over sorghum and millet became even more.

3.3.6 Malozis' preference for maize meal

The other reason which made the people of Sesheke district to change to maize cultivation was that as time went by, they began to prefer maize meal than that of sorghum and millet. For example, in the visited Lozi and Totela villages where there was hunger in 1947, villagers there preferred to go hungry rather than eat anything except the best white maize.[101] One informant, Mate stated that:

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[98] Interview, Namonda Mutemwa (Sesheke District Peasant Farmer), Mulimambago Village, Sesheke District, 23/05/2014.
[99] M. Smale and T. Jayne, *Maize in Eastern and Southern Africa: Seeds of success in Retrospect.EPTD* Discussion Paper No.97. Washington D.C: Environment and Production Technology Division International Food Policy, January 2003, p.14.
[100] Interview, Sitwala Kambole (Sesheke District Peasant Farmer), Matoka village, Sesheke District, 15/08/2018.
[101] NAZ, BSE 1/10/14, Sesheke Tour Report no.4, 1947.

> Maize meal was better than meal made from Sorghum and Millet; hence people preferred maize to these crops. Nshima made from sorghum and millet was too hard to be digested easily. But nshima from maize meal was not hard and digestion did not delay and did not cause discomfort in the stomach. Due to change of time, people had come to like the maize meal. At Lipumpu in Sesheke, before independence in 1964 the District Commissioner used to bring maize for selling. No other crops were sold there. It was also believed that maize meal had a good taste.[102]

Maize meal was provided to the workers of the Zambezi Sawmills in Sesheke. The Zambezi Sawmills's (ZSM) operations were transferred from Livingstone to Sesheke forests and centred at Mulobezi towards the end of the 1920s.[103] Rations of food were issued twice a week to all labourers of the Zambezi Sawmills. Apart from senior employees who had to buy their own food, the rest received eleven tins of mealie meal plus an extra two per child for married couples. Bachelors received one tin of mealie meal a day.[104] According to Henry Siloba Kambuze, leading retailers such as Susman brothers and Sutherland Limited used to order maize meal from Livingstone before independence and supplied their stores in Mwandi.[105] Kambole also explained that as late as 1975 when there was hunger in Sankolonga area, the local business men such as Bo Libingi, Siloba Kambuze and Ndopu Sabenzu used to order maize meal from Livingstone and sold it to the local people. The hunger that began in 1975 took a number of years and people had to depend on maize meal from the local dealers.[106]

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[102] Interview, Pumulo Mate (Sesheke District Peasant Farmer), Pumulo Village, Sesheke District, 21/05/2014.
[103] I. M. Nzila, ''The Zambezi Sawmills: A Study of Forest Exploitation in the Western Province of Zambia, 1890-1964,'' MA Dissertation, University of Zambia, 1987, p.vi.
[104] Nzila, ''The Zambezi Sawmills: A Study of Forest Exploitation in the Western Province of Zambia, 1890-1964,'' p.78.
[105] Interview, Henry Siloba Kambuze (Sesheke District Peasant Farmer), Siloba village, Sesheke District, 10/09/2018.
[106] Interview, Kambole.

Similarly, in colonial Zimbabwe among the shona people there was a preference to maize meal than the meals of other cereal crops. By 1910, most people, especially those that had taken up employment with the white colonialists in mines and farms were going for maize meal instead of sorghum and millet meals. The surplus millet produced after 1910 became virtually unmarketable as maize took a more prominent role.[107] In Zimbabwe, this development happened early because of the large number of whites who occupied that country early and dominated it than it was with Zambia.

In trying to compare with Southern province, the change to maize cultivation happened earlier than in Barotseland. According to Chipungu, the Tonga people began to shift from sorghum and millet to maize cultivation in the 1930s. He stated that:

> There was a generalised shift from production of indigenous crops to new and higher yield crops. Most dramatic was the shift from growing sorghum to maize monoculture in Southern Province. Everybody began growing maize. The development of maize monoculture in Chief Sianjalika's area in the 1930s was like a disease spreading in the community, nobody paid attention to *Maila* (Sorghum) anymore. To the Tonga people, maize had become what copper was to Zambia, and they equated maize production to production of copper.[108]

The Tonga people could have changed early and faster to maize cultivation than their counterparts in Barotseland because of the availability of transport to towns where there was a high demand for maize as the line of rail passed through that province. Fourshey noted that in Southwestern Tanganyika (Tanzania), the shift to maize that began with British backing in the 1920s, gained momentum during World War Two, and came into

[107] B. Tavuyango, N. Mutami and K. Mbenene, "Traditional Grain Crops in Pre-Colonial and Colonial Zimbabwe: A factor for food security and Social Cohesion among the Shona People," *Journal of Sustainable Development in Africa* Vol 12, No. 6, (2010), p.3.
[108] Chipungu, *The State, Technology and Peasant Differentiation in Zambia*, pp.35 –36.

full bloom only after the 1950.[109] This scenario was similar to the Sesheke story, in the sense that the significant change to maize in the area was also from the 1950s. The only difference was that, farmers in Southwestern Tanganyika resisted the change to maize. Though maize did become the food of the Tanzanians, its value as a crop was not uncontested and the shift was not immediate, rather a long and continually recharged process persisted from 1920 to the end of the century.[110] Tanzanians could eat maize, but first and foremost it was viewed as a cash crop. Sorghum, millet and plantains may have had cultural and social significance but maize became important economically as a saleable crop that could be exported beyond the Tanganyika Territory.[111]

3.4 Conclusion

This chapter has discussed the change from sorghum and millet to maize cultivation by the people of Sesheke district. The chapter has pointed out that cereal crops such as sorghum and millet were cultivated alongside maize when the crop was introduced in Western Province and Sesheke district in particular. Furthermore, the chapter has demonstrated that the change from sorghum and millet to maize cultivation in Sesheke district was gradual and this was noticed from the 1950s onwards. In addition, the chapter has shown that, a number of factors such as the introduction of money as a medium of exchange by colonial masters, availability of market for maize and several other factors compounded the change from sorghum and millet to maize production in Sesheke district. The change had a negative impact on the food security of Sesheke district.This will be discussed among other things in the following chapter.

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[109] C.C. Fourshey, The Remedy for Hunger Is Bending the Back: Maize and British Agricultural Policy in Southwestern Tanzania, 1920-1960",*The International Journal of African Historicl Studies,* vol.41, No.2(2008), pp. 223-261.
[110] Fourshey, *The International Journal of African Historicl Studies,* vol.41.
[111] Fourshey, *The International Journal of African Historical Studies*, vol. 41.

CHAPTER FOUR

THE IMPACT ON FOOD SECURITY OF THE CHANGE FROM SORGHUM AND MILLET TO MAIZE CULTIVATION

4.1 Introduction

This chapter examines the impact on food security of the change from sorghum and millet to maize production in Sesheke district. It argues that the introduction of monetary transactions as well as the market value that was attached to maize impacted negatively on the food security of the people of Sesheke district. The chapter also discusses the natural disasters which impacted negatively on food security as well as coping strategies which the people of Sesheke district employed when there was famine. Furthermore, the chapter discusses the importance of cattle rearing to the people of Sesheke district.

4.2 Impact of the change to maize cultivation on food security

The change to maize production had a negative impact on food security of the people of Sesheke district. This was because maize had become the most marketable crop and most people could sale large quantities of it leaving little stocks which could not take them to the next harvesting season. Eugene Leone Hermitte states that:

> In the 20th century, food selling was the only way most women could earn money, so even low prices were better than none. Occasionally, they tried to hold out for higher prices from the British, but in general their desire for money was too great to permit this. One British official noted that European demand was even a cause of food shortages in some areas. That is, if the British were willing to buy food in a particular area, people could sell part of

> what they needed for subsistence as well as that which was surplus.[112]

In 1932, in Loazamba and lower Machile areas of Sesheke district, it was reported that the alleged food shortage was caused by the fact that the farmers had sold all their surplus crops to the stores at Malanda and the store at Machile.[113] In addition, in 1935, the District Commissioner for Sesheke district noted that all crops were completely exhausted in the Njoko area and the people survived on wild fruits or wondered into adjacent districts in search of food.[114] In 1940, the southern half of Sesheke district did not have food because the previous year they sold so much grain to the stores at Lilonga and Mulobezi. If they conserved their crops, they would have plenty of grain left from the last season, when good crops were reaped.[115] A government official obsesrved in 1946 that, there was a shortage of both seed and food along the upper Zambezi area due to over-selling earlier in the year.[116]

Furthermore, in 1950, the selling of green maize also caused shortages of food in certain areas of Sesheke district. The potential surplus in the north of the district never came to anything because of the local custom of selling green maize in quantity at Mulobezi for a comparatively high price early in the year. As a result, the mission at Sichili found it increasingly difficult to provide for its various dependents and staff.[117] In 1958, the Mashi villages sold too much maize, hence there was hunger in the area.[118] In 1960, in the upper Machile area, buying of maize was done on a large scale and it was observed

[112] E. L. Hermitte, "An Economic History of Barotseland, 1800 – 1940", PhD Thesis, The North Western University, 1973, p.311.
[113] National Archives of Zambia (NAZ), SEC 2/557, Sesheke Tour Report no.1, 1932.
[114] NAZ, SEC 2/558, Sesheke Tour Report no.5, 1932.
[115] NAZ, MAG 2/5/9, Sesheke Tour Report no.20, 1940.
[116] NAZ, BSE 1/10/14, Sesheke Tour Report no.5, 1946.
[117] NAZ, BSE 1/10/15, Sesheke Tour Report no.11, 1950.
[118] NAZ, BSE 1/2/103, Sesheke Tour Report no.14, 1958.

that all villages except the northern group would exhaust their maize crop within the first few months.[119] One informant, Agness Kaluwe Monga said that there was a problem of food shortage in Sesheke district following the change from sorghum and millet to maize growing because most of the people sold most of their maize before the next harvest and this left them with inadequate food supply.[120]

4.3 Natural disasters' impact on food security

Natural disasters also added their challenge on the agricultural enterprise of the people of Sesheke district. This was due to the fact that people were heavily dependent on maize and if it failed, people had no other crop to depend on. There is strong evidence that lack of diversification in agriculture can have tremendous negative agro – ecological and socio – economic implications. In general terms, a lack of agricultural diversification, and specifically a focus on maize production can limit the potential to use agriculture as a poverty reduction tool.[121] In 1947, in the Zambezi area every village suffered from lack of rain and the resulting position was that very few mealies (maize) ripened in low lying ground but were eaten immediately in the absence of any other food except forest fruits.[122] A 1947 Sesheke Tour Report indicated that in the 59 visited villages which were purely Lozi and Totela, there was famine and the main crop was maize. It failed owing to drought.[123] In 1948, it was reported that poor soils and failure

[119] NAZ, SEC 2/573, Sesheke Tour Report no.4, 1960.
[120] Interview, Agness Kaluwe Monga, (Sesheke Peasant Farmer), Simanenga Village, Sesheke District, 20/05/14.
[121] C. Antony and J. S. Nicholas (eds.) *Agriculture in Zambia, Past, Present and Future*. (Lusaka: Indaba Agricultural Research Institute, 2015).
[122] NAZ, BSE 1/ 10/14, Sesheke Tour Report no.2, 1947.
[123] NAZ, BSE 1/10/14, Sesheke Tour Report no.4, 1947.

of rainfall were among the causes of famine in the district. The failure of rainfall was confirmed by the records at the district office.[124]

The much more arid Sesheke was the worst affected district in Western Province in the 1948 – 49 season. The maize crop had failed and cropping varied between zero and twenty five percent in all the 162 villages that were visited. Some people ate normal food only three or four days and in between lived on wild fruits.[125] It was reported in 1958 that in Kamanga and Ikwe areas, all *Sishanjo* maize seen on the tour was spoiled due to the excessive rain in the year.[126] In the same year, the District Commissioner for Sesheke district reported that in Kalobolelwa area, the Zambezi floods and the high rainfall had had a serious effect on the food situation in the area. The Kalobolelwa area, usually expected to produce a surplus, risked having no surplus maize for sale in the year. This was so because the floods were both early and very heavy and the majority of low lying maize gardens were destroyed. The crops above flood level were in many cases destroyed by very heavy rainfall.[127] In the Lwamulobe and Kamanga areas, in the same year, there was no surplus maize because the harvest was sadly affected by heavy rainfall which diminished the size of maize cobs.[128]

In 1959, in Katongo and upper Zambezi areas, maize everywhere suffered from lack of rain. The only food the people could have was that which they were able to buy.[129] In 1960, at the instigation of the Department of Agriculture, the people in Sesheke district

[124] NAZ, BSE 1/10/14, Sesheke Tour Report no.1, 1948.
[125]Bennet, S. Siamwiza, "A History of Famine in Zambia, 1825 – 1949", PhD Thesis, University of Cambridge, 1998, p. 322.
[126] NAZ, BSE 1/2/103, Sesheke Tour Report no.3, 1958.
[127] NAZ, BSE 1/2/103, Sesheke Tour Report no.3, 1958.
[128] NAZ, BSE 1/103, Sesheke Tour Report no.12, 1958.

[129] NAZ, MAG 2/6/29, Sesheke Tour Report no.5, 1960.

planted their maize early in the year but the failure of the early rains and continued drought in the months of December and January killed the majority of the first and second plantings in the Simungoma area.[130] Furthermore, in the same year in the Mushukula and Kalundu areas the early crops suffered from drought at the outset and then a surplus of rain later. Crops were poor and some were eaten young on account of starvation.[131]

The Sesheke Tour Report of 1960, states that, in both Kamanga and Ikwe areas the maize planted in October the previous year was considerably affected by the lack of rains. Since maize was the staple crop in most of the villages, there would be for a long time ahead a shortage of food in the villages. Where sorghum was planted it looked fairly good, but there were a large number of villages which did not plant the crop.[132] Furthermore, in that same year, on the Namakala and Kanyimba streams there were patches of good maize which were planted at the end of the year. The potential harvest was insufficient to feed the people for more than a few months. This was so because of the drought which had killed the crop.[133]

Some parts of Loanja, Njoko and Kwemba rivers including the area on which Nawinda Kuta was situated had infertile soils and were subject to year after year starvation. In 1963, the situation was even worse because the maize they had cultivated on the *matongo* gardens were stunted with excessive rains. People in different professions like teachers, court clerk, veterinary Assistant and a dresser were already depending on buying maize meal from Muchinga store of Susman brothers and Wulfsohn Limited near

[130] NAZ, SEC 2/573, Sesheke Tour Report no.1, 1960.
[131] NAZ, SEC 2/573, Sesheke Tour Report no.3, 1960.
[132] NAZ, MAG 2/6/29, Sesheke Tour Report no.2, 1960.
[133] NAZ, MAG 2/6/29, Sesheke Tour Report no.4, 1960.

Mabenga.[134] In the same year, in Luamuloba area, the maize crop was damaged by excessive rains. This situation was found everywhere in the district but some people who had cassava and sorghum gardens would not suffer from famine.[135] In 1964, yields of maize in upland gardens in Barotseland were low and it was reported from Sesheke district that the estimated yield per acre was three bags compared with five or six bags the previous year. This reduction in yield was due to lack of rain in January, February and March.[136] Maize was highly sensitive to deprivation of water, sunlight and nitrogen, it rots easily in tropical storage. Even a few days of drought at the time of tasseling can ruin the crop. Thus, maize monocultures were extremely vulnerable to environmental shocks, especially drought. It is important to point out that the impact of nature would not have been the same if the people of Sesheke district maintained their traditional crops of sorghum and millet. When the people of Sesheke district diversified in their agricultural system by growing traditional crops together with maize, they avoided having a situation where by if one crop failed they had no other crops to depend on. Therefore, total dependence on maize cultivation had a negative impact on food security in the area.

4.4 Coping strategies and the importance of cattle in ensuring food security in the area

There were a number of strategies the people of Sesheke district employed whenever there was famine. Though some of the strategies were normal economic activities which in times of food shortages could be used to alleviate hunger.

[134] NAZ, BSE 1/2/123, Sesheke Tour Report no.2, 1963.
[135] NAZ, BSE 1/2/128, Sesheke Tour Report no.4, 1963.
[136] NAZ, BSE 1/2/75, Monthly Report-Barotseland-11th June, 1964.

4.4.1 Fishing

Fishing was a normal and regular economic activity of the people of Sesheke district which played a major role in improving food security in the area. It provided relish for the people and it was also a source of income for others. Fishing helped in sustaining the people of Sesheke district in time of want. Sesheke and Senanga suffered cereal scarcity in 1937. Fortunately, there was a plentiful of fish to eke out the meagre grain supplies.[137] In 1939, considerable numbers of people in the Simungoma area carried on a lucrative fish trade in Livingstone.[138] In 1954, in the south eastern part of Sesheke, fish was the main material attraction. For six months of the year, it was practically their staple diet, and amply supplemented scarcity of grain.[139]

It was reported in 1958 that the inhabitants of Kasaya river were fortunate in that there was good fishing in the area which provided them with a livelihood for the purchase of grain when there was a considerable shortfall.[140] In Mabumbu, in the same year, more people than usual were far afield finding food, while many others were trading fish in Livingstone.[141] In 1961, A.M. Reid a cadet explained that, in the Katongo area and some parts of the upper Zambezi area, the fish trade was one of the most important sources of income.[142] In the same year, the District Assistant for Sesheke said that in Simungoma area, fish from the Zambezi river had the potential to alleviate any hardship caused by bad harvests such as was the case the previous year.[143] In 1962, in the upper Zambezi

[137] Siamwiza, "A History of Famine in Zambia, 1825 – 1949", p. 285.
[138] NAZ, MAG 2/5/9, Sesheke Tour Report no.5, 1939.
[139] NAZ, KTO 3/, Sesheke District Notebook 1903-1963.
[140] NAZ, BSE 1/2/103, Sesheke Tour Report no.5, 1958.
[141] NAZ, BSE 1/2/103, Sesheke Tour Report no.11, 1958.
[142] NAZ, SEC 2/574, Sesheke Tour Report no.3, 1961.
[143] NAZ, BSE 1/2/128, Sesheke Tour Report no.1, 1961.

area, many of the villages fished and used their catches both for food and as a source of income.[144]

According to Gwythian Isaac Thomas Prins, fish were like a crop which men harvested in the same way that women harvested sorghum or maize. Fish were conveniently small pieces of protein and could be obtained directly, through fishing or indirectly, through exchange, in many different ways.[145] Villages which were in the flood plains and rich in fish exchanged it freely for starch staples grown in the bush to augment their own staple production.[146] Fishing, therefore, helped the people of Sesheke district to improve household food security through the generation of income, and improved availability of food for consumption. Fishing enabled some people in the district to acquire money which they used to purchase food when there was a poor harvest. It could also be exchanged for grain.

4.4.2 Public Works

There were also a number of works such as road construction and maintenance which were sources of income for some people in Sesheke district. The works enabled some people in the district to acquire money which they used to purchase food during difficult times and also to meet certain needs. In 1958, the District Commissioner for Sesheke, M.S. Barrett, stated that, the Kalobolelwa area, usually expected to produce a surplus had no surplus for sale. However, the main road passed very close to the Zambezi and there were large labour gangs employed there bringing money into the area.[147] In 1960,

[144] NAZ, BSE 1/2/128, Sesheke Tour Report no.7, 1962.
[145] G. I. Prins, ‘‘Bulozi during the period of primary European contact, 1876-1896”, PhD Thesis, University of Cambridge, 1978, p.108.
[146] Prins, ‘‘Bulozi during the period of primary European contact, 1876-1896”, p.151.
[147] NAZ, BSE 1/2/103, Sesheke Tour Report no.5, 1958.

there was a bad harvest in certain areas of the district and the stores at Simungoma and Mwandi stocked and sold large amounts of maize. Money for this was obtained generally from work in the Public Works Department (P.W.D) road gangs on the Sesheke – Machile and Sesheke – Mwandi roads.[148] In the same year, the District Commissioner explained that in the places where there was famine such as the Namakala and Kanyimba areas a local programme of public works was to be organised to enable the people to earn sufficient money to buy food.[149] A 1960 Sesheke Tour Report indicated that the food supply in Iower Machile area was barely adequate for the year, but with the employment offered by the clearing operations of the Game and Tsetse control Department, close at hand, the villagers would be able to buy food and meet the defficiency.[150] A Tour Report of 1961 stated that, in Katongo area, the relative ease of obtaining work in the roads at the Boma and Katima Mulilo enabled the people in the area to alleviate hunger.[151]

4.4.3 Collection of Wild Fruits

Many people in the district depended on the fruits which were obtained in the forest during famine. A 1947 report noted that the Mashanjo people of Sesheke district lived on forest fruits for long periods of time. The Mungongo nut, their staple food was common in the forests and it was a saving factor in time of food shortage.[152] By late February 1947, only eight inches of rainfall had fallen in Sesheke. The crops were severely damaged and the people survived on forest fruits. It was reported in 1958 that,

[148] NAZ, SEC 2/574, Sesheke Tour Report no.1, 1961.
[149] NAZ, MAG 2/6/29, Sesheke Tour Report no.4, 1960.
[150] NAZ, MAG 2/6/29, Sesheke Tour Report no.7, 1960.
[151] NAZ, SEC 2/574, Sesheke Tour Report no.3, 1961.
[152] NAZ, BSE 1/10/14, Sesheke Tour Report no.2, 1946/7.

in Loazamba and Western Machile areas, there was no food for months and the people had eked out a precarious existence on forest fruits.[153] In the same year, in the Ngwezi area, the maize crop was spoilt by heavy rain and the villagers were living off the bush.[154] In the same period, in Simungoma, Katongo and a part of the upper Zambezi area the maize crop failed because of the flood and heavy rainfall. Most of the villagers said they were hungry and they depended on forest fruits for survival.[155] A 1962 tour report indicated that there were food shortages in Kamanga and Ikwe areas and a large number of people were living on forest fruits.[156]

4.4.4 Cattle rearing

Cattle rearing occupied a significant position in the economy of Sesheke district. This venture played a major role in the agricultural system of the people as well as in ensuring food security in the district. A government report stated that:

> The main reason for a farmer to sell his cattle would be to raise the needed money to buy food. Less important reasons were the need for clothes and blankets, for paying of school fees and in case of illness of family members cattle was used as a payment for treatment by African Doctors.[157]

The Sesheke Tour Report of 1947 indicated that, the people of Mabumbu, Katongo, lower Loanja, Simungoma and Sankolonga areas had plenty of cattle and they ate meat and drank milk, hence could not die from famine although a few people could have been hungry.[158] In the same year, the District Commissioner said that, the two main assets of

[153] NAZ, BSE 1/2/103, Sesheke Tour Report no.11, 1958.
[154] NAZ, BSE 1/2/103, Sesheke Tour Report no. 14, 1958.
[155] NAZ, BSE 1/10/14, Sesheke Tour Report no.7, 1958.
[156] NAZ, MAG 2/6/29, Sesheke Tour Report no.2, 1962.
[157] Government of the Republic of Zambia, Sesheke District Agriculture Office, Masese Cattle Development Area Project (CDA), 1982, p.21.
[158] NAZ, BSE 1/10/14, Sesheke Tour Report no.7, 1947.

the district were timber and cattle and that these were already being exploited both by the large European concerns (Zambezi Sawmills Limited, Rhodesia Wood Industries Limited, Cold Storage Control Board) and by individual African small traders who sold milk to travellers.[159] Furthermore, in 1947 the District Commissioner for Sesheke explained that milk provided a valuable addition to diet, especially for young children during famine.[160] One informant, Muyoba Mwanalimumwi, explained that cattle were sold to individuals as well as to some traders. The money acquired from the trade was used to buy food and to pay school fees.[161]

In 1957, in the west Machile area, there were 269 cows, 207 oxen, 17 bulls and 112 calves. All were in good condition.[162] In Ibolelo and Mushukula areas, there were 1314 cattle in 1957 and all were in excellent condition.[163] In 1958, the District Assistant Commissioner, Vincent Bratt stated that Sankolonga area supported the heaviest concentration of cattle in the district with 4474 head, and 996 head in lower Machile.[164] In 1958, in Mashanjo area, cattle on the Mashi was wiped out by tsetse fly. It was believed that cattle there were affected by mechanically transmitted trypanosomiasis, a situation which was to be investigated by the Provincial Veterinary Officer.[165] That same year, Simungoma area had 1665 cows, 482 oxen, 60 bulls, 460 calves, in the upper Zambezi area iii, there were 414 cows, 179 oxen, 16 bulls, 140 calves and in Katongo

[159] NAZ, SEC 1/371, Sesheke Native Development Minutes of 21st May, 1947.
[160] NAZ, SEC 1/371, Sesheke Native Development Minutes of 21st May, 1947.
[161] Interview, Muyoba Mwanalimumwi (Sesheke Peasant Farmer), Katema Village, Sesheke District, 17/05/2014.
[162] NAZ, BSE 1/2/88, Sesheke Tour Report no.7, 1957.
[163] NAZ, BSE 1/2/88, Sesheke Tour Report no.8, 1957.
[164] NAZ, BSE 1/2/103, Sesheke Tour Report no.15, 1958.
[165] NAZ, BSE 1/2/103, Sesheke Tour Report no.5, 1958.

area there were 1822 cows, 782 oxen, 52 bulls and 610 calves.[166] In 1959, there were 3255 head of cattle in Mabumbu ward an increase of 386 over 1958.[167]

Furthermore, in 1960, the cattle trade was clearly the most important economic factor in the Mabumbu area. It was believed that the cattle population could bring in over £4000 per year to the area at the prevailing prices.[168] The 1961 Sesheke Tour Report stated that:

> In Katongo and upper Zambezi iii areas, most people had large herds of cattle, and their cash value was made more apparent by the recent Mwandi sales. Cattle was sold to the Cold Storage Commission at Mwandi, to Mr. Siisii and Mr. Finaughty. Villagers in Katongo ward received at least £450 for their cattle in recent months, and £112 in Upper Zambezi iii area.[169]

In 1961, in Kalobolelwa area, cattle were in good condition. There were 64 bulls, 1055 cows, 454 oxen and 390 calves. An African butcher at Katima Mulilo who slaughtered three to four heads a week provided the biggest market for the area. Also a number of cattle owners sold their cattle at Mwandi to the Cold Storage Commission for good prices.[170] The Barotse Province Monthly Report for 1961 stated that the Agricultural Supervisor accompanied the Provincial Agricultural Officer to Mwandi in order to attend the first day of the four days cattle sale. On the first day 171 animals were bought for £2,522-10-0(average price of £14-14-0 per head).[171] In 1962, Sesheke district recorded three outbreaks of Trypanosomiasis. This was in Sichili, Lipumpu and Chief

[166] NAZ, BSE 1/10/14, Sesheke Tour Report no.7, 1958.
[167] NAZ, SEC 2/573, Sesheke Tour Report no.14, 1960.
[168] NAZ, SEC 2/573, Sesheke Tour Report no.14, 1960.
[169] NAZ, SEC 2/574, Sesheke Tour Report no.3, 1961.
[170] NAZ, SEC 2/574, Sesheke Tour Report no.8, 1961.
[171] NAZ, BSE 1/2/123, Barotse Province Monthly Report on Agriculture, August, 1961.

Momba areas but none of the outbreaks caused any great losses. All such outbreaks were dealt with quickly and efficiently by the veterinary field staff.[172]

In January 1962, 125 heads of cattle were bought by the Cold Storage Commission at Mwandi.[173] In July 1962, the cattle sales in Sesheke district took place at Machile and Mwandi. The numbers bought were: at Machile from 17th- 18th ; 32 beasts at £526 and Mwandi from 20th – 21th ; 369 beasts at £5,250.[174] According to Barotseland Monthly Reports for January and February 1964, cattle sales in Sesheke district were held at Mwandi, Machile and Lusu areas. Lusu, a new market attracted a large number of sellers.[175]

Cattle were also kept by the local people for draught power and transport. When income from any economic activity allowed, it was invested in cattle.[176] Therefore, oxen were used as a source of power in crop production and this enabled the people of Sesheke district to enlarge their fields of maize. Hermitte explained that ploughs had to be pulled by oxen, and cattle had traditionally been the exclusive concern for men.[177] Furthermore, oxen were used to transport the produce from the farm to the village for storage. The cattle were largely owned by Lozi chiefs and indunas though nearly every village had a few herds. Cattle were herded by small boys and kraaled at night close to the village. Milk could also be turned into sour.[178] Therefore, it is suffice to say that one cannot talk about agriculture and food security in Sesheke district without discussing the role cattle

[172] NAZ, BSE 1/2/106, Provincial Annual Report for the Department of Veterinary Services, 1962.
[173] NAZ, BSE 1/2/75, Provincial Agriculture Monthly Report of January, 1962.
[174] NAZ, BSE 1/2/75, Provincial Agriculture Monthly Report – Department of Agriculture Barotseland, 1962.
[175] NAZ, BSE 1/2/75, Barotseland Monthly Reports for January and February, 1964.
[176] GRZ, "Farming in Western Province: A description of domains and Zones based upon survey and analysis of farming systems", by M. Jacob Muwamba, 1988, p.5.
[177] Hermitte, "An Economic History of Barotseland, 1800 – 1940", p.312.
[178] NAZ, BSE 1/10, Sesheke District Note Book Vol.2, 1936 -1954.

played in the agricultural system of the people concerned. In other words, to the people of Sesheke district, without cattle, a plough was useless.

4.5 Conclusion

The chapter has discussed the impact of the change to maize cultivation on food security of the people of Sesheke district. The chapter has also shown that the introduction of monetary transactions as well as the market value which was attached to maize impacted negatively on the food security of the people of Sesheke district. This was because most people in the district gave in to the temptation of selling most of their produce for cash, a situation which left most of them with inadequate food supply. Furthermore, the chapter has explained that natural disasters also impacted negatively on food security and that certain coping strategies played a major role whenever there was famine in the district. Lastly, the chapter has shown the importance played by cattle keeping in ensuring food security for the people of Sesheke district.

CHAPTER FIVE

CONCLUSION

The study focused on agricultural change in Sesheke district of Western Zambia from 1899 – 1964. The study examined the dynamics of crop cultivation among farmers of Sesheke district. Several conclusions have emerged from the research. The first is that farmers in Sesheke district initially focused on the cultivation of sorghum and millet but over time began to cultivate maize as well. The study has demonstrated that maize was introduced into Western province around 1800 by the Portuguese and other traders from the west-coast.

The study has also demonstrated that soil type was one of the important resources the people of Sesheke district depended on in their agricultural undertakings. Fertile soils supported maize growing.

It has also been demonstrated that the main agricultural method practised in Sesheke district was the Southern Kalahari System of which two variations were distinguished, the Southern Kalahari Woodland System and the Southern Kalahari Thicket System. Both were indigenous forms of bush cultivation.

Another conclusion of the study is that the people of Sesheke district did not shift from sorghum and millet to maize cultivation at once. The change was done gradually and at the time of independence, a large population was still growing sorghum and millet. Therefore, it was not the entire population which had shifted completely to growing maize.

The study also concluded that it was in the 1950s that there was a significant change from sorghum and millet to maize cultivation in Sesheke district. The study has concluded that several factors led to the change, one of which was the availability of a market for maize. The Zambezi Sawmills, the Boma, Witwatersrand Native Labour Association and many other traders provided market for maize. Certain policies during the colonial period also encouraged the cultivation of maize than sorghum and millet. The British at first offered low price for Munanana and other sorghum crops. Later they completely stopped buying sorghum rendering it unmarketable. This was done in order to stop people from cultivating sorghum and millet. Maize was strongly supported by the colonial government as incentives were provided so as to encourage its production.

The study has also shown that the introduction of ploughs led to increased cultivation of maize as large portions of land were ploughed by peasant farmers. Bird attacks on sorghum and millet also contributed to the change to maize cultivation because of the tedious task involved in scaring birds away. The study has also shown that the introduction of hammer mills gave maize an advantage over sorghum and millet because it became easy to process maize into a meal than the other two cereals.

The study has concluded that the change from sorghum and millet to maize cultivation impacted negatively on food security of the people of Sesheke district. This was so because maize had become the most marketable crop and most people could sale large quantities of it leaving very little stocks which could not take them to the next harvesting season. Since maize was the only cereal crop which enabled people to make money, hence the temptation to sale the crop in large quantities and this caused food shortages.

Furthermore, the study has shown that natural disasters as well impacted negatively on the food security of the people under discussion. Drought, excessive rain and floods were among the natural disasters that affected peasant agriculture in Sesheke district.

The study has also demonstrated that a number of strategies were employed in order to mitigate against famine at certain times. These included fishing, road works and gathering of forest fruits. Fish did not only provide relish to the people of Sesheke district, but was also traded for money. Some peasants engaged in government road works which was a good source of income to buy food supplies. In addition, the collection of forest fruits helped the people of Sesheke to eliminate hunger.

Lastly the study has concluded that cattle rearing played a major role in the economy of the people of Sesheke district. This venture helped in ensuring food security in the district. Some people could sell cattle in order to acquire money which was used to purchase food stuffs during difficult times. Cattle also provided milk as well as beef hence improving the nutritional status for the people of Sesheke district.

BIBLIOGRAPHY

Primary Sources

National Archives of Zambia (NAZ)

Secretariat Files- SEC Series

SEC 2/558 Sesheke District Tour Report, 1935.

SEC 2/557 Sesheke Tour Report, 1932.

SEC 2/574 Sesheke Tour Report, 1961.

SEC 2/573 Sesheke Tour Report, 1960.

SEC 1/371 Sesheke Native Development Minutes of 21st May, 1947.

BS Series

BSE 1/2/103 Sesheke District Tour Report, 1958.

BSE 1/10/14 Sesheke District Tour Report, 1947.

BSE 1/2/88 Sesheke District Tour Report, 1957.

BSE 1/10/14 Sesheke District Tour Report, 1948.

BSE 1/2/15 Sesheke District Tour Report, 1950.

BSE 1/3/3 Records of a meeting between Agricultural Officer and Chief Lubinda and the Mwandi kuta, 1952.

BSE 1/2/106 Department of Agriculture Barotseland Protectorate Annual Report, 1958.

BSE 1/4/13 Barotseland Protectorate Food Supply Committee, 1960.

BSE 1/2/75 Monthly Report of February, 1962.

BSE 1/10 Sesheke District Note Book vol 2, 1936 – 54.

BSE 1/2/136 Barotseland Protectorate Annual Report for the year 1961.

BSE 1/2/123 Barotse Province Monthly Report on Agriculture, August, 1961.

KDE Series

KDE 2/44, 1936.

Ministry of Agriculture (MAG) Series

MAG 2/5/9 Sesheke District Tour Report 1940.

MAG 2/5/49 Barotseland Annual Report of the Department of Agriculture for the year 1954.

MAG 2/6/2 Agricultural Development Plan for Barotse Protectorate, 1960.

MAG 2/9/10 – Peters, D.U Report: Survey of agriculture on Barotseland 1951.

A Series

A5/2/3 Sesheke Annual Report, April, 1909.

Interviews

Interview with Kaluwe, Monga Agness, 20th May, 2014, Simanenga village, Sesheke.

Interview with Kangowa, Henry, 20th May, 2014, Silubu village, Seshseke.

Interview with Kapala, Twabe, 20th May, 2014, Kanyamuna village, Sesheke.

Interview with Mukuwa, Mulonda, 21st May, 2014, 2014, Imilema village, Sesheke.

Interview with Muyoba, Mwanalimumwi, 17th May, 2014, Katema village, Sesheke.

Interview with Muyoba, Namonda, 17th May, 2014, Mulimambango village, Sesheke.

Interview with Namasiku, Kawina, 20th May, 2014, Katema village, Sesheke.

Interview with Namonda, Mutemwa, 23rd May, 2014, Mulimambango village, Sesheke.

Interview with Nangana, Ndombo, 21st May, 2014, Lipumpu village, Sesheke.

Interview with Nansasi, Mulele Esther, 20th May, 2014, Kafaya village, Sesheke.

Interview with Npuli, Kondwani, 21st May, 2014, Katema village, Sesheke.

Interview with Petulo, Mulibe, 14th November, 2016, Zambwe village, Sesheke.

Interview with Pumulo, Mate, 21st May, 2014, Nalikela village, Seshseke.

Interview with Siloba, Kambuze Henry, 10th September, 2018, Siloba Village, Sesheke.

Interview with Sitwala, Kambole, 15th August, 2018, Matoka village

SECONDARY SOURCES

Books

Chapato, A and Nicholas, J. S. (eds.) *Agriculture in Zambia, Past, Present and Future*.

Lusaka: Indaba Agricultural Policy Research Institute, 2015.

Chipungu, N. Samuel. *The State, Technology and Peasant Differentiation in Zambia: A Case study of the Southern Province, 1930 – 1986*. Lusaka: Historical Association of Zambia, 1988.

Hall, Richard. *Zambia*. London: Pall Mall Press, 1965.

Kittler, Glenn. D. *Central Africa: The New World of Tomorrow*. New York: Thomas Nelson Inc, 1971.

Lewin, C. J. *Northern Rhodesia- Agricultural and Forestry Development Plans for 10 years*. Lusaka: Government Printer, 1945.

Livingstone, David. *Missionary Travels and Researches in South Africa*. London: Clowes & Sons, 1857.

Lombard, C.S and Tweedie, A.H.C. *Agriculture in Zambia since Independence*. Lusaka: Neczam, 1974.

Mulford, C. David. *Zambia: The Politics of Independence 1957-1964*. London: Oxford University Press, 1967.

Roberts, Andrew. *A History of Zambia*. London: Heinemann, 1976.

Snelson, Peter. *Educational Development in Northern Rhodesia, 1883-1945*, second edition. Lusaka: Zambia Educational Publishing House, 1974.

Tabler, E. C. (ed.) *Trade Travel in Early Barotseland*. London: Chatto & Windus, 1963.

Vansina, Jan. *Kingdoms of the Savanna*. London: The University of Wisconsin Press, 1966.

Chapters in Edited books

Andrews, D. H, Mughogho, L.K and Ball, S. L. "Sorghum and Pear Millet Production in Africa: Problems and Prospects with New Varieties," in Hawksworth, D. L (ed.), *Advancing Agricultural Production: Proceeding of CAB'S First Scientific Conference Arusha, Tanzania*. London: Commonwealth Agricultural Bureaux, 1984, pp. 85-86.

Doggett, H. "Cereal Production Needs and Achievements", in Hawks worth, D. L (ed.), *Advancing Agricultural Production in Africa: Proceeding of CAB'S First Scientific Conference Arusha, Tanzania.* London: Commonwealth Agricultural Bureaux, 1984, pp.12-18.

Fagan, Brian. "Early Farmers and Iron workers (100 B.C to A.D. 1500)", in Fagan, Brian. M (ed.) *A Short History of Zambia*. London: Oxford University Press, 1976, p.87.

Gluckman, Max. "The Lozi of Barotseland in North- Eastern Rhodesia", in Colson, E and Gluckman, M (eds.) *Seven Tribes of Central Africa.* Manchester: Manchester University Press, 1961, pp. 1-68.

Kajoba, Gear. M. "Vulnerability and resilience of Rural Society in Zambia: From the view point of Land Tenure and Food security*", Working Paper on Social Ecological Resilience Series* No. 2008-003, March, 2008, 1-38.

Lukanty, Jadwiga and Wood, Adrian Paul, "Agricultural Policy in the Colonial Period", in Wood; Kean; Milimo and Warren (eds.), *The Dynamics of Agricultural Policy and Reform in Zambia*. Iowa: Iowa State University Press, 1990, 3-18.

Mcmaster, D. "Agricultural Geography", in John, I. Clarke (ed.), *An Advanced Geography of Africa.* Hulton: Hulton Educational Publications Ltd, 1975, p.348.

Small, M and Jayne, T. Maize in Eastern and Southern Africa: Seeds of success in retrospect- Environment and Production Technology Division (EPTD), Washington D.C, January, 2003, p.14.

Van Horn, L. "The Agricultural History of Barotseland 1840-1964", in Palmer, R. and Parsons, N (eds.), *Roots of Rural Poverty in Central and Southern Africa*. London: Heinemann, 1977, p.145.

Journal articles

Eldridge, I. M. "Short History of the Sesheke District" in Brelsford, W.V (ed.). "Northern Rhodesia Society", *The Northern Rhodesia Journal vol.3*, (1956), pp.174-176.

Fourshey, C.C. "The Remedy for Hunger Is Bending the Back: Maize and British Agricultural Policy in Southwestern Tanzania, 1920-1960", *The International Journal of African Historical Studies,* vol.41, No.2 (2008), pp.223-261.

Gluckman, Max and Winterbottom, J.M (eds.). "Human Problems in British Central Africa", *The Rhodes – Livingstone Journal3* (1945), p.41.

MacCann, J. "Maize and Grace: History, Corn and Africa's New Landscapes, 1500-1999", *Comparative Studies in Society and History*, vol.43, No.2 (April, 2001), pp. 246-272.

Tavuyango, B, Mutami, N and Mbenene, K. "Traditional Grain Crops in Pre- Colonial and Colonial Zimbabwe: A factor for Food Security and Social Cohesion among the Shona people", *Journal of Sustainable Development in Africa 12*, 6 (2010), p.3.

Ministry of Agriculture, Western Province

Sesheke District Development Coordinating Committee Secretariat (DDCC).*Sesheke District Situation Analysis*. Sesheke, 2003.

Ndiyoi Mukelabai and Heemskerk Willem. "*Status of Agronomy research in Wetland target Areas western province"*, Mongu, 1989.

Sesheke District Agriculture Office. *Masese Cattle Development Area Project (CDA),* Sesheke, 1982.

Muwamba, Jacob. M. *A description of domains and zones based upon survey and analysis of farming systems in Western Province*, Mongu, 1988.

Food and Agricultural Organisation, *Farm Data Hand Book: Crop and Livestock Budgets, Zambia.* Rome, FAO, 1990.

Annual Reports

Department of Agriculture. *Annual Report for the year 1962*. Lusaka: Government Printers, 1963.

Theses and Dissertations

Bwalya, Donald Hezie. J. "Agricultural Change in the Northern Province of Zambia 1948-1978: A case study of maize production in Kasama District", MA Dissertation, University of Zambia, 1989.

Bwalya, M.C. “Rural Development and Agricultural Transformation in Northern Zambia. A study of the Historical and Contemporary sources of Agricultural Backwardness in Mpika”, PhD Thesis, University of East Anglia, 1980.

Chabatama, Chewe Mebbiens. “Peasant Farming, the State and Food Security in the North–Western Province of Zambia, 1902-1964”, PhD Thesis, University of Toronto, 1999.

Chondoka, Y. A. Labour Migration and Rural Transformation in Chama District, North Eastern Zambia, 1890-1964”, PhD Thesis, University of Toronto, 1992.

Hermitte, E. L. “An Economic History of Barotseland, 1800-1940”, PhD Thesis, The North Western University, 1973.

Kamayoyo, Njekwa. “Anatomy of Economic Underdevelopment of Lyaluyi area, 1890-1924”, MA Dissertation, University of Zambia, 1989.

Malambo, Lovejoy M. “Rural Food Security in Zambia”, PhD Thesis, Michigan State University, 1987.

Mboma, Kafuba. “The Changing Role of women in Agriculture: A study of Kalabo District, 1906-1986”, MA Dissertation, University of Zambia, 1991.

Muntemba, M.S. “Rural Underdevelopment in Zambia: Kabwe, Rural District, 1850-1970”, PhD Thesis, University of California, 1977.

Mwansa, D. “Gender and Agricultural Development in Zambia, 1890-1900”, PhD Thesis, University of Zambia, 2017.

Nzila, Iven Mweetwa. “The Zambezi Sawmills: A study of Forest Exploitation in the Western Province of Zambia, 1890-1968”, MA Dissertation, University of Zambia, 1987.

Prins, G. I. “Bulozi during the period of primary European contact, 1876-1896”, PhD Thesis, The University of Cambridge, 1998.

Punt, E. “The Development of African Agriculture in Southern Rhodesia with particular Reference to the Interwar years”, MA Dissertation, The University of Natal, 1979.

Siamwiza, Bennet, S. “A History of Famine in Zambia, 1825-1949”, PhD Thesis, University of Cambridge, 1998.

Tembo, A. The Impact of the Second World War on Northern Rhodesia (Zambia), 1939-1953”, PhD Thesis, University of Free State, 2015.

Vickery, P. K. “The Making of a Peasantry: Imperialism and the Tonga Plateau Economy, 1890-1936”, PhD Thesis, Yale University, 1978.