COMMERCIAL FARMING AND SOCIAL CHANGE
IN MKUSHI DISTRICT, 1945-1975

by

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1989.
DECLARATION

I, CHIPO MUNZABWA SIMUNCHEMBU, hereby declare that this dissertation represents my own research work, and that it has not been previously submitted for a degree at this or any other University.

SIGNATURE: ..................................................

DATE: 5-12-89 .............................................
For my late father Siazinkwa and my late mother Sussana who did not witness the fruits of their efforts.
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<tr>
<td>ASS</td>
<td>Assisted Settlement Scheme</td>
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<tr>
<td>BSA Co.</td>
<td>British South Africa Company</td>
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<tr>
<td>CFB</td>
<td>Commercial Farmers Bureau</td>
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<tr>
<td>CDC</td>
<td>Commonwealth Development Corporation</td>
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<tr>
<td>DC</td>
<td>District Commissioner</td>
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<td>FG</td>
<td>Federal Government</td>
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<tr>
<td>FYDP</td>
<td>Four Year Development Plan</td>
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<tr>
<td>GRZ</td>
<td>Government of the Republic of Zambia</td>
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<tr>
<td>ICEM</td>
<td>Inter-Governmental Committee for European Migration</td>
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<tr>
<td>KM</td>
<td>Kilometre</td>
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<tr>
<td>MFA</td>
<td>Mkushi Farmers' Association</td>
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<tr>
<td>MFB</td>
<td>Mkushi Farm Block</td>
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<tr>
<td>NAZ</td>
<td>National Archives of Zambia</td>
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<td>NR</td>
<td>Northern Rhodesia</td>
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<td>NRG</td>
<td>Northern Rhodesia Government</td>
</tr>
<tr>
<td>SR</td>
<td>Southern Rhodesia</td>
</tr>
<tr>
<td>TBZ</td>
<td>Tobacco Board of Zambia</td>
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<tr>
<td>TFS</td>
<td>Tenant Farming Scheme</td>
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<tr>
<td>UDI</td>
<td>Unilateral Declaration of Independence</td>
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<tr>
<td>VTAZ</td>
<td>Virginia Tobacco Association of Zambia</td>
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</table>
CURRENCY: 1968 CONVERSION

OLD

One Penny (1d)
Six Pence (6d)
Twelve Pence (12d)
Two Shilling and Six Pence (2/6d)
Ten Shilling (10/-)
One Pound (£1)

NEW

One Ngwee (1n)
Five Ngwee (5n)
Ten Ngwee (10n)
Twenty-Five Ngwee (25n)
One Kwacha (K1)
Two Kwacha (2)

NAMES

OLD

Abercorn
Belgian-Congo
Broken Hill
Fort Jameson
Northern Rhodesia
Salisbury
Southern Rhodesia

NEW

Mbala
Zaire
Kabwe
Chipata
Zambia
Harare
Zimbabwe
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ABSTRACT

The study deals with agricultural development within the context of a changing environment both under colonial rule and in the post-colonial period. It is a case study of Mkushi District in which a farm block was established where white farmers, especially ex-servicemen, were settled on crownland in the 1950s. In this study I argue that ecological problems in agriculture and animal husbandry were serious constraints in the economic development of the area. Colonial rulers were concerned about solving ecological problems facing agriculture. This concern facilitated the exploitation of natural resources. The colonial policies after 1950 were formulated and implemented mainly to deal with environmental problems as a way of facilitating improved agricultural production. These efforts were relatively successful during the colonial era but were not so successful in the post-colonial period because the new government did not fully attend to conservation measures. The study will also deal with the socio-economic changes which were brought about by the development of commercial farming amongst the farm workers in the farm block.

The first chapter gives a historical background of commercial farming in Northern Rhodesia from 1900-1945. It examines the government policies pertaining to commercial farming in a colonial setting. The second chapter is the main chapter and deals with the development of commercial farming
on Mkushi farm block. It also examines the policies of the colonial government regarding commercial agriculture in the area. The final chapter discusses the post-colonial agricultural developments in the farm block.
The first part of the research was devoted to reading published and unpublished materials at the University of Zambia library and Institute for African Studies on agriculture and ecology. I then went to the National Archives of Zambia where I spent time reading relevant materials on my research topic. I consulted Mkushi district notebooks and tour reports throughout the colonial period. Thereafter I went to the provincial archives in Kabwe where I consulted archival materials for Mkushi district.

I went for fieldwork in June 1988 to Mkushi where I interviewed Ministry of Agriculture employees. They allowed me to consult their District annual reports and land use maps. While in Mkushi I interviewed labour officers who also allowed me to use their closed files. I spent time visiting the farm block where I interviewed some commercial farmers, farm workers and some tenant farmers on TBZ farms. Most of the early occupants have left the farm block and also some tenant farmers on TBZ farms left the schemes for various reasons. The interviews were not tape recorded.

I wish to acknowledge the following people for the role they played in the course of my research and writing. My supervisor Dr. A.M. Kanduza, of the University of Zambia for making criticisms on the structure and organisation
of the Dissertation. I also thank him for his useful suggestions which encouraged me to see this work to the end. Many thanks go to Dr. B. Nyeko, who took over when Dr. Kanduzza left, the members of staff in the History Department who in one way or another contributed to shape the Dissertation. I am particularly grateful to the Directorate of Manpower Development and Training for the financial assistance rendered to me during my studies.

My sincere gratitude goes to Mrs. A.K. Mbewe for typing this work. I convey my thanks to Mr. D.H. Bwalya, who was my only course mate, and Mr. L.M. Muchindu, for their encouraging words in periods of distress. My greatest tribute goes to my wife Maureen who appreciated my absence and who looked after our only son Siazinkwa who at three months did not understand my departure from home. To many friends and relatives, too many to list, who helped me in one way or another in my work, I say thank you.
INTRODUCTION

Since the colonial period, a number of scholars have written on the economic history of Zambia. Among these scholars are neo-classical economists who have dealt with the existence of two contrasting economic systems in Central Africa which they have referred to as a 'dual economy'. They emphasized the backwardness and subsistence-oriented nature of African economies. They underrated the strength of African economies and considered them as rigid and uninnovative. William Barber noted about Central Africa that 'the central fact about the economic system is the co-existence of two forms of economic and social organisation within the same geographical area'. This approach underplayed the internal dynamic of the indigenous economies and considered capitalist oriented production as dynamic and innovative.

A number of scholars have challenged the utility of the dual economy theory as ahistorical and abstract. This criticism became systematically discussed from the late 1960s. For Central Africa, Giovanni Arrighi opened the debate. He stated that 'these authors conceive of the underdevelopment of the African peoples as an original state which the development of a capitalist sector gradually eliminates'. Colin Bundy, Robin Palmer and Neil Parsons empirically and theoretically showed the poverty of the dual economy theory. Instead they showed that the underdevelopment of African economies resulted from their
response to commodity markets when they competed with European agriculture which was supported by the colonial state. Africans were subjected to discriminatory market arrangements, taxation and land alienation with the result that African agriculture in general became underdeveloped. In this formulation, underdevelopment should be seen in a historical context because 'white prosperity was historically dependent on African impoverishment and vice-versa'.

In the debate referred to above, the scholars differed only in their interpretation of data. Underdevelopment of African economies has also been explained by using ecological data. Leroy Vail, dealing with Eastern Zambia in the first half of the twentieth century, examined one aspect of underdevelopment as ecological deterioration directly attributed to colonial rule. Vail's argument was that colonial policies did not take into consideration ecological consequences on the local people of Eastern Province. Kjekshus writing in a different area argued that colonial policies enhanced ecological deterioration. In general, the significance of studies of ecology or ecological factors in historical change have done a lot to amplify our understanding of socio-economic change in Central Africa.

T.O. Ranger's review of the history of agriculture in Zambia concluded that within the framework provided by Allan and Hellen, there was need to carry out village studies. R. Roberts and C. Elliot noted that 'the physical environment within which agriculture is practised in Zambia must itself
be recognised as one of the principal constraints to production'.

8 Beinart observed that despite the availability of information on soil, rainfall and vegetation in the 1930s in Zambia, there does not seem to have been studies on ecological history. 9 He therefore called for detailed investigations of ecological effects on agriculture. F. Cooper advised Africanist academics that they should not continue pursuing similar studies but to engage in scholarly work which has not yet been fully explored. 10

This study takes into consideration environmental factors such as rainfall patterns, soils, pests and diseases. This approach follows John Tosh whose study of African peasant agriculture emphasized the need not to detach the farmer from his environment. He further argued that most historical debates on African agriculture were conducted 'in a kind of ecological vacuum'. 11 Similarly B. Ogot suggested that it is necessary to know something more than geography when studying historical changes. He asserted that,

\begin{quote}
\textbf{historians will have to re-orient their work towards the study of what ecologists call spatial dynamics which include such topics as land form evolution, ecological succession, soil formation, climate dynamics and cultural landscape evolution... Any historical reconstruction must take cognizance of the vast changes in the physical environment that have taken place. 12
\end{quote}

This is the line of argument in the present study.

Environmental differences affect farming in contrasting terms. There are variations in environmental hazards found in tropical regions affecting agriculture. 'The rapid
leaching of nutrients and degradation of planted farmland following the removal of forest, soil erosion through variable and heavy rainfalls and prolonged droughts.\textsuperscript{13} U.J Moffat a former agricultural officer in Northern Rhodesia who settled in Mkushi where small-circle cite\textit{mene} method of farming was practised noted that African methods of agriculture ought not to be looked at from the point of view of highly specialised agriculturist which takes little account of the local conditions prevailing in the area.

As one begins to study African methods and follows each process in detail, one sees a great deal of common-sense in carrying out of the different operations and there is generally a good reason why things are done as they are.\textsuperscript{14}

W. Allan also argued that a shifting cultivator had good understanding of his environment suited to his needs and that the character of the soil determined the nature of the agricultural system.\textsuperscript{15} He further argued that 'the most important factor which determines shifting cultivation was the ratio between the length of time the soil will sustain cultivation with satisfactory results and the period required for the restoration of fertility.'\textsuperscript{16}

Commenting on the agricultural system which was practised in Mazabuka district in the 1940s, W. Allan et al argued that the Tonga traditional agricultural techniques have been a drawback in land use. They argued that the shortage of land in the district was not caused by European settlers and government policies but the nature of agricultural system which involved shifting cultivation. They made recommendations
that unless a change in agricultural method and a reduction of livestock was done in the district, land would become worn-out and incapable of supporting its people.\textsuperscript{17} There are variations in physical environment which limit the distribution of plants and animals - 'the actual distribution will depend on man's willingness and ability to ameliorate physical limits'.\textsuperscript{18} This had become possible through technological innovations which had necessitated developments. The patterns of settlement have long been influenced by trends associated with the environment and this is necessary for historians to take into consideration when analyzing various communities.

In the Southern part of the district which is the focus of this study lies the hot dry Luano valley. From here the country rises sharply towards the North through Muchinga escarpment to an undulating plateau which became the Mkushi farm block. The plateau lies at a general elevation of 3700 ft (1028m).\textsuperscript{19} The plateau group of soils are mainly derived from crystalline rocks (granite, schists and quartzites). The soils are thin, poor and considerably leached. There are ranges of stony hills, rocky outcrops and waterlogged damboes often of great size.\textsuperscript{20} The light sandy soils (sandveld) are suitable for maize and tobacco in rotation. The crownland was set up on the plateau mainly because of the soils which were suitable for Virginia tobacco. In the South-West the plateau is well watered by the tributaries of Lunsemfwa river which borders the farm block.
Collin Trapnell, a government ecologist, carried out ecological surveys on the soils, vegetation and agricultural systems of North-Eastern Rhodesia in 1943. He noted the sandy nature of the soils and a higher altitude of Mkushi farm block. The mean annual rainfall varies between forty and fifty inches (762mm-1015mm). Temperature ranges between 67°F and 70°F (19°C - 21°C). In winter period from May to August the monthly mean drops to 15.5°C or even lower. The rainfall distribution is higher in the Northern part of the district but decreases considerably in the lower Luano valley - lying on the leeward slope. The plateau sandveld in their natural state are not suitable for large stock - and even with light stocking the grass has very little feeding value especially during the dry season. The greater part of the plateau is covered by Central Julbernadia - Brachystegia woodland characterised by B. Burtttii. It is in this context that I will discuss the importance of ecological studies in relation to farming on Mkushi farm block.

This study of Mkushi farm block attempts to understand the relationship between human beings and their habitat because failure of certain development schemes undertaken in recent years might have been avoided if a fuller use had been made of the services of geographers in co-operation with agricultural experts and soil chemists. Moffat, Tosh, Allan et al have discussed the importance of understanding the environment in farming amongst peasant farmers but this study is absent on settler farmers. This is the contribution
I intend to make in this discussion. The complexities of interactions between climate, plants and animal species on Mkushi farm block have to be understood.

It is because of lack of consideration for ecological realities due to lack of knowledge that some projects in developing countries have not succeeded. It is therefore important to utilize land properly to avoid environmental disasters.²⁵

In order to understand the development of commercial farming in Mkushi, both environmental setup and government policies have to be taken into consideration. The colonial government realized the need to maintain conservation works by setting up the Intensive Conservation Area (ICA) Committee in 1957. This Committee comprised experienced farmers who monitored inexperienced farmers and advised them on proper farming techniques pertaining to the environment of Mkushi. 'In undertaking such a case study in rural Africa, it is important not to allow models and theory obscure real life. It is equally important to develop an awareness of agricultural realities on the ground'.²⁶

Farming is influenced by a number of factors such as rainfall, temperature, soils, distance from the markets and many other human factors. Maize is Zambia's major grain crop and Virginia tobacco, had been a major cash crop grown for export on Mkushi farm block. There are three types of tobacco namely Virginia, Barley and Turkish. Only Virginia tobacco
was grown by the settler farmers on the farm block. Tobacco requires a constant temperature of 21°C during the growing season. It also needs a good and regular supply of water. In the absence of sufficient rainfall, irrigation is necessary for the seedlings when they are transplanted to the main field just before the rains. Heavy rainfall and long drought spells affects the growth of the plants.27

The conditions for maize are a summer rainfall between 500mm and 1250mm and temperatures of over 18°C during the growing season. There should be no frost during the growing season. It requires deep, well drained, humus rich soils but on plateau sandveld areas mineral supplements in form of fertilizer are necessary. Sandy loam soils are preferred especially when maize and Virginia tobacco are grown in rotation. Tobacco does not require soils which are very fertile because the leaves may be too juicy. It is the during methos which matter because the flavour and aroma of tobacco depends mostly on these factors.28 The best way to cure tobacco on Mkushi farm block was to use the flue-cured method. Generally the soils on the farm block are regarded as very good for both maize and tobacco and it is in this context that the farm block was established in 1951 to spearhead production of these crops. The farm block covered 428,000 acres of land.29

Before the Second World War, Mkushi could not develop commercial agriculture because it lay at 161 Km from major markets in Kabwe and the link of Mkushi to the Copperbelt
through Kapiri-Mposhi is about 257 Km. Mkushi farm block was the last major area to be occupied by white settler farmers in Northern Rhodesia because of lack of transport and communication difficulties to major markets. These problems had delayed the occupation of the area. This was not considered a major deterrent to the development of commercial agriculture after 1945 as shown on map 1 because of the need to increase food production in Northern Rhodesia and a world wide demand for agricultural crops by industry in the Western world. In addition to market, the ecology was generally favourable as discussed earlier.

The development of commercial farming on Mkushi farm block did not lead to major social changes amongst African workers because the area was only occupied in the 1950s unlike other crownlands in the country. Social change has been defined by J. Gould and W. Kolb as,

an observed difference from the antecedent states of the social structure, institutions, habits or equipment of a society in so far as it is the product of change either in a specified substructure or dominant sector of social existence or in a physical environment.

In this discussion we are referring to an observed change in farming equipment of the workers. The purpose of the study is to demonstrate that the occupants of crownlands have not always occupied fertile agricultural areas. The period under discussion ends in 1975 because tobacco growing in the farm block had begun decreasing while other crops (maize and soya beans) became more profitable.
MAP 1: LOCATION OF STUDY AREA: MKUSHI FARM BLOCK IN RELATION TO MAJOR MARKETS.


23. Allan, Husbandman, p. 120.


29. NAZ, NR10/186, Alienation of Land in Mkushi, 1951-56.

30. NAZ, NR17/186, European Farming Industry in Northern Rhodesia.

CHAPTER ONE

THE POSITION OF MKUSHI DISTRICT IN THE
AGRICULTURAL ECONOMY OF NORTHERN RHODESIA

The period 1900-1945 was characterised mainly as one of subsistence production among Africans in Mkushi. The prominent system of agriculture was small-circle citemene and this had not experienced major technological innovations. The Lala produced finger millet as the dominant crop. Other subsidiary crops included cassava, pumpkins, groundnuts, beans and sweet potatoes. There were very few settler farmers. Commercial farmers were confined to the line of railway from Kalomo to Kabwe, Mbala and parts of Eastern Province.\(^1\) The development of commercial farming in the area has been a post Second World War phenomenon.

Commercial farming in Northern Rhodesia (NR) followed the construction of the railway line from Southern Rhodesia (now Zimbabwe), which reached Victoria Falls in 1902, Broken Hill (now Kabwe) in 1906 and the Belgian-Congo (now Zaire) in 1910.\(^2\) The first white farmers were mostly those with little capital, who had been attracted by the cheap labour and land north of the Zambezi.\(^3\) In the early part of the twentieth century Northern Rhodesia was not a viable agricultural area as it was regarded mainly as a labour reservoir for the mines and farms of Southern Rhodesia and South Africa. There were 625 Europeans in the country by the end of 1906 who were mainly employed in trading, mineral exploitation, the railways, government services and
production of maize and cattle rearing along the line of railway for the Katanga mines. Some settlers had also settled around Fort Jameson (now Chipata) raising cattle for Southern Rhodesia. This trade was shortlived following the outbreak of sleeping sickness in 1907 and the recovery of Southern Rhodesia herds also led to the decline in exports. The attempt to grow cotton failed due to diseases and Virginia tobacco was introduced there around 1911. M. Jones noted that 'there was a slow and erratic development of European settlement in Northern Rhodesia who were concentrated around administrative and mission stations'.

There were 714 European farmers in the territory in 1921 who were mainly found on the old railway belt between Livingstone and Kabwe, around Chipata and in a remote border area of Mbala, but none in Mkushi. The British South Africa Company (BSAC) which governed Northern Rhodesia from 1897 to 1924 was mainly concerned with mineral explorations. In 1924 the British Imperial government took over the administration of Northern Rhodesia from the BSAC. While the BSAC policy and practice focused on settlers, with the transition to colonial rule, the concept of settler supremacy was questioned in principle, but not in practice.

As the settler agricultural industry in maize and tobacco was picking up in the 1920s, the World Depression of 1929-33 reversed that development. The loss of a local market through closure of some mines between 1931 and 1933
on the Copperbelt forced many farmers out of production. Whilst farmers were in a depressed state, the British government published a memorandum in 1930 which stated that, 'the interests of the African natives must be paramount and that if, and when those interests and the interests of the immigrant races should conflict, the former should prevail.' This provoked an immediate protest amongst the Northern Rhodesia settlers whose reaction was that,

to British settlers the paramountcy of the native appears to be incompatible with justice. To subordinate the interests of civilised Britons to development of alien races, whose substantial further advancement has not been demonstrated appears to be contrary to natural law.

The colonial government generally avoided conflicts with the settler community. Although some British officials sympathised with African problems, European immigration and permanent white settlement remained a high policy. The allocation of land was one of the most powerful instruments of encouraging permanent white settlement. This was done through the reserves commission of 1929.

In 1931 a report on the position of agricultural industry showed that,

while there was some scope for the development of sidelines to supply the local mining population with milk, butter, cheese, vegetables and for irrigated wheat production, there were no immediate prospects for increased settlement because of the limited size of the market.
In 1938 the Pim Commission enquired into the financial and economic position of Northern Rhodesia. It was reported that,

there was economically no scope for more maize producers in the railway belt, and that the only alternative dry land crop that might be developed on any comparable scale was tobacco in those parts suited to it.12

The establishment of Native reserves in 1929 affected the people of Mkushi who practised small-circle citemene system of agriculture. Movement into the reserves was effected in 1932 and was completed in 1933. Seven chiefs were affected and had their land reduced from 6,000 square miles to 2,190 square miles.13 In 1938 the following remark appeared in a government report:

agriculture is a serious problem in chief Shaiwila's area... villages now line the reserve side of the Mkushi river cheek by jowl, looking with hungry eyes at the unoccupied land opposite, behind them lies the commencement of a man-made desolation. Either crownlands opposite must be open or there must be a complete revolution in the present system of agriculture.14

In the Luano-Lala native reserve in chief Mbonshya, the land was hilly and infertile lying on the Muchinga escarpment. The area was further infested with tsetse fly. The ecological factors and land alienation in Mkushi contributed to differences in agricultural production between the settler farmers who had the modern skill in farming and the peasant farmers who had limited skills to counter-ract the environment. The ecological position of the district facilitated variations in agricultural production.
The failure of the colonial government to improve transport and marketing facilities in African areas was to some extent being affected by the nature of the topography and terrain. The regional differentiation affected agricultural production in some parts of the district and this contributed to social differentiation amongst peasants as agricultural production followed ecological conditions. Some African peasants were successful while others faced difficulties because of environmental problems. The major problem was the quality of the land rather than quantity.

The conditions for Commercial agriculture began to change in the country during the Second World War. Food surplus gave way to deficits and Governor John Waddington issued a directive in 1942 for increased agricultural production to support a continued production of copper. The basic economic life in Northern Rhodesia in early 1940s was affected by the course of the Second World War. There was increased interest in agriculture during the war because of the high demand for copper. This demand was due to the fact that copper was used in the making of armaments thus justifying the Governor's directive to increase agricultural production to feed workers on the Copperbelt. The market for agriculture continued to expand after the war and favourable conditions stimulated production in the country.

The Land Commission of 1942 had carried out a survey to find out how many settlers had occupied the
crownlands. This was in view of the expected ex-servicemen who were to be settled on the crownlands. There were only three white settlers apart from missionaries who had been allocated land in the district since 1920s. One of them had left the country, while the other one had a small successful ranch. The third concentrated on citrus production with some success. However details of the success of these farmers are difficult to find empirically, because, prior to 1950, commercial had not developed in Mkushi district. There does not seem therefore to have been much interest in recording what happened.

In 1945 a select Committee was appointed by the Legislative Council to examine and report on the question of land settlement in Northern Rhodesia for the ex-service-men. The Committee's main findings was that there were shortages of agricultural pastoral products but that caution in stimulating new white settlement should be observed. Dairy farming and wheat growing had a wide market even when restrictions were imposed on some crops and new settlers could engage in such products. In 1945 the consumption of cheese, butter and milk (fresh and preserved) was equivalent to 2,750,000 gallons of milk while production was 600,000 gallons. There were very few farmers who had taken up the industry because of difficulties encountered in distribution.

The new settlers could therefore take advantage of the opportunity as a local market was available. The
additional cows of dairy type needed numbered 3,000 to meet the 1,500,000 gallons shortfall. The new settlers were advised by the Director of Veterinary Services to consider keeping between twenty-five and thirty cows. 18 Indeed, since the development of the copper industry there had never been self-sufficiency in dairy produce. The territorial imports of dairy products amounted to eighty-four percent in 1946, sixty percent for wheat and forty for meat. 19

In 1946 a Committee was appointed by the Governor to enquire into the development of European farming industry. It recommended that there was need to expand European farming industry since there was a large industrial and urban population. The report stressed the need to reduce imports of foodstuffs by having a sound farming community. 20 The consumption rate doubled while production was only half. The consumption rate for wheat in 1945 was approximately 50,000 bags which was half the required amount. 21 The limiting factor lay in having inadequate irrigation network rather than the market. With good irrigation, new settlers could increase production.

Sixty percent of maize was grown by thirty large and heavily-capitalised farmers and new settlers could not manage to compete successfully with established farmers. 22 However, new settlers could still grow maize for farm consumption while marketing a little surplus. There was a restriction on
ranching as the only farm occupation but stock could be kept on every farm and the sale of the increase would form a valuable contribution to farm income.

Virginia tobacco could be grown by fifty to seventy more new settlers in areas suitable for growing it. There had been an increase in the export of Virginia tobacco from Northern Rhodesia. In 1945, 2,279,363 lbs were exported from Northern Rhodesia and the produce exported in 1951 rose to 10,161,256 lbs. Virginia tobacco was an attractive prospect and settlers could be expected to take it up. This was an export crop which could not afford that degree of price stability enjoyed by production for local market. Much depended on the continuance of the Imperial preference which encouraged colonies to export the crop to Britain. The development of Virginia tobacco on the crown land of Mkushi as an export crop led to the absorption of the district in a world commercial system. It is the Imperial demands for Virginia tobacco which led to the development of commercial farming in the area and brought about agricultural transformation in the district.

Turkish tobacco exports were at 407,676 lbs in 1945 but production dropped to 65,942 lbs in 1951, because the supply from Balkan states to the USA began increasing soon after the Second World War. Turkish tobacco production rose rapidly in Northern Rhodesia after the war due to temporary cessation of exports from traditional growers in the Middle-East and Balkan states where production began some 300 years ago. This produce would depend on whether
the leaf could complete successfully on the American market. The Northern Rhodesian government therefore could not encourage new settlers to grow the crop.

Northern Rhodesia was not self-sufficient in groundnuts and beans. These were essentially African grown products and were not likely to attract commercial European production due to low prices. Legumes were grown on European farms mainly for rotational purposes and for forage. G.F. Clay, Joint Development Advisor in Northern Rhodesia, in 1945 emphasized the need to encourage a reduction in one crop farming and encouraged mixed farming. The European farming community was encouraged to maximise agricultural production especially in crops which were in short supply. Clay also suggested that there was need to extend knowledge, techniques and capital to the Africans who were given the task of satisfying the market for maize. They were also given the responsibility of supplying cattle to European farms to fatten for slaughter.

The first five years after the Second World War laid the foundation to establish Mkushi as a commercial area through settler farmers. The crop by crop review enabled new settlers to have a wider knowledge of agriculture in the territory and to engage in producing crops which had a wide market to avoid making losses. As Page, a member of the Select Committee put it, 'I think it is far better to face a charge of being conservative than be accused of over-optimism and taking steps to induce people to settle in this
country without letting them know exactly what the position is'.  

G.B. Beckett, an Agricultural and Natural Resources Officer also noted that the select Committee 'had a duty to the taxpayer to see that the Committee's recommendations in regard to help and finance were not a gamble but based on sound economic reasons'. The development of commercial agriculture in Mkushi was therefore supported by the state.

The Northern Rhodesia government had been very erratic over the financial requirements for the new settlers. This is clearly observed in Mkushi where government had no concrete facts on capital requirements for the new settlers as will be shown in the next chapter. Inadequate knowledge of the capital requirements for Mkushi farm block by new settlers affected their production and consequently some new settlers abandoned farming in the area. The next chapter will discuss the financial aspects of these matters.
NOTES


5. NAZ, Future of European farming industry.


11. NAZ, European farming industry.

12. NAZ, European farming industry.


16. Land Commission, p. 22.

17. NR Legislative Council of Northern Rhodesia. Final Report of the Select Committee appointed to Examine and Report on the question of land settlement in Northern Rhodesia for ex-servicemen and others (Lusaka: Govt. Printers, 1945).


22. The Question of Land Settlement in Northern Rhodesia, p. 5.

23. The Question of Land Settlement in Northern Rhodesia, p. 4.


25. Trade in Northern Rhodesia, p. 78.


27. C.F. Clay, Northern Rhodesia Memorandum on Post War Planning in Northern Rhodesia (Lusaka, Govt. Printers, 1945), pp. 5-6.


CHAPTER TWO

THE DEVELOPMENT OF COMMERCIAL AGRICULTURE
IN MKUSHI DISTRICT, 1945-75

The origin of Mkushi farm block and significant commercial farming in Mkushi District lay in a memorandum containing proposals which Elia Salzman made in 1945 to the government of Northern Rhodesia. Salzman was a prominent tobacco buyer for four tobacco manufacturers in the United States of America (U.S.A.). The proposals sought support to settle ex-servicemen from South Africa, Southern Rhodesia and Northern Rhodesia who had fought in the Second World War, on crownland for the purpose of growing Turkish tobacco.

The proposals were made due to the fact that the Second World War had affected production of tobacco in the Middle-East and Balkan States. Business transaction and purchase of Turkish tobacco were in a precarious state. It was because of this that alternative suppliers were sought by the U.S.A. It was stated that the time was opportune for establishing the production of Turkish tobacco in Northern Rhodesia and that there were advantages to American manufacturers, as compared with the Balkan countries in adopting Northern Rhodesian leaf for blending purposes. It had been known that the soils, climate and rainfall pattern of Northern Rhodesia were suitable for Turkish tobacco farming.
Salzman first suggested that 300 European families could be settled on five block farms in Northern Rhodesia to produce Turkish tobacco for export to USA where there was a ready market. Each block was to grow Turkish tobacco on 3,000 acres bringing the total acreage to 15,000. It is in these proposals that Mkushi farm block was mentioned as a potential area for tobacco growing. Salzman's interest to take up 50,000 acre farms faced many problems on the line of railway. This area was earmarked for mixed farming and not a monoculture type of farming. Another problem was that the Northern Rhodesian government had set its policies on long term progress for ex-servicemen. Salzman had planned to work on his project in Northern Rhodesia for five years after which he would move back to the Middle-East. Salzman expected Northern Rhodesia to benefit from such a short term project.

Salzman was asked to have these blocks away from the line of railway, about eighty kilometres so that rural areas may be opened up and for easy access to African labour. But Salzman thought it uneconomical in terms of transport costs. Salzman also proposed a fifty pound wage annually for African workers but the Northern Rhodesian government considered this very high. The government feared that it would bring conflicts with other farmers who paid African workers lower wages. Muntemba noted that farm workers in the 1930s were paid between 7/6 to 10/- in Broken Hill Lusaka
and Chisamba areas. The conditions had not changed significantly in the 1940s².

The Northern Rhodesian government rejected Salzman's proposals because of its understanding of the agricultural requirements of the country. S.F. Turner, Acting Commissioner of Lands and Survey, replied that,

the application has received careful consideration of the government but it is regretted that the areas asked for in your letter under reference cannot be granted to you. Government would be prepared to grant a holding of this size of the company only on condition that it does not lie within eighty kilometres of a settled European area³.

In 1950 U.J. Moffat, Senior Agricultural officer at Broken Hill carried out a survey on Mkushi crownland. He fixed farms at eighty kilometres interval and 145 farms of 1 000 - 4 000 acres were proposed⁴. The Northern Rhodesian government on 8 May 1951 advertised in a government Gazette number 1610 farms in Mkushi farm block. This was an area of great agricultural potential. Mkushi crownland consisted of 428 000 acres of land. The advertisement explained the geographical aspects of the crownland, stating the availability of water supplies from rivers and the water-table which was near the surface in some areas with good prospects for boreholes. The Land Board indicated in 1951 that there was an increasing number of Europeans interested in settling in Northern Rhodesia mainly from South Africa. Most of them seemed to have been
attracted by the prospects of making money quickly through Virginia tobacco farming. These created prospects ready for opening of Mkushi farm block in 1951. The government worked towards that goal.

In the same year, J.C. Collins, the Northern Rhodesian adviser, successfully exhibited samples of Northern Rhodesia leaf at the World's Congress at Amsterdam. Northern Rhodesia was ranked amongst the best tobacco growers at the exhibition⁵. Moffat took the opportunity in 1951 to settle on the newly surveyed farm block to commence commercial farming of Virginia tobacco in the area. This gave an encouragement to intending settlers to develop commercial agriculture in the area. The Northern Rhodesian government asked Moffat to advise the government on the developments in the farm block.

In 1951, 145 farms of 2 000 - 6 000 acres each were demarcated but not more than fifteen were occupied⁶. There were still a number of applications awaiting consideration. The intending settlers continued sending enquiries to the Northern Rhodesian government from South Africa on the approximate cost of clearing one acre of bush, annual rainfall, mean temperatures, distance to the nearest railway line, availability of labour and minimum capital requirements for the curing of matured tobacco leaves plus creation of tobacco barns. The process of occupation was slow due to
the government's cautious approach to settling the farm block.

The development of commercial farming had to be supported by a sound financial position of the settlers, since it involved making a profit and loss. There was need for capital. 'Where new settlers were to receive financial assistance from the state, there was a clear obligation to the tax payer and indeed to the settlers themselves that all reasonable steps were taken to avoid failure'. The candidates for financial assistance were to be carefully selected. They had to possess or acquire knowledge and experience before being permitted to take up farming.

The Land Board was established in 1946 to examine and consider agricultural and land evaluations. It was also responsible for the administration of loans and other matters pertaining to land settlement. In 1953 the Land and Agricultural Bank took over all government loans which now became centralised in the Bank. Both the Land Board and the Land Bank affected Mkushi farmers because these banks did not stipulate the amount of money needed for settlers who intended to settle on Mkushi farm block. There were different opinions concerning capital requirements for the new settlers in Mkushi and this might have contributed to slow occupation of the crownland.
In 1953, one view was that at least £10 000 was required while on the other hand it was suggested that less than half that sum was sufficient. An agricultural officer in the same year said that a new farmer could manage with capital ranging between £4 000 to £5 000. The Northern Rhodesian government had its own opinion. The minimum capital requirement for the Northern Rhodesian ex-servicemen was £500 while those from elsewhere was £1 500. The maximum loan for an ex-servicemen applicant in Northern Rhodesia with £500 would be £2 500 so that the total requirement reached £3 000.

Training allowances were also recommended for Northern Rhodesian ex-servicemen on an already established farm. Single men would be paid £5 per month while married men got double this amount. The government was not willing to encourage settlement of men with insufficient capital and those without any previous experience. Inexperienced men were to undergo training for about two years on established farms. Northern Rhodesian ex-servicemen were more favoured because of their war efforts. In order to reward them, the Northern Rhodesia government allowed them to settle on crownlands and were allowed to obtain a higher amount of loans.

The interest charge was four percent per annum in annual arrears and the repayment was to be made in ten instalments starting at the end of the fifth year.
Board ensured that all loans were utilized exclusively for the purpose for which they were granted, punitive action would be taken to safeguard public funds to unabiding farmers. Such farmers would not obtain more loans in future. To reinforce this farmers were visited frequently by officers from the Land Bank who inspected and assessed progress before releasing more funds.

The success of settler farmers lay in the availability of capital to purchase farm requirements. Capital in this study involves equipment, machinery or any other farm requirements or cash. From the time Mkushi farm block was occupied several problems were encountered by the farming community. Some new settlers had to abandon their newly occupied farms due to financial constraints. The settlers who occupied the farm block were in four categories. There were those pioneers who had occupied the area before the official Gazette of 1951 and there were those who occupied the area soon after the Gazette. In 1957 and 1959 more settler farmers came to settle on farm block. It was the first two groups of farmers who experienced severe financial constraints more than the latter occupants. In 1952, eight new occupants arrived but two left immediately due to insufficient capital. H. L. Miller left the farm block for Scotland after constructing temporary buildings while V. Purse went to Ndola where he became a Compound Manager. The Land Board annual report of 1952 noted that 'it had become necessary to raise capital originally required to become
a new settler because the costs of machinery had risen beyond the means of a new settler.' The Land Bank did not however propose capital requirement for Mkushi farm block.

The major crop which was grown on the farm block was Virginia tobacco whose demand and price were reasonable. Some farmers such as G. Scrivener, a former compound manager with Anglo-American in Mufulira, concentrated on ranching. Cattle reasing on small scale was an important supplement commodity for rations on farms but some could be sold within or outside the farm block. Two ex-servicemen, Colonel Charles Gordon and Captain Raymond Pakenham, had tobacco fields extending to over ninety acres in 1953. They also kept stock of South Afrikander type numbering 280 head. They were able to sell their first twenty-three locally bread steers, all grade one animals. This development could be observed as a landmark for commercial activities in the farm block. This was an example of an encouraging farming spirit among the pioneers on the farm block.

A review of the crownlands of Northern Rhodesia noted in 1953 that,

in the vast landlocked area of Central Africa where communities were widely scattered, the farmer was at the supreme mercy of a most capricious climate. Nature did little to aid soil cultivation there and a healthy crop could be completely ruined by a sudden tropical storm. It also pointed out that 'preservation of the productive layer of the soil was one of the biggest problems farmers and government agriculturalists were striving to overcome.'
Even when the British government established crownland in the country it was aware of the environmental problems that would beset a new farmer. The soil classification of Mkushi farm block on map 3 showed that there were variations in land suitable for commercial purposes. The soil classifications showed that for successful commercial farming, crop rotation, inter cropping and proper land use were necessary.

Though the plateau area of Mkushi was regarded as one of the areas suitable for livestock rearing, it could only keep limited stock. The area had a lower stock carrying capacity especially when the rains were over. Thirty acres of grazing land per animal had been regarded as insufficient in the dry season. The protein and phosphate content in grass was reduced by heavy rains while the fibre content was increased. The dambo areas tended to be sour and the grass was often coarse and wiry as to be useless for grazing. These were serious problems which were encountered on the farm block.

The Land Board noted in 1952 that, all stock owners found it difficult and trying to maintain the condition of their animals due to heavy rainfall. Grass could not be mowned for hay; the tender grasses could not be grazed and when the rains stopped the grasses were too stalky and lost all proteins.
In view of the environmental constraints on livestock new grass species for pasture were introduced in Mkushi. The most common being star grass (Cynodon plectostachyon), Makarikari grass (Panicum coloratum), Rhodes grass (Chloris gayana) and Napier grass (Pennisetum purpureum). This development facilitated the increase of beef cattle for commercial purposes on the plateau area. On a broader perspective there was a slow development on cattle rearing mainly for sale among settler farmers because of the environmental hostility.

A report from an inquiry into the position of European farming industry in Northern Rhodesia and to make recommendations for its future development of 1954 noted that Northern Rhodesia was a hardy country to farm because of its short and uncertain rainy season and the land was generally of poor type. Therefore, the cost of clearing land had limited the possibilities of production. The Troup report recommended that, 'more capital investment was necessary if the farming industry was to develop extensively in Northern Rhodesia'. The success and failure of settler farmers depended on the nature of soils and climatic conditions even when managerial skill was available.

The Troup Commission pointed out that many of the post-war settlers lacked the understanding of the local farming conditions and this had seriously affected their yields. Mkushi farm block was not an easy area for successful
commercial farming. It needed mineral supplements in form of fertilizer because of the sandy soils. With high annual rainfall in the area, most plant nutrients were leached and there was need to replace these lost nutrients for successful yields. Since all fertilizers were imported, problems were encountered by the early settler farmers on the farm block.

The Federal Ministry of Agriculture which was formed in 1954 extended its responsibilities to settler farmers of Northern Rhodesia in 1956. It had the powers to fix prices and regulate marketing, importation and exportation of agricultural produce in the territory for white settler farmers. From an economic point of view, this was meant to encourage new settler farmers. The Federal government was going to assist in financing new settler farmers. The NRC encouraged settler farmers with experience to take up unoccupied farms in the territory. Mkushi farmers questioned the wisdom of the government. They objected to be under the Federal government. Mkushi farmers felt that farming was in its infancy in the area and therefore needed more financial backing. These farmers also feared that the funds would be diverted to Southern Rhodesian farmers who had a more developed agricultural system than those in Mkushi and Northern Rhodesia generally. They therefore demanded for a referendum to be conducted amongst farmers on the question of federation. However, no referendum was held because
the groups that favoured federation saw no need for
the referendum.

The development of commercial farming in the district
was slow and this compelled the government to advertise for
more farms to be occupied in Mkushi farm block. J.F. Turner
Director of Surveys and Land despatched a copy of notes for
intending settlers together with a report on Mkushi farm block
to South Africa in 1956. There were still more than 100
farms available for alienation in 1956\textsuperscript{20}. There were farms
where the few pioneers who had occupied the area were able
to grow first class tobacco. Some of these farmers were
able to make up to £200 an acre\textsuperscript{21}.

In the same year Dr. N.G. Weizman, a land settlement
expert, was seconded from Israel to an International
Organisation known as the Inter-governmental Committee for
European Migration (ICEM). He proposed the need to settle
two groups of fifty farmers in Northern and Southern
Rhodesia on 100 acre farms each. Dr. Weizman justified
his proposal on the fact that, 'out of 30 000 000 acres
occupied in Southern Rhodesia 1100 000 acres were under
crops. In Northern Rhodesia European farm holdings covered
a little over 4 500 000 acres but only 220 000 acres were
under cultivation.'\textsuperscript{22}. The funds for the land purchase would
be provided by the countries sending settlers and the other
half by the government where they would settle. While the
Northern Rhodesia government was anxious to encourage land
settlement and was taking active steps to do so it had, however reached a conclusion that the scheme recommended by Weizman was unsuitable for Northern Rhodesia. The government's decision was based to a large extent, on the fact that the cost inherent in the scheme to the government would be considerable.  

THE TAKE OFF 1956-64

The Troup Commission noted that the costs of machinery, spares and fuel were high. It also noted that the majority of the potential settlers lacked sufficient capital; therefore one could not see an influx of new settlers with adequate capital of their own. In order for the virgin holdings to be developed rapidly there was need for considerable financial assistance. The Northern Rhodesian government took the recommendations seriously and introduced two schemes for tobacco production in Mkushi. These schemes were financed by the Federal government. This contributed to quick occupation of the farm block and consequently production of Virginia tobacco and Maize increased at a rapid rate. Various capital plans were initiated in 1956 to 1964 to boost commercial farming in the farm block.

The first such major effort was in the context of the Four Year Development Plan (FYDP) from 1956 to 1959. The FYDP established the Mkushi Tenant Assisted and Settlement
scheme which was designed to assist energetic and determined young men to operate and develop farms on their own. Before entering the land, the Land Board would have already made a number of improvements on these farms as part of government assistance to reduce the capital each settler had to raise. It would stump about forty acres of land and drill boreholes for farmers. In addition accessible roads would be constructed to alleviate transport problems. This was at an estimated £100 000 to cater for Mkushi and other parts of the territory.\textsuperscript{25}

The Tenant Farming Scheme was for experienced tobacco farmers with insufficient capital to start farming on their own. £200 000 was estimated for the tenant farming scheme for Mkushi, Eastern province and other suitable areas in the territory.\textsuperscript{26} These schemes were designed for young men to develop commercial farming through tobacco production. All these efforts were linked with a view to develop commercial agriculture in Mkushi through Virginia tobacco production. With the initiation of four year development plans for the farm block, the number of Europeans increased from seventy-eight in 1956 to 161 in 1959.\textsuperscript{27} The assessment of the Tenant Assisted and Settlement Scheme is difficult to obtain empirically but from 1959 to 1963 statistical data is available as shown in Table 1. The table shows a tremendous increase in the number of settlers and acreage planted for both maize and tobacco. Consequently production increased.
Another Four Year Development Plan was launched in 1959-63. The objectives of this plan was to provide limited funds for the scheme for settlement. These funds were meant to prepare the underdeveloped crownlands for occupation. A total sum of £270,000 was provided for land settlement loans for the whole country, a large amount of which money was meant to develop Mkushi farm block.28 The amount for Mkushi farm block was not stated. The expenditure would be recovered from new settlers over a period of thirty years on annual basis including five percent interest. All future developments would depend entirely on the lease and because of this all ex-service-men were to undergo a two year period of appropriate training on the farms within the federation before being permitted to occupy farms. Approximately 130 farms, of economic value for tobacco, combined with other farming crops would benefit this scheme. More new settlers took up farming in Mkushi under this scheme.

Farmers rapidly realized that quality rather than quantity was the key to successful Virginia tobacco farming. This partly required turning to proper rotational cropping, contouring, stricter and more economical means of fertilizing crops. The farmers were also required to follow proper conservation. The government intensified the activities of the Intensive Conservation Area (ICA) committee which gave guidance to new farmers on proper farming techniques. This action was necessary because the soils were of a highly erodible nature.
### Tobacco

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<tr>
<th>Crop Year</th>
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<th>Number of Growers</th>
<th>Acre Plant.</th>
<th>Crop Yield</th>
<th>Acre Plant.</th>
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<td>4 443</td>
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<td>1962</td>
<td>883</td>
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<td>30 16.1</td>
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<tr>
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### Maize

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<th>Acre Plant.</th>
<th>Crop Yield</th>
<th>Acre Plant.</th>
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<td>4 443</td>
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<td>0 000 96 2 0 0 0 4 0 0 7 1 7 1 7 1 7 1 7 1 7</td>
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**AGRICULTURAL PRODUCTION IN MAZHU BETWEEN 1959-63, NON AFRICAN FARMS ONLY**

**TABLE 1**
Extension services were extended mainly to new settler farmers who were not familiar with the local environment. Any abuse of the farming environment through poor conservation measures led to prosecution or removal from the area\textsuperscript{29}.

The Federal government Department responsible for conservation measures and extension services (Conex) together with ICA of Mkushi inspected farmers to reinforce conservation measures. Construction of major farm operations such as a dam needed the approval of ICA committee which would carry out feasibility studies. In 1962, 7 000 acres of contour ridging had not yet been done by Conservation and Extension Services staff because of shortage of manpower\textsuperscript{30}. This was a source of worry to the farming community in the area as they were threatened with massive soil erosion. All these efforts were made to understand the environmental requirements.

The early settler farmers were progressing successfully on the farm block. In 1953-54 season some farmers such as U.J. Moffat whose understanding of the environment was good were able to obtain yields of over 1 000 lbs of tobacco per acre. An average of fifty pence per lb was fetched\textsuperscript{31}. Moffat, following successful yields, began using irrigation network on his farm the following season. The quality of the leaf improved to such an extent that some successful farmers were adhering to it as the "staple crop". There seems to have been good progress in tobacco production on the farm block. Though there was such progress on the farm block, the Troup Commission noted that the tobacco industry faced problems
arising from the ripening of too much leaf at once, from fungoid diseases which developed rapidly in the warm humid atmosphere of the early stages of curing and from faulty barn design\textsuperscript{32}.

There were 125 tractors on the farm block in 1961 and a total of 2159 African workers plus seventy-five European managers. The area of farms occupied rose from 80,000 acres in 1954 to 181,000 acres in 1961 of which 7860 acres were under crops in 1961. The amount of fertilizer used amounted to 1,520 tons. 950 tons were spent on tobacco while 540 tons were spent on maize. The same year 462 barns out of 547 were in use. The faulty barns contributed to poor quality of tobacco during curing. The composition of European owned beef cattle was 2,241 head in 1961\textsuperscript{33}. This showed a marked improvement in commercial activities in Mkushi. Hellen noted that from 1958 to 1963, with assisted stump ing, road making and capitalizing, fifty more farms were occupied. The output of virginia tobacco was estimated at 2500,000 lbs and that of maize at 76,000 bags\textsuperscript{34}. Capital invested in the farm block in 1960 alone was more than £500,000. The increase in production was because of the government which was strict in monitoring development projects in the farm block.

When the labour officer visited the farm block in 1962 to find out the number of workers on the farms, they found that Greyling's farm was in the hands of the farmer's Department.
of Adjustment Board. The farmer was forced to vacate the farm because he had no previous experience in tobacco farming. 'So often in recent years, particularly in tobacco farming have young inexperienced farmers attracted by the "get-rich-quick" possibilities of the crop, been faced with disaster because of inexperience and insufficient funds',\textsuperscript{35}. The state had made it clear that it preferred people with experience to avoid making losses.

The development of Commercial farming in Mkushi needed Capital and experience in farming. This was a sound government policy. Experience was a necessary pre-requisite because of the nature of the environment in Mkushi. This determined the progress of farmers. The understanding of farming knowledge which involved geographical analysis played a major role in transforming the Mkushi farming block into an agricultural zone. The success of European farmers between the end of 1950s and early 1960s was encouraged by the federal government which rendered financial assistance for Commercial purposes. In view of such assistance, the federal government was strict on conservation measures in the area. The other major problems arose from labour.

Labour had been one of the most serious problems affecting some commercial farmers throughout the period under discussion. The tobacco industry required good crop management at all stages to produce maximum yield. Labour can be divided into two categories, the skilled and unskilled. 'The quality of the labour force had been the greatest limiting factor to production'\textsuperscript{36}. The local Africans in
Mkushi were not keen to work on the farms basically for two reasons. The first reason was because of low wages which farm labourers were paid relatively to those found on the Copperbelt and Kabwe. Secondly, the nature of crops grown on the farm block was new to them and they therefore lacked the experience of handling them.

When referring to low wages on the mines where most of the Africans from Mkushi went, wages almost doubled between 1954 and 1960, while those of agricultural workers barely increased. This increase could only attract a few Africans. The agricultural industry was the least to attract workers because of low wages compared to other major sectors of employment. In view of low wages the industry was affected. A rural proletariat therefore could not be formed on the farms because of drift to urban areas where conditions of service were better. Employment in urban areas was more attractive than employment in rural areas and farmers were faced with stiff competition in attracting labour industry as is shown in Table 2.

### TABLE 2

<table>
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<td></td>
<td>£</td>
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<td>Mining and Quarrying</td>
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<td>95</td>
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<td>Transport and Communication</td>
<td>87</td>
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</tbody>
</table>
Domestic service 55 80
Agriculture 42 62


When analyzing wages on farms it must be borne in mind that workers were in classes, that is groups of people who occupied different positions in relations to the means of production. There were supervisors, tractor drivers, barn attendants, bricklayers, carpenters, lorry drivers and general labourers to mention a few. Since capitalist production relations were based on private property, the workers were consequently exploited. 37

Most of the alien labour force brought onto the farm block held supervisory positions and generally the local tribesmen were subjected to positions of general labourers because they lacked certain skills on these farms. Being in a less privileged position they opted to leave farm employment for urban areas where they hoped to gain higher wages and better conditions of service whenever it suited them.

The absence of a Trade Union Movement for the African workers contributed to their being subjected to low wages, especially those farm labourers who could be easily replaced. The miners went into direct negotiations with mine management for better working conditions and higher wages for the workers. Labour strikes were more frequent on the mines and this forced mine management to become more responsive to labour demands.
This was not the case with farm workers in Mkushi and the country generally. The absence of Trade Union organisation slowed the pace of worker consciousness on settler farms and a permanent rural proletariat could not exist as a result some farms faced acute labour shortages. Some farmers preferred an illiterate group of farm labourers and some of the qualified personnel were deliberately turned away especially those with previous experience on the mines. All this was meant to draw cheap labour force and suppress worker consciousness on the farms to maximise profits.

Most of the commercial farmers preferred to recruit labour from Malawi, Tanzania, Mozambique, Southern and Eastern provinces. Some settler farmers from Southern Rhodesia brought their own labour force into the farm block as shown in appendix iii. Most of the labour force brought into the farm block had previous experience in tobacco and farm work unlike the local Lala and Swaka people of the area. For instance, the Ministry of labour and Mines issued licenses to J.J. Wilke, B. Nel and C.N. Cornfield, all Mkushi farmers, to recruit labour from Fort Jameson in 1962. Labour from outside the district was preferred because of its stability and experience on tobacco farms. It was noted that there was a great rush to farms in Eastern province. There was need to utilize this experienced labour force in Mkushi where there was perpetual shortage especially during picking periods on tobacco farms.
On average there were 20,000 Africans from Malawi and 6,000 from Tanzania working in NR in 1953. The records at Mkushi Labour Office show that there were more complaints in the Central part of the farm block. Most of the workers complained of bad employers who had the Boer mentality of ill-treating the African workers. This might have been the area where most ex-servicemen from South Africa settled and they had not changed their racial attitude. In most cases employers refused to grant permission to their employees to be off work when need arose. Most farm workers rested once a week and in crucial periods even on the resting days they were compelled to work. These strenuous tasks forced many to abandon farm work. It was common in Mkushi to hear people complaining of farm work as a tough job.

A Anderson, an ex-servicemen who came from Southern Rhodesia in 1965, commented that Africans were lazy people who objected to plant fruit trees in their compound because their stay was temporary.

There were marked variations in food rations on the farms despite the fact that the government had stipulated the minimum required amounts as shown in Appendixes II to IV. The records show that stipulation for mealie meal ration was not abused by almost all farmers unlike other rations. This was because it was grown on farms, therefore farmers kept some of it to feed their workers. According to records on Mkushi, its experience differed from others areas. Zgambo noted that, 'despite setting up of the official food standard scale, very rarely did farmers in Eastern Province comply with
its stipulations. Muntemba also observed a similar abuse of ration in Kabwe rural. Generally, most of the commercial farmers violated the government scales. Malnutrition cases were very high in Mkushi farm block with the change from ration in kind to wages after independence. Moffat, son of a pioneer of the farm block, argued that the malnutrition was caused by the drinking habits of the workers. Other observations on the drinking habits of farm workers revealed how extravagant farm workers could be.

Though most farmers indicated that they had medical facilities at their farm, this was far from reality. There were no such facilities for farm workers who were occasionally rushed to the Clinic at the Boma. The Mkushi farmers Association in 1963 appealed to the government to build a clinic in the farm block where farmers could take their workers for treatment. The Association argued that a number of people died on the farm before they could be given medical attention because of the long distance to the clinic as shown in appendix IV. The departure of farm workers from the farms was partly due to the fact that they wanted medical facilities and their children to attend schools in urban areas. There was only one school in the farm block in 1963. This meant that a majority of farm workers' children (African) were unable to attend school.

Housing, though not a contributing factor to labour problems, was not very attractive on the farms.
Most of the houses were made of pole and daga. In contrast with the mines, 'the basic wages were supplemented by free housing, rations (until 1956), a cost of living allowance and a variable annual bonus related to the level of the industry's profit'. Some commercial farmers were aware of these disparities between mining industry and agriculture and therefore avoided recruiting people who had worked where wages and conditions of service were better. Datta commented that 'commercial farmers blamed the government and other better paying employers such as the Mines' for their labour problems. Farm employment had never been a popular form of occupation throughout the colonial period because of the above mentioned factors. Furthermore, there was no pension scheme for the farm workers. This lack of security made it difficult for white farmers to secure and retain labour for long periods.

In the light of the conditions facing workers, politics among African workers disturbed white farm owners in the farm block. It became a source of concern because United National Independence Party (UNIP) leadership began interfering with farm operations. UNIP leaders were against farmers who recruited labour from Southern province, an area dominated by the rival political party, African National Congress (ANC). Foreign workers were also intimidated. The use of situpas as a pre-requisite for employment was also discouraged. UNIP officials insisted that more local people
ought to be employed on the farms.

There were five strikes on one farm as a result of UNIP political meetings in 1963.\(^{50}\) This political consciousness spread to many farms. There were mixed feelings amongst the farmers on the farm block. Some older farmers preferred to abandon federation in order to be rid of their labour problems.\(^{51}\) The new settlers supported the existence of federation for two reasons. The first was the fear that Africans would take over their land and secondly, the federal government gave financial assistance to farmers. With termination of federation in 1963 and the granting of political independence the following year, some settlers decided to leave the country because of their fear of an African government.

The impact of the establishment of the farm block amongst the farm workers pertaining to social change was not considerable. There was no financial accumulation through wages because these were relatively low. The farm workers were unable to purchase farm equipment when they returned to their villages as was common in Southern Province. Some commercial farmers ploughed plots for the workers and gave them inputs. These farmers recovered the money spent on workers after each marketing season. This aspect did not bring the kind of impact that occurred on the Tonga plateau where Africans bought farm equipment from sales of cattle and wages. The Tonga of Mazabuka district were able to purchase ploughs and other farm equipment from the white
settler farmers from their savings on the farms$^{52}$. Those who owned large herds of cattle sold some in order to purchase new farming technology$^{53}$. This enabled them to increase acreage and consequently increased production. Social differentiation was therefore experienced through such accumulation. Some farm workers preferred going to urban areas where they hoped to accumulate from savings. These savings were meant to be invested in villages for agricultural purposes.

TRANSPORT AND MARKET

Transport and market have been combined here deliberately to show how they are related. Bastian De Gay Portman noted that 'a market consists of two essential components: first, demand-dependent of course on income, preferences, and prices - and second, the possibility of supply reaching demand at a profitable price$^{54}$. Agricultural development in Mkushi could have definitely been hindered by 'a market constraint arising chiefly from a badly developed system of transport and communication$^{55}$. in such a remote district. The farm block lying between forty-eight to one hundred and twenty-nine kilometres from the railhead caused a serious problem to settler farmers because of the distance to markets in Lusaka.

The farmers hired trucks to deliver their agricultural produce. Despite this distance, farmers were able to make profit since Virginia tobacco price was favourable.
Salzmann had earlier objected to occupy the farm block because of long distance from market. The Northern Rhodesia government took the responsibility of constructing feeder roads joining the Great North Road (GNR) which was only tarred towards the end of the 1960s. The Central African Road Services (CARS) was the major company which transported farmer's produce to markets. It had two sheds in the farm block where produce could be collected. The monopoly of CARS was short-lived when another company Peile came into operation in the area in 1963. The threat by CARS to increase freight charges in protest against Peile was withdrawn after consultations with Mkushi Farmers Association.

The issue of transport and market became prominent towards late 1950s because of the increase in Virginia tobacco production by new settler farmers. The depot where fertilizers could be obtained was moved from Kabwe to Kapiri Mposhi towards the end of 1960. The cost of transporting produce to Kabwe was higher compared to that of produce delivered to Kapiri Mposhi. The rates for shed number two were higher than the other two sheds because it was located in a remote part of the farm block and freight charges depended on distance covered. Map 3 shows the farm locations and roads within the farm block.
Table 3: Cost of Delivering Maize to Kabwe Through Kapiri Mposhi in 1963

<table>
<thead>
<tr>
<th>No. 1</th>
<th>Shed</th>
<th>19/2d</th>
<th>per ton to Broken Hill</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>13/4d</td>
<td>per ton to Kapiri Mposhi</td>
</tr>
<tr>
<td>No. 2</td>
<td>Shed</td>
<td>22/6d</td>
<td>per ton to Broken Hill</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16/8d</td>
<td>per ton to Kapiri Mposhi</td>
</tr>
<tr>
<td>Peile's Shed</td>
<td></td>
<td>20/6d</td>
<td>per ton to Broken Hill</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15/-</td>
<td>per ton to Kapiri Mposhi</td>
</tr>
</tbody>
</table>

Plus 6d per mile for the eleven miles at a bag rate

Source: NAZ, Kabwe, District Commissioner's office.
Mkushi Farmers Association file Number
Soc/9 Vol. II, 3/1/4
The freight charges by CARS were negotiated by the Mkushi Farmers Association. These were economical charges for the farmers in the area. CARS had a third shed where individual farmers could hire trucks for their produce to market. The charge to transport sixteen animals (cattle) to Kapiri Mposhi in 1963 cost £34.10.0d. CARS was the major transporting firm in the farm block. The farm block continued to flourish in agricultural production and transport was not a major deterrent to commercial activities. The commercial farmers were able to purchase their own trucks to cut on hired transport.

Since the mid 1950s Virginia tobacco production in the country had been increasing apart from the 1957-58 season which showed a drastic fall in production because of bad weather. The Land and Agricultural Bank of Northern Rhodesia was concerned with the poor seasonal returns for settler farmers in that year. A large number of commercial farmers were unable to meet their commitments. 'Owing to the lateness of the arrival of the rains, excessive precipitation when they did arrive and their abrupt and early cessation ... maize and tobacco yields per acre have in consequence shown a sharp decline'.56 The tobacco industry began picking up in the country so that by 1964 Virginia tobacco production had more than doubled.
Table 4: Virginia Flue-cured Tobacco Production and Sales, 1955-64

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CROP MARKETED ('000LB)</th>
<th>AVERAGE PRICE PER LB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955</td>
<td>7,606</td>
<td>28n</td>
</tr>
<tr>
<td>1956</td>
<td>10,096</td>
<td>26n</td>
</tr>
<tr>
<td>1957</td>
<td>9,257</td>
<td>32n</td>
</tr>
<tr>
<td>1958</td>
<td>6,773</td>
<td>29n</td>
</tr>
<tr>
<td>1959</td>
<td>12,628</td>
<td>28n</td>
</tr>
<tr>
<td>1960</td>
<td>12,473</td>
<td>28n</td>
</tr>
<tr>
<td>1961</td>
<td>14,840</td>
<td>28n</td>
</tr>
<tr>
<td>1962</td>
<td>16,147</td>
<td>29n</td>
</tr>
<tr>
<td>1963</td>
<td>15,490</td>
<td>34n</td>
</tr>
<tr>
<td>1964</td>
<td>24,167</td>
<td>23n</td>
</tr>
</tbody>
</table>

The price of Virginia tobacco had been fluctuating in these years because of the natural factors which affected the quality of the leaf. In these adverse conditions, farmers were served by generally high prices which were considered economic.

During the 1960-61 season there were excessive rains in Mkushi which caused adverse effects on the quality of tobacco with the result that some farmers in these areas were unfortunately unable to meet their commitments. Rapid ripening of tobacco in some areas further created a problem to the extent that a great deal of the leaf was discarded. Effective diagnosis of constraints on farming on the Mkushi farm block reveal that the commercial farmers intensified their efforts to tame nature through new systems of agricultural practice. The study of the environment and the problems for which solutions were sought led to crop diversification in the area. This demanded an ecological approach to agriculture. In an attempt to counteract environmental forces, mixed farming became an important occupation. It would be insufficient to simply list constraints on farming season after season but to understand the ecosystem of the area. It is detailed discussion of ecology that is missing in existing studies on capitalist and peasant agriculture in Southern Africa.
NOTES

1. National Archives of Zambia, (NAZ) SECl/39 Minutes of Land settlement Committee on growing Turkish tobacco by Northern Rhodesian soldiers. Application for Land, Tobacco General Manager's visit to Northern Rhodesia, 1945-47.


3. NAZ, Minutes of Land Settlement Committee on growing Turkish Tobacco.


6. NR, Department of agriculture Annual report for the year 1951 (Lusaka: Govt. Printer 1952), p. 15.


8. NR, Select Committee appointed to examine and report on the Question of land settlement in Northern Rhodesia for ex-servicemen and others (Lusaka: Govt. printer, 1945), p. 7.


15. Land Board, P. 8.
16. NAZ, European farming Industry.
20. NAZ, Alienation of land.
21. NAZ, Alienation of land.
23. NAZ, Land settlement scheme.
25. NAZ, NR 10/244, Four Year Development Plan, 1956-59.
27. NAZ, KSM ⁴/₁ Vol. II, P. 61.
29. Interview: David Moffat, Commercial farmer since 1950s 8/7/88.
30. NAZ, NR17/24 Brokenhill Group/Mkushi Group, 1959 -64.
33. NAZ, NR 17/24, Broken Hill Group Mkushi Group, 1959-64.
35. NAZ, KSM 4/1 Vol. II, p. 100.
41. Shortfall of Revenue, p. 80.
42. Mkushi Labour office file No. MK/16-50,
43. Interview: A. Anderson, commercial farmer since 1965, 5/7/88.
45. Muntemba, 'Rural underdevelopment', p. 211.
46. Interview: Moffat, 8/7/88.
48. Interview: Mwenda, 8/7/88.


CHAPTER THREE

POST-COLONIAL AGRICULTURE IN MKUSHI, 1964-75

When Zambia became independent in 1964, the total production of Virginia tobacco in the country was at 24,167,000 lbs, the highest figure to be attained in the history of Virginia tobacco industry. This figure refers mainly to the period under study. Table 5 shows the trend in Virginia tobacco production from mid 1950s to early 1970s. This crop was exclusively grown by white settler farmers and this created a problem for the future developments. As the tobacco industry expanded in Mkushi, the district and the country experienced the departure of some of the experienced tobacco farmers who feared that the government would interfere with their economic interests. With effect from 1 January 1964, all responsibilities by the Federal ministry of agriculture were reverted to territorial governments. This might have prompted settler farmers' departure to countries where they hoped for better economic prospects.

Consequently production of Virginia tobacco fell to 14,551,000 lbs in 1965 with Mkushi producing 3,024,581 lbs. The number of tobacco growers in Mkushi was reduced to sixty-three in the same year. The Zambian government realized the need to replace the settlers who had left the area and immediately launched Tenant tobacco schemes in the district.
The Graph was prepared by V.I.A.Z. and shows yields and prices. It forecasts the probable yields for 1972.

Source: Zambia Farmer, Incorporating Commercial Farming Vol. 6 No.12 DEC. 1971 p.3
to increase production. These schemes were not new but had not been extended to African farmers during the colonial period. The colonial legacy prevailed as the Ministry of Agriculture invited experienced Virginia tobacco farmers to participate in tenant-farming schemes. Experience for Africans was that they worked for settler farmers who grew Virginia tobacco, because these farmers enjoyed the monopoly of growing the crop prior to independence. The minimum criterion required was at least two year’s experience of growing the crop. The government provided 500 acres of arable land, capital for the tenant to erect buildings, a loan to buy specified farm equipment plus seasonal loans to cover approved crop expenses. Loans not exceeding £4,000 repayable after five years were given to the selected farmers. The Zambian government further paid for essential soil conservation measures, land clearing and borehole water supply of not less than 500 gallons an hour with reservoir, pump piping and access to roads. The period of tenancy was five years beginning on 1 August 1966 and could be terminated on 31 July each year on twelve month’s notice. Compensation was not paid to a tenant vacating the tenant scheme. Farmers were going to be grouped to facilitate supervision. The government had allocated Mukoncha which through the experience of the established farmers in the area, had proved suitable for Virginia tobacco growing.

In 1966, President K.D. Kaunda referred to the importance of the tobacco industry in earning foreign exchange for
Zambia. He noted that competition in the tobacco industry was fierce and called for an equally fierce publicity campaign for increased production: 'I am therefore glad to learn that the facts and figures as well as information on the development and progress of our Zambian tobacco will now be available in this country and across our border overseas'. The President was appealing to commercial farmers to increase tobacco production. It was at this period that some farmers were leaving the country. In response, a new scheme was introduced in 1969 called Assisted Tenant Scheme. This scheme was for experienced farm foremen rather than experienced farmers.

The Zambian government intended to make use of many Zambians who possessed abundant knowledge of growing flue-cured Virginia tobacco but lacked management knowledge to run full scale farms themselves. In view of the difficulties in recruiting expert staff capable of training would-be assisted tenants and men of considerable administrative experience, TBZ established a college at Popota in Choma district to train management staff. The future of the industry depended on the availability of trained staff to run the schemes.

Since 1966 when the scheme started, difficulties were experienced in recruiting tenants of the required standard. Most of the potential tenants were residents of Southern Rhodesia. Since Unilateral Declaration of
Independence (UDI) in 1965, there were difficulties in obtaining temporary working permits by people from there. TBZ made every effort to retain the settler tobacco farmers who were already in the country.

As TBZ continued to advertise farms for Virginia tobacco growing, some Greeks from Tanzania trekked southwards. These Greeks heard of the tobacco farms in Mkushi and thought that they would make a fortune having suffered severe agricultural constraints in Tanzania. Most of them occupied farms in the mid 1960s. Greeks have been known to grow tobacco for a long time in the Balkans for export to U.S.A. and their presence in Mkushi became an added advantage to the country. The crop was further boosted by technical aid in 1970. The Commonwealth Development Corporation (CDC) jointly with the World Bank agreed to finance an expanding programme at Mukonchi tobacco settlement training scheme. The CDC entered into a technical aid agreement with TBZ to continue to provide management and consultancy services for a period of five years. The management agreement came to an end on 31st December 1974 and Mukonchi tobacco and training scheme came directly under TBZ.

The Virginia tobacco growers were encouraged by the establishment of Virginia Tobacco Association of Zambia (VTAZ) in 1965 whose aim was to promote and develop the industry in the country. Prior to independence, Zambia's Virginia tobacco was auctioned and packed for export in Salisbury.
Zambia found this arrangement unsatisfactory, soon after Independence and she undertook construction of auction facilities in Lusaka. The auction floors were opened in 1966 while the processing and packing plant was opened in the following year.

However, the 1966 season was reported to have been a difficult one for Virginia tobacco farmers. There was widespread drought in December and January and as a result much of the tobacco was lost due to sun-scorch.

All areas in the country lost approximately between twenty-five to thirty percent of the crop from combined effects of sun-scorched leaf, too rapid ripening coupled with labour problems, too few barns and late release of nitrogen in January which is thought to have caused black tobacco 8.

The production of Virginia tobacco in Eastern province in the same season was also affected because of 'pests and diseases caused by localised problems such as eelworms' 9.

The post-independence period did not change the labour position because of the government policy to repatriate alien labour force. Home Affairs Minister, Aaron Milner, addressed Mkushi farmers and stated that alien labour force was being employed in excessive numbers and that the practice ought to be stopped. Mkushi Farmers Association contended that labour force brought from elsewhere was more
efficient than local labour. The Association complained about the inefficiency and indiscipline of local labour and the related problems of repeated absenteeism. Loss of tobacco through inefficient labour was experienced on the farms. Eight farmers had between them lost approximately sixty barns of tobacco in 1966. This amount was considerable as each barn was estimated to contain 1,000 lbs of tobacco.

The Association added that the industry was particularly vulnerable to labour problems. The situation was aggravated by frequent early ripening of the crop, a factor beyond farmers' control. The tobacco crop involved high seasonal investments and because harvesting and curing were very critical, operational losses could be very high unless a reliable labour force was available. Loss of labour to road works within the area where wages were high was common. The GRZ objected to employing of juvenile labour in large numbers for fear that farmers would opt for juvenile labour which was cheaper while performing the same amount of work as adults.

The proximity of the farm block to the construction site of Tanzania-Zambia Railways (TAZARA) in early 1970s further affected some tobacco farmers as they lost labour to the TAZARA project. As tobacco could not be picked by machines farmers needed a lot of labour to do it. The
Association complained that

the Chinese have been taking our Labour to work on the railway line, which has caused critical shortage of workers. The farms have been robbed of trained tobacco men and farmers are facing the impossible task of trying to reap their tobacco crops with unskilled and minimum labour forces. Since then the situation has worsened and even more labour has left the farms to work for the Chinese. The Chinese are taking them to Serenje.

In view of labour shortages both juvenile and female labour force was employed in increasing numbers.

It was brought to the attention of the natural resources Advisory Board that soil erosion in Mkushi farm block was severe. Though TBZ encouraged settlement schemes on the state land of Mkushi it did not take measures to encourage conservation works. TBZ was more interested in increasing production than in the methods of production. Soil conservation measures were not taken seriously partly because of inadequate extension staff. There was destruction of wood as tenants searched for fuel for curing purposes. Consequently TBZ farms in the farm block were rendered unsuitable for commercial purposes and were abandoned by some tenants.

The Provincial agricultural report stated that

a list of farmers in order of conservation was compiled by provincial agricultural officer. It was submitted to TBZ with an urgent plea for the release of funds. No funds were made available. No replies to our pleas were received. The country continues to erode.
It was further reported that 'on some farms gulleys have more turned into dongas, but into very wide artificial dry river beds sometimes six feet wide and eight feet high.\textsuperscript{15} (SIC). TBZ did not reinforce conservation measures. As a result, within a decade of the establishment of tenant schemes some farms had little commercial value.

The provincial annual reports emphasized the need to encourage conservation works. 'If very serious action is not taken soon, the Mkushi commercial farming block will slowly ... become less and less valuable for farming operations and the nation will have lost forever some of her best soils.'\textsuperscript{16} Though the natural resources Act no 53 of 1970 was concerned with the soil and all renewable natural resources, it did not reinforce conservation measures in Mkushi farm block. The Act specified that 'the Minister of Lands and Natural Resources control and direct the actions of individuals if they are seriously damaging to the soil or destroying natural resources by mismanagement.'\textsuperscript{17}

'If on the advice of the Board, the Minister, is satisfied that conservation works or measures are essential for the prevention of soil erosion, the protection of water resources, the control of bush fires, pollution, tsetse fly or noxious weeds ... he may cause such works to be carried out.'\textsuperscript{18} The conservation and extension services under the Federal government did not allow any conservation regulation to be violated by the settler tenants. It had intensified conservation measures
on the farm block, but with the change of government in 1964 the conservation and extension services and Mkushi ICA powers to reinforce the conservation works were terminated. The Ministry of Lands and Natural Resources took over the conservation regulations in the interest of the nation but did not strictly reinforce these measures.

The cadastral map of 1976 showed that, of the thirty TBZ farms occupied several farms were in a poor state while seven of them lay vacant. Mkushi is one area in Central Province which needed strict conservation networks because of the nature of the soils and the high rainfall as shown in Table 6. The differences in agricultural production in the district can be traced through environmental differentiation.

The Department of Agriculture and the Provincial Rural Development Officer submitted some proposals to the Permanent Secretary of Central Province. 'They pointed out that there was need of reinstating of an active
Table 6: Projected Conservation Needs, Central Province

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>Areas in need of conservation measures</th>
<th>Estimated cost involved (K' 00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mkushi</td>
<td>4,300 hectares</td>
<td>43,180.00</td>
</tr>
<tr>
<td>Kabwe</td>
<td>965 hectares</td>
<td>9,668.00</td>
</tr>
<tr>
<td>Mwomboshi</td>
<td>320 hectares</td>
<td>3,226.00</td>
</tr>
</tbody>
</table>

resourceful and well informed cultivator of natural resources who should be equipped with experienced staff and transport and adequate funds. The proposals further stated that 'the conservator of natural resources and his staff be given far reaching powers by the Minister to enable them to proceed unhampered by bureaucratic obstruction! With reinforcement of the principles contained in the Natural Resources Act, of No. 53, of 1970'. The proposals further emphasized that the implementation of adequate conservation measures on newly cleared land be a pre-requisite before the lands are permitted by law to be cropped and that a strong element of compulsion be brought to bear on land users to ensure that they institute protective conservation measures on existing land which is still in good heart.

The Assistant Commissioner of Lands in the Ministry of Lands and Natural Resources noted that there was need for conservation measures to be carried out but this had to be in line with party policy. TBZ failed because it opened up too many tobacco schemes throughout the country without carrying out intensive feasibility studies. There was quick Zambianisation of management staff, some of whom were not adequately trained. The TBZ schemes obtained loans on guarantee basis, so TBZ was responsible for maintaining the balance when tenants made losses. This therefore did not stimulate tenants to increase production. A tenant farmer
revealed that TBZ gave loans to inexperienced tenants who consequently performed poorly and did not follow proper land use as they neglected advice\(^{25}\). TBZ schemes therefore did not function according to the projected target. Lack of adequate extension staff was a drawback on TBZ schemes.

The fall of copper prices in the mid 1970s contributed to high cost of imported farm machinery and spare parts. Many commercial farmers were discouraged to grow the crop because of unattractive prices. Lombard and Tweedie noted that 'there were several reasons for the decline in production notably acute price fluctuations, high production costs and uncertainty about the future on the part of European growers. The farm block experienced the departure of experienced farmers who were replaced by new farmers. The new farmers realized the demands of tobacco and lacking experience and capital avoided growing the crop leaving barns idle. Some farmers made chicken runs from the barn bricks\(^{27}\).

Though TBZ encouraged tenants to grow tobacco, some tenants grew the crop for a limited period and eventually abandoned tobacco growing for maize which seemed easier to grow\(^{28}\). Production of tobacco in the area had drastically fallen due to departure of settler farmers. The price of Virginia tobacco rose from 38 ngwee per lb in 1970 to 80.67 ngwee in 1975\(^{29}\), but this was regarded uneconomic in terms of capital expenses and farmers reduced their acreage for the crop\(^{30}\). Lombard and Tweedie further noted that,
The cost of Virginia production is much higher in Zambia than in any of her tobacco-producing neighbour states; for example, it is believed that Malawi's costs per lb are in the neighbourhood of 16 ngwee compared to Zambia's cost of 29 ngwee per lb.  

In a 'watershed' speech in 1975 Dr. K.D. Kaunda encouraged Virginia tobacco farmers to increase production because of new incentives given to them. He commented that 'we have now given incentives to farmers, and it is up to the farmer and TBZ' to satisfy both internal and external markets. This paid little dividend.  

The emerging indigenous capitalist class was slowly occupying a few farms left by the settler farmers. Few peasant farmers had emerged to become commercial farmers in the area. The majority had remained emergent farmers. The emergent farmers were able to own advanced technology such as tractors and other farm equipment. The upper ranks of the party and parastatal organisations benefited as they were able to obtain loans to purchase farms and farm machinery. This group of officials began occupying some farms in the ... block, bringing social stratification among Africans. The indigenous class exhibited a degree of dependence on the state.  

Although there are no statistical data to show the number of Africans who purchased farms in the farm block.  

Szeftel noted that along the line of railway,
by the early seventies approximately 356 individual Africans held stateland under freehold or lease-hold title covering 430 000 acres. Some 263 of these had holdings over 50 acres, the average of this group being 1 630 acres but reaching 3 100 acres in Kalomo district and 3 500 acres in Choma 33.
NOTES


7. *Interview*: David Moffat, Commercial Farmer since 1950s 8/7/88.


12. MLSS/102/6/1.


27. Interview: W. Ross, Virginia Tobacco Association of Zambia Executive Secretary, 4/3/88.
28. Interview: E.N. Chambwa, A. Phiri, During an interview of new Tenant Farmers to be settled on TBZ Schemes, 22/10/88.
30. Interview: J. Hudson, Commercial Farmers Bureau, Executive Secretary, 28/3/88, Ross VTAZ.
CONCLUSION

The study has examined the development of commercial farming under colonial rule within a context of a changing political environment. This study is meant to contribute to the role of ecological factors in explaining historical change whether in a colonial or post-colonial setting. In many instances, historians tend to overlook the importance of ecology in relation to economic developments. History when fused with geographical analysis of a community portrays a high correlation but such studies are few.

The first chapter of the dissertation gave a historical background to the development of the Mkushi farm block. It revealed a pattern where settlers found themselves in various parts of the country. On the surface, it appears that white settlers simply followed the line of railway but a historical geographer will try to understand why such a settlement pattern developed. In this, an appreciation of ecological influences on agricultural change is important as I have attempted to demonstrate in this study.

J. Tosh argued that the understanding of the environment plays a major role in agricultural production. B.A. Ogot categorically showed the need to combine history and ecology in order to fully understand various communities. Ecological studies in Central, Eastern and Southern Africa are being carried out. The investigations are meant to
enrich our understanding of the problems which affected African communities. Throughout the 1970s, scholarly debate focussed on capitalism and colonialism as constraining factors on African agricultural production. The case studies in Southern Africa have revealed that there was need to understand the ecosystem of an area in any examination of its agricultural change.

Leroy Vail, dealing with Eastern Zambia in the first half of the twentieth century attributed ecological deterioration directly to colonial rule. Vail argued that the colonial rule policies did not take into consideration ecological factors for the local people of Eastern Province. In this approach it is necessary to be cautious in attributing ecological disasters to colonial policies. Kjekshus writing in a different area concluded that colonial policies enhanced ecological deterioration. Beinart noted that ecological studies have not been sufficiently utilized in Zambia as elsewhere in Africa and called for detailed local studies. Allan's work has demonstrated the important relationship between agricultural change, various farming systems and ecological factors. This study had drawn inspiration from all these scholars in examining the interaction of ecology and particular policy measures of the colonial and post-colonial governments in Zambia from the 1950s to early 1970s.
The establishment of Mkushi farm block is an interesting issue because it was analysed here from an environmental and geographical perspective. The colonial government understood the fact that for successful commercial farming to take place, consideration of the ecology of the area was important.

The colonial policy did not intend to ruin the environment through lack of understanding of the environmental requirements. The colonial policy stipulated that there was need for experience in farming before any settler farmer could be allowed to commence farming on Mkushi farm block. This was a sound colonial policy which took into consideration the effects of settling people who lacked ecological knowledge. The colonial policy further emphasized the need for good farm management and took practical steps to reinforce this, consequently the farms became productive.

The Post-colonial policies were not as successful as the previous policies pertaining to the conservation of land in the farm block. The soil conservation measures were not reinforced on the farm block because of lack of understanding of ecological factors. Lack of experience amongst the tenants who occupied the area led to soil depletion through unwarranted cutting of trees in search of fuel for the tobacco barns. The policies that were formulated when the farm block was opened for
occupation were partially implemented. Strict conservation measures were followed by the colonial government which was committed to conservation of natural resources. This effort was lacking in the post-colonial period.

The type of soils and climate were conducive to the development of commercial agriculture on the farm block but this was affected by the changes in the ecosystem. It is up to historians to take the issue of knowing something more than geography in order to explore the relationship between colonial policy, economy and ecological change. Within the limited space, this dissertation has attempted to show why colonial policies on agriculture in Mkushi were formulated and how they were successfully implemented.

There is need to take ecological case studies seriously in order to avoid stereotyped explanations and generalizations about the impact of Capitalism. Tobacco production could have succeeded in the post-colonial period if there was fuller utilization of geographers in co-operation with soil chemists. The deterioration of natural resources and soil erosion have worked both against white settlers and tenant farmers in the post-colonial period. Morgan and Munton argued that the objective for the agricultural geographer must be to understand the spatial aspects of farm enterprises. Ecological knowledge is as essential to conservation as it is to development, and has a useful backing on explaining historical change.
Ecological knowledge is useful in development planning because it aims at enhancing the goals of development policies and also anticipates the effects of development activities on the natural resources. The studies in Eastern and Southern Africa, have shown that for a prosperous economy there is need to understand the environmental requirements and technological innovations. Many conservation efforts have failed and large sums of money have been wasted because ecological facts were ignored.
<table>
<thead>
<tr>
<th>Nos Employed</th>
<th>Male</th>
<th>Female</th>
<th>Juvenile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>38</td>
<td></td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>European</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Coloured</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38</td>
<td></td>
<td></td>
<td>38</td>
</tr>
</tbody>
</table>

No of days worked: 6 days a week
Workmen's Compensation: National Farmers Union mutual
Pay days: On completion of tickets
Hours worked: 36-40
No. of days on leave annually
Annual: on reasonable request

Public: 2 days
Value of Rations in kind weekly:

- 12-20 lbs mealie meal
- Sugar
- Beans, fish and meat
  - once monthly
- Weekly total value: (Cash and kind) 7/6
- Housing: Near farm barn Dagga and pole.

<table>
<thead>
<tr>
<th>Region</th>
<th>Male</th>
<th>Female</th>
<th>Juvenile</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Rhodesia</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. Rhodesia</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nyasaland</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tanganyika</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Congo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.E.A.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.W.A.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Mkushi Labour Office.
<table>
<thead>
<tr>
<th>No. Employed</th>
<th>Occupation</th>
<th>Wages rate</th>
<th>T/PM/W.D.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Capitao</td>
<td>110</td>
<td>P.T.</td>
</tr>
<tr>
<td>3</td>
<td>Tractor Driver</td>
<td>95/</td>
<td>&quot;</td>
</tr>
<tr>
<td>1</td>
<td>Builder</td>
<td>200/</td>
<td>&quot;</td>
</tr>
<tr>
<td>3</td>
<td>Farm labourers</td>
<td>60/</td>
<td>&quot;</td>
</tr>
<tr>
<td>14</td>
<td>Farm labourers</td>
<td>55/</td>
<td>&quot;</td>
</tr>
<tr>
<td>11</td>
<td>Farm labourers</td>
<td>50/</td>
<td>&quot;</td>
</tr>
<tr>
<td>5</td>
<td>Farm labourers</td>
<td>45/</td>
<td>&quot;</td>
</tr>
</tbody>
</table>

Remarks: 
(a) Starting wage for labourers 45/ with 5/ increment every 6 months.
(b) Seasonal bonus appears to vary from £3 to £20.00.
(c) Employer will construct some houses of burnt brick under thatch each year.
<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Juvenile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>38</td>
<td>6</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>European</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>6</td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

Employer's Association = Commercial farmers

Union Workmen's Compensation: W.C.C.
No. of days work per week: 6 days
Pay days monthly
Hours worked per week = 48 hours
Pensions: No

Gratuities: No
No. of days paid leave: Annual = 18
Public = 4

Ration allowance in kind weekly = 6/-
Housing allowance = Nil
Monthly Allowance = Nil
Continuous years of service allowance = Nil

Source: Mkushi Labour Office.
<table>
<thead>
<tr>
<th>No. Employed</th>
<th>Occupation</th>
<th>Wage Weekly/Daily/Hourly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shopband</td>
<td>7/6</td>
</tr>
<tr>
<td>1</td>
<td>Bricklayer</td>
<td>7/1</td>
</tr>
<tr>
<td>1</td>
<td>Foreman</td>
<td>6/4</td>
</tr>
<tr>
<td>1</td>
<td>Carpenter</td>
<td>6/8</td>
</tr>
<tr>
<td>1</td>
<td>Driver</td>
<td>4/9</td>
</tr>
<tr>
<td>1</td>
<td>&quot;</td>
<td>4/7</td>
</tr>
<tr>
<td>1</td>
<td>&quot;</td>
<td>4/3</td>
</tr>
<tr>
<td>1</td>
<td>&quot;</td>
<td>4/-</td>
</tr>
<tr>
<td>8</td>
<td>Labourers</td>
<td>3/4</td>
</tr>
<tr>
<td>22</td>
<td>&quot;</td>
<td>3/3</td>
</tr>
<tr>
<td>4</td>
<td>Domestic Female</td>
<td>1/7</td>
</tr>
<tr>
<td>1</td>
<td>&quot;</td>
<td>1/9</td>
</tr>
<tr>
<td>1</td>
<td>&quot;</td>
<td>1/-</td>
</tr>
</tbody>
</table>

Source: Mkushi Labour Office.
Proprietor: B.N. YOUNG: Outside Assistance Settlement Scheme 5 years in Block

**Date of Inspection:** 5/7/62 | **CROPS:** Tobacco, Beef, Pigs 4417 acres

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Juninile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>18</td>
<td>8</td>
<td>16</td>
<td>42</td>
</tr>
<tr>
<td>Northern Rhodesia</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>Southern Rhodesia</td>
<td>17</td>
<td>8</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>PE.A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>42</td>
</tr>
</tbody>
</table>

6 days a week

Hours of work = 48 hrs. a week

Value of Rations = 9/15

Scale: married with 4 children 22lb mealie meal, $2\frac{1}{2}$ lb fish

Married with 3 children 18 lb mealie meal, $2\frac{1}{2}$ lb fish

Married with 1 child 16 lb mealie meal, $2\frac{1}{2}$ lb fish.

Bonuses (i) Employers with 4 years service obtain 5$x200$ lb m/meal or £7.10 each.

(ii) Tobacco bonus clothing (vaseline)

(iii) Curing and Barn boys £3.10.0 - £5.00 at the end of e season.

Source: Mkushi Labour Office.
Proprietor: M. Greyvenstein: TOBACCO AND MAIZE 16/1/63

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Juvenile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>44</td>
<td>14</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>14</td>
<td>58</td>
</tr>
<tr>
<td>N. Rhodesia</td>
<td>20</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>S. Rhodesia</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nyasaland</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tanganyika</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portuguese East Africa (PEA)</td>
<td>6</td>
<td></td>
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</tr>
<tr>
<td>Portuguese West Africa (PWA)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 44 14 58

(i) Considering an incentive bonus structure
(ii) No real labour troubles
(iii) Hopes to build more Permanent houses
(iv) Feels pays better than others

(v) Child died of small pox in compound a day before labour officers visited the farm hence compound not seen as health team inoculated and quarantied everyone.

Source: Mkushi Labour Office.
The Table showing the Composition of Individual farms

<table>
<thead>
<tr>
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<td>6</td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

N. Rhodesia 38 6
S. Rhodesia

Nyasaland

Total 38 6 44

Source: Mkushi Labour Office.

Date of Inspection: 12/11/64

Employer's Association = Commercial farmers
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<td></td>
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<td>Domestic Female</td>
<td>1/7</td>
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</tr>
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<td>1/9</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>&quot;</td>
<td>1/-</td>
<td></td>
</tr>
</tbody>
</table>

Source: Mkushi Labour Office.
A. Unpublished primary Sources

National Archives of Zambia (NAZ) Lusaka

(i) KSM 4/1, District Notebooks, 1900-1963, volumes I, II, and III.

(ii) NR SERIES


NR3/138, Wages for local tobacco planters in Fort Jameson, 1940-51.

NR10/152, Transfer of Land Bank to federal government, 1957-61.


NR10/186, Alienation of land in Mkushi district, 1951-56.

NR10/244, Four Year Development Plan, 1956-59.


NR17/24, Broken Hill group/Mkushi ICA group, 1959-64.

NRI7/70, Central province – Provincial report 1949-58.


(iii) SECRETARIAL SERIES

SECl/39, Minutes of land settlement Committee meeting and farming development Committee on growing Turkish Tobacco by Northern Rhodesia Soldiers; Application for land; Tobacco General Manager's report, 1945-47.

SECl/109, Tobacco Sales statements of objects and reasons, imposition of tobacco export levy, legislation Council elections, 1936-49.

SECl/113, Tenant tobacco growing in Northern Rhodesia, System of tobacco production report. Labour government on laid appointment: Rules governing permits to sale unmanufactured tobacco; Board Minutes.

(iv) INTERVIEWS

I conducted about 80 interviews only the most useful have been cited.

A. Anderson, Commercial farmer Mkushi farm block since 1965 6/7/88.

J.R. Chalomba, District Agriculture Officer, Mkushi, 5/7/88.

M. Chibale, District Labour Officer, Mkushi, 26/6/88.

C.D. Chilala, Commercial farmer, Mkushi farm block, 4/7/88.


M. Daka, 3rd Year agricultural Science Student UNZA, Son of a prominent farmer. Mkushi farm block, 15/4/88.

F. Hamunzala, Farm worker, 26/6/88.

J. Hudson, Commercial farmers Bureau, Executive Secretary, 28/3/88.

P. Jere, African Farming Equipment Tractor mechanic for Mkushi farm block, 19/6/88.

D. Moffat, Commercial farmer since 1950s, 8/7/88.

L. Mukali, Lima Bank branch manager, 28/6/88.

N. Mutambo, Farm Manager, Kingdom farm, 7/7/88.

S.L. Mwenda, Mkushi labour inspector, 26/6/88.

G. Phiri, Agricultural Assistant Land use, Mkushi 5/7/88.

M. Phiri, Tenant farmer, TBZ Scheme since 1972 20/9/88.

W. Ross, Virginia Tobacco Association of Zambia, Executive Secretary, 4/3/88.

A.M. Siisi, Grindlays Bank branch Manager, 28/6/88

M. Steele, Commercial farmer, Mkushi farm block, 27/6/88.
B. Official Published Primary Sources

(i) Federation of Rhodesia and Nyasaland (Malawi) Reports

Reports of the Agricultural Production of Southern Rhodesia, Northern Rhodesia and Nyasaland 1955-63 (Salisbury)

(ii) Northern Rhodesia Government Reports

Advisory Committee on Industrial Development reports, 1946-48 (Lusaka)

Agriculture and Forestry Development Plans for 10 years by C.J. Lewin (Lusaka: Government printer, 1945).


Department of Lands Annual Reports for the years 1957-58 (Lusaka: Government printer).

Department of Surveys and Land Annual Reports for the years, 1948-56 (Lusaka: Government Printer).


European Tenant farming with Special reference to Share-cropping in Northern Rhodesia by M. Halcr (Lusaka: Government Printer, 1952).


Land Board Annual Reports for the Years 1949-52 (Lusaka: Government Printer).
Land Board information for intending settlers
(Lusaka: Government printer, 1948).

Legislative Council - Final Report on the Select
Committee appointed to examine and report on
the question of Land Settlement in Northern
Rhodesia ex-servicemen and others (Lusaka:

Memorandum on Post-war Development Planning in
Northern Rhodesia by G.F. Clay (Lusaka:
Government Printer, 1945).

Ministry of Land and Natural Resources
Annual Report of the Department of Lands
for the years 1959-62 (Lusaka: Government Printer).


Order Browne, G.St.J. Labour Conditions in Northern
Rhodesia Colonial number 150 (London: H.M.S.O.
1938).

Report of a Commission of Inquiry into the future
of the European farming industry in Northern

Report of a Commission of Inquiry into the future of
the European farming industry in Northern Rhodesia
on the Issue of land tenure of agricultural land

Report of the Board of the land and agricultural Bank
of Northern Rhodesia for the financial years ended
30th June, 1954-60 (Lusaka: Government Printer).

Report of the Commission Appointed to Enquire into the
Financial and Economic position of Northern
Rhodesia by Alan Pim (Chairman) Colonial

Report of the Farmer's Debt Adjustment Board
Annual reports for the years, 1959-62
(Lusaka Government Printer).

Printer, 1946).

Report of the Northern Rhodesia supply mission
to the United Kingdom (Lusaka: Govt. Printers,
1944).

Report of the Position of agricultural Industry
and the necessity or otherwise of encouraging
further European settlement in agricultural
areas by S.M. Milligan (Lusaka: Government
printer, 1931).

Report on the development of Secondary Industries
in Northern Rhodesian by W.J. Busschau
(Lusaka: Government printer, 1945).

Ten-year Development plan for Northern Rhodesia
as approved by the Legislative Council 11
February 1947 (Lusaka: Government Printer,
1951).

Soils, Vegetation and agriculture in North-West
Rhodesia (Lusaka Govt. Printer, 1937).

Soils, Vegetation, and agriculture in North-East
Rhodesia by C.G. Trapnell (Lusaka: Government
Printer, 1953).
(iii) Zambian Reports


Agriculture and Pastoral Production, Central Statistics Office, 1966-72, Lusaka.


Tobacco Board of Zambia Annual reports, 1968-75, Lusaka.
C. ARTICLES AND BOOKS

i. Published Secondary Sources


---


ii. **Unpublished Secondary Sources**


D. MAGAZINES
   Farming in Zambia
   Farming Voice
   Productive Farming

E. NEWSPAPERS
   Times of Zambia
   Zambia Daily Mail