



## African Journal of History and Geography

[ajhg.eanso.org](http://ajhg.eanso.org)

Volume 4, Issue 1, 2025

Print ISSN: 2790-7589 | Online ISSN: 2790-7597

Title DOI: <https://doi.org/10.37284/2790-7597>



EAST AFRICAN  
NATURE &  
SCIENCE  
ORGANIZATION

Original Article

## The Legacy of Colonial Policies on Agricultural Development in Independent Kenya; 1954 to 1992

Basiliano Samoei<sup>1\*</sup>, Paul Opondo, PhD<sup>2</sup> & Paul Kurgat, PhD<sup>2</sup>

<sup>1</sup> Koitaleel Samoei University College, P. O. Box 5-30307, Eldoret, Kenya.

<sup>2</sup> Moi University, P. O. Box 3900-30100, Eldoret, Kenya.

\* Author's Email: [samoeibasiliano@gmail.com](mailto:samoeibasiliano@gmail.com)

Article DOI: <https://doi.org/10.37284/ajhg.4.1.2725>

Date Published: **ABSTRACT**

25 February 2025

**Keywords:**

*Agricultural Policy,  
Agricultural  
Development,  
Colonial Agricultural  
Policy,  
Land Development and  
Settlement Board (LDSB).*

The LDSB schemes of 1961/62 formed the second phase and a continuation of the official colonial agricultural policy (Swynnerton Plan of 1954). However, the political situation in the immediate pre-independence period derailed its implementation as the Land Development and Settlement Board (LDSB) was disbanded on June 1st 1963 and replaced with the Central Land Board. It is the Central Land Board that supported the implementation of five-year 'one-million-acre' schemes for the land purchase in the former 'scheduled' areas. From this background, the paper examines how the colonial agricultural policy initiated in 1954 continues to serve as the main agricultural policy in independent Kenya today. Yet, policymakers can re-engineer a new appropriate agricultural policy to promote economic development in the 21st century. Thus, the study sheds light on the legacy of colonial agricultural policy in independent Kenya by examining a pioneering LDSB scheme in the Ndalat Settlement Scheme in Nandi County, Kenya. The paper adopts a historical descriptive design with a sample size of 30 key informants conveniently sampled from 16 farmers, four cooperative society officials, five pioneering settlement officials, two Ministry of Agriculture officials, and three retired agricultural officers. The interview was the main research instrument supplemented by archival and government policy documents. The findings indicated that all the LDSB schemes were part of the colonial agricultural policy to reduce the pressure on land resources and were experimental in design. This colonial agricultural policy is credited with settlement programs, large-scale agricultural development, commercialization of food crops, and the institutionalization of producer cooperatives and statutory marketing boards. The study concluded that this colonial policy still dominates agricultural development in independent Kenya today. The study recommends that there is a need to revamp the agricultural policy to support the socio-economic development in Kenya.

### APA CITATION

Samoei, B., Opondo, P. & Kurgat, P. (2025). The Legacy of Colonial Policies on Agricultural Development in Independent Kenya; 1954 to 1992. *African Journal of History and Geography*, 4(1), 88-105. <https://doi.org/10.37284/ajhg.4.1.2725>.

#### CHICAGO CITATION

Samoei, Basiliano, Paul Opondo and Paul Kurgat. "The Legacy of Colonial Policies on Agricultural Development in Independent Kenya; 1954 to 1992". *African Journal of History and Geography* 4 (1), 88-105. <https://doi.org/10.37284/ajhg.4.1.2725>

#### HARVARD CITATION

Samoei, B., Opondo, P. & Kurgat, P. (2025) "The Legacy of Colonial Policies on Agricultural Development in Independent Kenya; 1954 to 1992", *African Journal of History and Geography*, 4 (1), pp. 88-105. doi: 10.37284/ajhg.4.1.2725.

#### IEEE CITATION

B. Samoei, P. Opondo & P. Kurgat "The Legacy of Colonial Policies on Agricultural Development in Independent Kenya; 1954 to 1992", *AJHG*, vol. 4, no. 1, pp. 88-105, Feb. 2025.

#### MLA CITATION

Samoei, Basiliano, Paul Opondo & Paul Kurgat "The Legacy of Colonial Policies on Agricultural Development in Independent Kenya; 1954 to 1992". *African Journal of History and Geography*, Vol. 4, no. 1, Feb. 2025, pp. 88-105, doi:10.37284/ajhg.4.1.2725.

## INTRODUCTION

The contemporary evidence indicated that the Swynnerton Plan in Kenya of 1954 was the first the large – scale comprehensive effort to promote agricultural development in African areas (Thurston, 1987). The evolving land and agricultural crisis in African areas in the mid-1940s, in the form of overcrowding, degradation and fragmentation led to the emergence of two boards; A Board of Agriculture for the European areas and an African Settlement Board for the African areas in 1945 (Heyer, 1974). The African Settlement Board initially named African Land and Utilization Scheme (ALUS) was later renamed the African Land Development Board (ALDEV) in 1946, and funded to the tune of £ three-million-pound grant (Thurston, 1987).

This emerging situation then gradually morphed into a large-scale government effort to improve the African areas beginning with the implementation of the Swynnerton plan of 1954 (Ruthenberg & Ruthenberg, 1966) and ending with Land Development and Settlement Board (LDSB) programmes which initiated the planning and development of settlements schemes in the scheduled areas between 1961 and 1962 (Belshaw, 1964). This official colonial agricultural policy for agricultural development in African areas shaped the post-independence agricultural policies in Kenya (Thurston, 1987).

The turning point for agricultural development in African areas began in 1951 with the reorganization of the agricultural department and the appointment of Mr Roger Swynnerton as the

deputy director of field services. Two things stood out in the mind of Roger Swynnerton; the concept of smallholder agriculture supplemented by land use intensification (Thurston, 1987). The land crisis in African areas in Central Province districts led to the first large-scale plan titled 'Revised and Consolidated Agricultural Policy for Central Province' which provided a blueprint for intensive agricultural development supported by smallholding mixed farming agriculture (Thurston, 1987). The plan also re-established order and control and served as a basis for economic recovery and development during the emergency period (Thurston, 1987).

Upon its success in Central province, the plan morphed into a nationwide agricultural plan titled 'A Plan to Intensify the Development of African Agriculture in Kenya' financed by the Colonial Development and Welfare grant of £ 7.95 million. Other financiers included the United States International Co-operation Administration (later USAID), the Rockefeller Foundation, the Hindocha Foundation (a philanthropic Kenyan Asian foundation) and the Colonial Development Corporation (Thurston, 1987). This plan transformed African agriculture from subsistence to commercially-oriented agriculture (Thurston, 1987) through expanded cash crop farming, and land use intensification techniques (Heyer, 1974). The plan prioritized high-potential agricultural lands and provided for semi-arid/pastoral areas with 30% of the total allocation (Thurston, 1987).

The Swynnerton Plan was revolutionary and consolidated land holdings, revolutionized

smallholder agriculture countrywide and significantly increased agricultural production from African areas (Segal, 1967). The plan provided agricultural extension services, credit facilities and supported coffee and tea farming to mention a few resulting in coffee output from African areas rising by 55% between 1955 and 1964 (Leys, 1971). By 1959, during the final year of the Swynnerton Plan, both financial and human capital requirements were wound down because of political and economic uncertainty (Thurston, 1987).

The pressure for land in 1959 was apparent as land use intensification could neither solve the basic immediate problem of population pressure and destitution created by land tenure systems nor create economic land units where they did not exist (Thurston, 1987). Through a new land ordinance of 1959, racial restrictions in the Scheduled areas were removed and prescribed the individualization of the land tenure system (Heyer, 1974; Thurston, 1987). In 1960, the political necessity of resettlement of landless Africans was prioritized and thus Land Settlement and Development Board were created to deal with the land question (Leys, 1971, Thurston, 1987; Herz, 1970).

As part of the colonial agricultural policy, the British government financed all the land purchases for the LDSB schemes (Belshaw, 1964). Typically, the low-density (yeoman) schemes were funded by the British government, the International Bank for Reconstruction and Development (World Bank) and the Colonial Development Corporation (I.B.R.D/C.D.C) (Clough, 1968; Storrar, 1964) envisaged a net income of £ 250 to £ 280 per year from a 20 – hectare land (Harbeson, 1967; Belshaw, 1964) and geared towards an educated and ‘progressive’ farmer with farming experience (Leys, 1971). The high-density (assisted-owner) schemes were funded by the British and German Governments (Herz, 1970) and aimed at subsistence with a net cash income of £ 25 to £ 75 depending on land size (Clough, 1968). The land loans were repayable on a 30 – year while the development loan facility was repayable over a 10 – year with

both having an annual 6.5% interest (Storrar, 1964; Von Pischke, 1977).

In summary, ALDEV and Swynnerton schemes of 1947 – 1960 settled more than 11,000 families on 130,700 hectares (Heyer, 1974), while the LDSB schemes operationalized slightly over 104 schemes {high- density (Yeoman) and low-density (Assisted - owner) schemes} over 353,262 hectares (Shaffer, 1967). As per the Department of Settlement annual report/(65/66), the 68 high-density schemes covered 278,493 hectares and settled 25,433 families (Shaffer, 1967). Ndalat Settlement scheme was founded and operationalized in 1962 as Assisted - Owner Schemes (high-density schemes) (Belshaw, 1964). Further, there were 36 low-density schemes covering 75,983 hectares and settled 5,166 families (Shaffer, 1967) but were discontinued in 1962 due to heavy capital demands (Belshaw, 1964).

The colonial agricultural policy deemed the settlement schemes with a three-pronged objective; political, economic and social. The settlement schemes were an economic necessity for sustaining the country's economy while balancing out the political objective of landlessness among Africans and the social objective of appeasing both the Africans and White settlers alike (Department of Settlement annual reports, 1962/63). The annual report in 1962/63 indicated that 500,000 acres of land valued at £ 5,000,000 had been operationalized with over 6,000 families settled, 6,000 development loans authorized, 30,000 heads of cattle purchased and distributed, 150 tractors purchased and over £ 250,000 in income (Department of settlement annual reports, 1962/63).

In the mid-1963, the LDSB as a body was disbanded and replaced by the Central Land Board (CLB) and it is this board that initiated the five-year 'one-million-acre scheme' for land purchases in scheduled areas (Leys, 1971; Herz, 1970). After disbandment, the LDSB function was split into different bodies, first, the executive arm of the Department of Settlement called the

Settlement Fund Trustees (SFT), second, the Land Registration (Special areas) ordinance under the Central Land Board and third, the Commissioner of lands who issued with the Letters of allotment in the name of CLB (Department of Settlement, annual reports, 1962/63). It is not all lost that land and agricultural development go hand in hand, Kanyinga, (2000); Leys(1971); Leo (1984) among others), criticized the official land settlement programmes as a failure, yet, there is a clear distinction and linkages between the Swynnerton Plan and the LDSB schemes (Thurston, 1987; Heyer, 1974).

It is also clear that the immediate post-independence government just maintained the same colonial agricultural policy (Thurston, 1987) instead of Africanising it to suit the demands of the independent state. The big question is whether it is appropriate to blame or applaud the colonial agricultural policy for having ensured agricultural development initiated in 1954 has continued as a legacy in independent Kenya (Thurston, 1987; Heyer, 1974). It is from this background that the paper seeks to examine how the colonial agricultural policy initiated in 1954 has continued to form the main agricultural policy in independent Kenya today, yet policymakers can re-engineer a new suitable agricultural policy. Thus, the study sheds light on the legacy of colonial agricultural policy based on an LDSB scheme (Ndalat Settlement Scheme) in independent Kenya in the 21<sup>st</sup> century.

## METHODOLOGY

The study was carried out in the Ndalat settlement scheme which is located in Ndalat Location of Nandi County. The study employed a historical qualitative design to historically describe the events that occurred during the establishment of the settlement scheme in 1961 and interrogate the changes of major economic transformations thereafter. The study largely used interviews complemented with archival documentary evidence. The study purposively sampled 48 respondents which include 32 farmers, four cooperative officials, five pioneering settlement officials, two Ministry of Agriculture officials and

three retired agricultural officers. Other data sources comprised data from the Kenya National Archives (KNA) and libraries. Qualitative data were evaluated, classified and presented into logical thematic categories.

## RESULTS AND DISCUSSION

### The Large-scale Settlement Programmes for Landless Africans

The LDSB schemes represented a significant component of Kenyan land policy (Coldham, 1982) as they attended to the fears of the European settlers rather than aiding the African leaders to launch social and economic programmes in line with their nation-building (Harbeson, 1967). The LSDB schemes were based on an Israeli expert's opinion who advised against collective farming enterprises and advocated for individualized land tenure with strong collaboration in farming operations marketing and value addition. Thus, the white settler farms in the former scheduled areas were subdivided into small 'peasant' land holdings (Department of Settlement Annual Report, 1962/63).

This was evidenced by the former agricultural officer, Mr Tarus;

*The settlement schemes were initiated by the colonial government through the LDSB which acquired the land from the white settlers in a specified manner intending to sustain and maintain agricultural productivity. The settlement schemes were initiated with the specific purpose of establishing and replacing the productivity of the departing white settler farmers. The first settler farms to be sold were those that were closer to the African reservation and the process took several stages. First, the land was subdivided into economic units for smallholding agriculture. This process took into consideration the topography and the quality of the land. Once, the sub-division had been completed, a white settlement officer, Mr. Gibson, was placed on the former white settler farm to aid in the transition. The white settlement officer would then be supported by an African settlement*



*officer as the settlement process took shape (Oral Interview, Former Agricultural Officer, Mr Tarus. March 29<sup>th</sup> 2023).*

In support, A former cooperative inspector, Mr. Tarkwen (Oral Interview, February 15<sup>th</sup> 2022) also elaborated on the settlement activities during the initiation period.

*At the initiation, the new African settlers were paid sixty shillings for the first three months to sustain them during their transition period. At the top was the white settlement officer tasked with the overall management of the project who had control of all the activities and operations in the scheme and was the main liaison with the LDSB. The white settlement officer was deputized by an African settlement officer who intermediated between the settlement office and the smallholder farmers. The settlement officer had several settlement functions which included: the veterinary functions, the agricultural extension function, the cooperative society function and the public health function among others Whereas the settlement activity began in the early 1960s, the land was largely first held by the LDSB as the creditors(both land and development loans) to the settlers before the Settlement Fund Trustees(SFT) took over.*

*The settlement store had an office run by Dalgety Company Limited and each smallholder acquired the items on credit and the transaction was recorded by the clerks. The African smallholder was allocated the following agricultural and farming implements and materials in non-monetary terms: two milk cans, rolls of barbed wire, a machete, nails, two milk cans (10 – Litre and 20 – Litre jerricans), two dairy cows and a calf depending on the loan which totalled Kshs. 3,000 and was repayable over ten years (Oral Interview, former cooperative inspector, Mr. Tarkwen, February 15<sup>th</sup> 2022).*

This was further elaborated by a pioneering farmer, Mr Kipkosgei Butuk;

*The first settlement scheme in Nandi District was the Lessos Settlement Scheme in 1961 where the settler farms were divided into 40–acre farms at a deposit of Kshs 750 for a 30–year loan. The second settlement scheme was the Ndalat Settlement scheme in 1962 and was based on a 15–acre smallholding plots. However, some special plots of 100 acres were allocated to retired soldiers and civil servants who had farming experience.*

*The loan was repaid every other six months through a direct cash payment to the settlement office and later through a check-off system with the Ndalat Farmers' Cooperative Society where the cooperative society deducted the loan amounts from the farmers' earnings (Oral Interview, Pioneering Farmer, Mr Kipkosgei Butuk, May 9<sup>th</sup> 2022).*

As indicated by the 1962/63 annual reports, Dalgety's Ltd, New Zealand Loan Co. Ltd and Kenya Farmers' Association were the main service providers through their trading stores and loan provisioning in all the IBRD/CDC and HMG schemes. In the Ndalat Settlement scheme, Dalgety's Ltd and Kenya Farmers' Association provided farm inputs and other agricultural devices. (Department of Settlement Annual Report, 1962/63)

Further, the 1965/66 annual reports indicated that the IBRD/CDC schemes were completed in 1966 with the final purchase of over 14,806 acres costing over £ 249,000 bringing the total cost for the yeoman schemes to £ 1,991,000 with £ 962,000 in development loans(Department of Settlement Annual Reports, 1965/66). This report further validates the legacy of colonial agricultural policy as the LDSB schemes were meant to integrate Africans into the scheduled areas and develop previously underdeveloped lands in addition to sustaining land markets (Harbeson, 1967; Von Pischke, 1977).

The legal processes for the established LDSB schemes were strictly planned and controlled by the LDSB and later the SFT. As indicated, LDSB controlled the development of the settlement

holdings through the letter of allotment under the terms of the agricultural ordinance and Chattels Transfer Ordinance. Any settler who breached to terms of the letter of allotment or of the conditions in the charge sheet was warned and at the last resort, evicted from the settlement plot while those who breached the development loan agreements were warned and in the last resort, the settler's chattels were sized (Department of Settlement Annual report, 1962/63).

Each of these settlement plans and activities had both positive and negative impacts on the Africans and by extension the agricultural productivity of the smallholder farmers in independent Kenya (Leo, 1984). The settlement schemes have been criticized for having created landed and landless classes (Van Arkadie, 2016; Leo, 1984) and introduced social classes peasantization (Ochieng, 1992), but there is a need to appropriately critique the state of affairs. In particular, the LDSB schemes took a socio-economic perspective as opposed to the economics (Belshaw, 1964)

### **The Large-scale Agrarian Revolution in Independent Kenya**

As envisaged by the Swynnerton Plan, rural agrarian change directly benefited from land consolidation and improvement in land use. Upon the initiation of the Swynnerton Plan, the agricultural output from the African areas tripled by 1959 (Leys, 1971) and grew fourfold by 1968 (Thurston, 1987). The Swynnerton Plan shifted emphasis from large-scale European farming with subsistence African agriculture to commercialised peasant agriculture which has continued to undergird the long-term agricultural and socio-economic development in Kenya (Fibaek & Green, 2019). The official agricultural statistics show steady growth in farm output and income from smallholding agriculture with an estimated gross farm revenue rising from under eight million pounds to over 34 million between 1958 and 1968, an increase of 425% (Thurston, 1987).

The impact of the colonial agricultural policy was best illustrated by the former cooperative

inspector, Mr Tarkwen (Oral Interview, February 15<sup>th</sup> 2022).

*The settlement offices ensured that the smallholder farmers participated in the intensification of the agricultural processes in their plots. The LDSB program introduced the grade cow breeds and hybrid maize varieties to the smallholder farmers in the scheme. Farm ploughing, tilling and planting were mechanized and thus required the use of tractors, while the cows were artificially inseminated and required periodic dipping using acaricide to prevent tick infestation.*

*Accordingly, the LDSB established the minimum productivity levels for each smallholder farm establishment of the settlement activities. As per the agricultural policy, the settlement offices required that the smallholder farmers produce 50 litres of milk daily and a minimum of 50, 90-kg bags of maize annually. During the early days, the Ndalat settlement scheme was highly productive with an average production of 40 litres per milk per day and 80 – 100 bags of maize per farm annually (Oral Interview, former cooperative inspector, Mr. Tarkwen, February 15<sup>th</sup> 2022).*

In elaborating further, Mr Kipkosgei Butuk, a farmer commented on the financial arrangement that occurred at the settlement scheme during the initiation.

*The settlement scheme was able to triple the milk production from 160 litres to over 500 litres per day and increased the land under maize production as the former European settler farms always left significant land holding unutilized. This development was supported by the guaranteed minimum return (GMR) – guaranteed loans for maize production as it enabled the farmers to benefit from the insuring crop losses (Oral Interview, Farmer, Mr Kipkosgei Butuk, May 9<sup>th</sup> 2022).*

In terms of animal management, the LDSB programme provided veterinary support services to the new smallholder farmers in the Ndalat

Settlement Scheme as informed by a former cooperative inspector, Mr Tarkwen (Oral Interview, February 15<sup>th</sup> 2022).

*The veterinary function was led by a white veterinary doctor, Mr Hansen in charge of animal health (management and control of animal diseases) and reproductive performance (the selection of cow breeds to be kept, the use of AI services, the maximum number of dairy cows to be kept by each smallholder among other issues). The veterinary doctor was supported by several African veterinary scouts (Mr Christopher Araap Samoei, Mr Matayo Araap Biy, Saulo Olayo and Mr Kiboit) who were tasked with the surveillance and monitoring of animal diseases and pandemics, supervision of the smallholder farmer activities (adherence to the objectives of the settlement scheme) and sustaining the provision of AI services as desired. The farmer paid for the AI services through a check-off system arrangement with the settlement offices and later through the Ndalat Farmer's Cooperative Society (Oral Interview, former cooperative inspector, Mr. Tarkwen, February 15<sup>th</sup> 2022).*

The LDSB programme also attended the agricultural support services to the farmers as informed by a resident farmer, Mr Daniel Chepsiror (Oral Interview, 10th March 2022).

*The agricultural extension services were led by a senior agricultural extension officer who was either Whiteman or African (depending on the availability). The agricultural extension officer was supported by several agricultural instructors (Paul Tarus, Simon Kurgat, Stephen Kemei and Kiprop araap Kebeney, Ngatia, Edward Mburu, David Kapkiyai, Thomas Birgen and Saina). These extension services include the adoption of farming technologies, management of soil conservation efforts, monitoring of farmers and productivity as well as environmental management activities and protection of river banks among other issues. The settlement office also maintained a health inspector, Mr*

*Yakub Kurei who was responsible for sanitation and public health (toilets and pit latrines).*

The LDSB programme also provides general support services to the new smallholder farmers as indicated by the contribution of a farmer, Mr Boit;

*The LDSB delegated the support services and functions to agents such as Steinkamp and Smith Company Limited (Agents to Agricultural Finance Corporation), Dalgety's Limited and Meyer Limited all of which provided varied support services. The Steinkamp and Smith Company Limited provided loan and mechanized leasing facilities and services such as tractors, ploughs, planters, farm tools and implements among other things, while Dalgety's Limited provided grade cows with the Meyer Limited availing hybrid maize seeds and phosphate fertilizer. The Steinkamp and Smith Company offered for the initial period before the Ndalat Farmers' Cooperative Society was operationalized (Oral Interview, farmer, Araap Boit, October 3<sup>rd</sup> 2020).*

### **The Commercialization of Food Crop Production in the Settlement Schemes**

At independence, Kenya being an agricultural economy, focused on the growth and expansion of food production to support and tackle food security and complement cash crop farming in areas where it was agro-ecologically suited (Oloo, 2020). This was evidenced by the dominance of maize production in the value of marketed output in Nyanza province in the late 1950s which was attributable to Swynnerton's plan (Heyer, 2011). Another concurrent opinion suggests that smallholder milk production systems as a well-established economic activity represented a complementary commercial enterprise alongside other food or cash crop farming such as coffee, tea, fruits or vegetables (Omore et al., 1997).

It took the collapse of the milk marketing system in the early 1980s to confirm the misaligned focus on food crop production as opposed to high-value crops (Jayne & Smale, 2005). This smallholder

mixed farming in Kenya was largely driven by the need to integrate the African settlers into an economic activity (Leys, 1971) as the colonial policy called for the enlarged market opportunities for the peasantry agriculture for subsistence, local consumption and also for export (Maxon, 1992).

According to Belshaw (1964), several settlement schemes in the west of Rift Valley Province including Lessos, Keben, Muhoroni and Tamu, West Sotik, and East Sotik among others were geared towards the mixed farming producing dairy, maize and other crops. In other instances, the settlement agriculture included a broad variety of production systems that included: beef, sheep, pyrethrum, sugar cane, potatoes, maize, wheat, barley, coffee, tea and other minor crops (Von Pischke, 1977). During structuration, the Ndalat settlement scheme was a smallholder mixed-farming as observed by the former cooperative inspector, Mr Tarkwen (Oral Interview, February 15<sup>th</sup> 2022).

*The Ndalat settlement scheme was established as a mixed-farming settlement for dairy and maize production with an annual net target income of about 40 US dollars. The average maize yields ranged between 12 – 13 bags per acre and the whole scheme had a milk quota of 248 gallons per day with the surplus being sold as butter fat. The policy emphasized the monocropping of maize in the smallholder plots. At the initial stage, only vegetables on a small portion of land were allowed. The settlement scheme only allowed the smallholder farmers to keep only dairy cows (a maximum of three cows and calves). Within the scheme, grazing outside the smallholder plots was prohibited to prevent the spread of diseases. The LDSB programme offered several dairy cow breeds including Friesian and Ayrshire, Guernsey and Redpoll and the indigenous cattle breeds and bulls were prohibited in the scheme. The smallholder farmers in the Ndalat Settlement scheme had to artificially inseminate their cows.*

Former cooperative officer, Mr Tarkwen elaborated on the contradictions introduced by the colonial settlement policy.

*Though Coffee as a crop was available and was suited to the agroecological system in the Ndalat Settlement scheme, the settlement offices uprooted the coffee plants in a coffee plantation in 'Kapmakiton' during the establishment of the settlement scheme. Thus, coffee as a crop was not embraced. The scheme only promoted a monocropping system without recourse to other economic activities. This lack of alternative economic activities had a consequent effect on enterprise diversification which would have provided an alternative income source for the farmers. The independent Kenya appeared to have focused only on the agricultural colonial structures and thus there was no alternative economic paradigm in the post-independence settlement schemes (Oral Interview, former cooperative inspector, Mr. Tarkwen, February 15<sup>th</sup> 2022).*

At independence, the predominance of the colonial agricultural policy meant that maize and dairy production would dominate mixed farming systems for both export and local consumption (Heyer, 1974). The mixed-farming system took root during the 1960s (Belshaw, 1964) and has been maintained with little changes. This European mixed farming represented a neo-colonial ideal and way of life for the educated Africans. In the defence of mixed-farming systems, the independent Kenya leadership justified the transfer of the mixed farms as they were, along with the apparatus of monopsonistic marketing structures (Leys, 1971).

### **The Institutionalization of the Cooperatives as Marketing Agents**

Cooperatives became vehicles for socio-economic transformation taking place in the LDSB settlement schemes as the colonial agricultural policy encouraged the formation of cooperatives for bulking the farmers' produce for sale to established marketing bodies, arranging the



supply of seeds, fertilizers and agricultural requirements to its members. Archival data indicated that the first producer cooperative society was created in October 1962 by 1963, their number had risen to 34 with the expectation of over 120 cooperatives to be established by 1966 (Department of Settlement, Annual reports, 1962/63).

The colonial agricultural policy also linked the agricultural value chain activity that roped in the farmers through the cooperative sector to the marketing boards and lastly the consumer. Ndalat Farmers' Cooperative Society was established to underpin the desired economic and social change in the Ndalat Settlement Scheme. As indicated by the farmer/former treasurer Mr. Naftali Nyango, the Ndalat Farmer's Cooperative Society was a multipurpose vehicle that served several functions.

*At first, the financial arrangement including marketing of the milk and maize produced from the settlement scheme and loan repayment was done by the settlement offices headed by Mr Gibson. Thereafter, the LDSB programme established a socioeconomic structure in the form of the Ndalat Farmers' Cooperative Society within two years. Once established, the Ndalat Farmers' Cooperative Society was operationalized and all the farmers registered with the cooperative and allocated production quotas. For instance, each smallholder farmer was supposed to deliver at least 50 litres of Milk daily and a minimum of 50 90-kg Bags of Maize annually.*

*Under the LDSB programme, the Ndalat Farmers' Cooperative Society became a conduit through which farmers supplied farm produce to either Kenya Cooperative Society(milk) or Kenya Farmers' Association (Maize) and provided linkages for bulk purchasing arrangements for the acquisition of farm inputs (fertilizer, seeds, equipment, milking equipment etc) from the Kenya Farmers' Association Stores or its agents, Dalgetty Ltd. Its function was largely a market intermediary to the marketing boards.*

*These mutual 'credit' arrangements expected the farmer to 'sell' their milk to the Ndalat Farmer's Cooperative Society every morning upon which the quantity of milk was recorded in the ledger books. The milk produced by each farmer was carefully examined, weighed and recorded before being delivered to the nearby Kenya Co-operative Creameries, Eldoret Plant. The KCC would 'pay' the Cooperative society for the milk delivered and in turn the cooperative society would 'pay' each farmer for the quantity of milk delivered to the cooperative less any other financial arrangements or obligations (Oral Interview, farmer/former treasurer Mr Naftali Nyango, September 28<sup>th</sup> 2022).*

Concerning maize produce, the former agricultural inspector Mr Tarus, (Oral Interview, May 5<sup>th</sup> 2022) commented on the arrangement by the Ndalat Farmers' Cooperative Society.

*The farmer would shell maize, package it and store the shelled maize. Once the farmer had shelled the maize, the cooperative staffer weighed and ensured that 90 – Kg per bag before ferrying the produce to a central office. The cooperative was obliged to collect the produce and record the 'sale' in the farmer's ledger and immediately pool together the smallholding farmers' produce in their stores and then contact the KFA to pick the produce.*

*The Kenya Farmers Association would immediately collect the farmers' produce as bulked and record it as a 'sale' with the cooperative society and move them to silos. After some time, KFA would pay the cooperative society for their produce and in turn, the cooperative society would pay the farmers for their produce less any other financial arrangement or obligation. The cooperative society was a member of the Kenya Farmers Association and therefore farmers were able to access animal feeds on credit facilities. This credit arrangement also ensured timely and reliable access to feeds and thus increased the maize and milk production in the scheme.*

*The farm input items would be moved to stores and managed by a storekeeper. When the farmer visited the store and requested the farm inputs, items, tools and implements, the storekeeper would issue the farm input, item, implement or tool and record the transaction at margin in a ledger book which at the end of the month would be collated and summarized. The cost of the transaction would be transferred to the main farmer's ledger book where it would be deducted from the farmer's monthly income and the transaction closed.*

Former Mosop Divisional Agricultural officer, Mr Morton Lelei (Oral Interview, March 22<sup>nd</sup> 2023) also acknowledged.

*In providing these services, the Cooperative society built its own offices and stores in the Ndalat settlement scheme expanded its activities and acquired transportation trucks. The cooperative society was managed and run democratically through the election of the nine-man management committee (Chairman, treasurer, and secretary). These elections were overseen by the Ministry of Cooperative Development. Essentially, the cooperative societies were autonomous bodies overseen by the ministry officials. The cooperative society had in some time hired clerks and typists to assist and recording and bookkeeping. These individuals were trained by the cooperative society to support the activities and operations of the cooperative society.*

In support, Harbeson (1967) observed that cooperative societies played a significant role and function in coordinating social and political change from an institutional point of view. Echoing a similar notion, Von Pischke(1967) observed that farmers' producer cooperatives and the marketing organizations shaped the agricultural development in the settlement schemes and as per the 1965/66 annual report, dairy, wheat and pyrethrum dominated the sales through the cooperative society (Department of Settlement Annual report, 1965/66).

The close linkages between the cooperative societies, marketing and regulatory boards also became a regulatory conduit for quotas between large-scale farmers and smallholder farmers in the settlement schemes (Department of Settlement Annual Report, 1962/62). However, farmers' cooperatives faced significant challenges arising from financial mismanagement and fund misappropriation by the committee members and clerks (Department of Settlement Annual Report, 1965/66).

### **The Institutionalization of the Statutory Marketing and Regulatory Boards**

The regulatory bodies such as the Maize Control Board (1942), the Kenya Dairy Board (1959), the Wheat Board (1957), the Pyrethrum Board, the Tea Development Authority (1951), the Dairy Board(1959), the settler bodies such as Kenya Cooperative Creameries(KCC), Kenya Farmers' Association (KFA), Kenya National Farmers' union (KNFU) and Kenya Planters' Cooperative union (KPCU) (Kenyanjui, 1992) and marketing boards such as the Maize and Produce Board (1946), (Leys, 1971) would define the colonial agricultural policy. These monopsonistic structures largely conferred benefits to large-scale farmers due to production efficiencies while disadvantaging smallholding agriculture (Leys, 1971).

Ndalat Settlement scheme operated under the auspices of KCC, KFA, Maize Produce Board and Dairy Board. These regulatory and marketing boards impacted agricultural development as these bodies were coopted as public sector organizations in independent Kenya. These statutory marketing boards were typically responsible for a broad range of functions such as collection, storage, marketing and distribution of smallholder farmers' produce had considerably influenced the market prices for agricultural commodities (Von Pischke, 1977).

While the white settler farmer bodies such as (KFA), and Kenya Nation Farmers Union (KNFU) regulated and controlled the production arrangements (Kenyanjui, 1992), the colonial

agricultural policy called for a marketing intermediary, that is the cooperatives between the farmer and statutory boards (Leys, 1971). It is this institutional arrangement that was continued by the independent governments with the support of the nationwide cooperative sector as opposed to the free market structures (Oyugi, 1980; Kenyanjui, 1992).

This is indicated by the initial former cooperative officer for the Ndalat settlement scheme Mr Tarkwen (Oral Interview, February 15<sup>th</sup> 2022) who made the following remarks.

*Ndalat Settlement Scheme operated under the social influence of the Ndalat Farmers' Cooperative Society established in 1964 to serve as a vehicle of socio-economic transformation through the pooling of resources for improved production and marketing arrangements. Ndalat Farmers' Co-operative Society brought farmers together for the bulking and marketing of their produce as well as enabling the provision of agricultural input provision (fertilizer, maize seed, gunny bags, and milking equipment among other things). The Cooperative society sold the farmers' produce wholly to the marketing boards as the 'producers' of the maize and milk and was 'paid' by KCC and the KFA.*

Though the cooperative sector pooled and bulked the produce from smallholder agriculture to meet the processing and marketing arrangements (Kenyanjui, 1992), the former settler – bodies (KCC, KFA, KPCU and KNFU) became statutory marketing bodies which dictated that marketing arrangements for the underlying cooperative sector (Leys, 1971). This was observed by the Royal Commission on East Africa as early as 1953 who questioned the automatic preference for regulation and control as opposed to the market forces. Whereas, the nationwide cooperative provided a strong foundation at the local farm levels, their alignment with the marketing boards largely influenced the farmers' returns (Von Pischke, 1977) as the agricultural productivity of the settlement scheme was negatively influenced

by the preference for regulation and control through marketing boards (Leys, 1971).

The macro-economic changes in the 1980s brought about by the market liberalization policy laid bare the adverse and dreadful effects of the statutory boards as indicated by the former agricultural officer, Mr Morton Lelei who asserted that;

*Previously, the regulatory agents for the cereal produce included the Maize Produce Board and the Wheat Control Board which operated as individual entities before being merged into the National Cereal and Produce Board (NCPB) in 1984. The government in 1984, dismantled the KFA and established the Kenya Grain Growers Cooperative Union (KGGCU) as the new farmer body and the new body struggled to replace the functions played by the KFA. In it, the maize produce was now delivered to NCPB while KGGCU, could not manage the efficient in-kind financial arrangements and check-off system with the cooperative societies. Therefore, farmers could not access farm inputs and implements. (Oral Interview, Former Mosop Divisional Agricultural officer, Mr Morton Lelei. March 22<sup>nd</sup> 2023).*

Concerning the government policies introduced in the late 1980s, Former agricultural officer, Mr Tarus felt that;

*The KCC as a marketing body faced significant marketing challenges arising from the liberalization of the markets. Because of this aspect, the cooperative society was not regularly paid for the milk delivered and thus also saw a significant drop in the provision of subsidized AI services that were supported by the cooperative society. Due to this challenge, many farmers now resorted to using bulls which further reduced the milk productivity in the scheme (Oral Interview, former agricultural inspector, Mr Tarus, May 5<sup>th</sup> 2022).*

There was a systematic organizational failure in agricultural development following the failure of

marketing bodies (KCC & NCPB) and farmer associations (KFA) as indicated by the Former chair, of Ndalat Farmers' Cooperative, Mr Nathaniel Mengich (Oral Interview, November 4<sup>th</sup> 2020)

*Because of market liberalization, the main marketing boards for maize(NCPB) and milk(KCC) faced marketing pressures and could not favourably compete. Due to this aspect, the farmers' cooperative societies faced imminent collapse in the early 1990s because of the loss of the marketing channels and fund misappropriation by corrupt officials. In particular, this led downfall of the KCC in 1993, while the cereal market also faced challenges from cereal importation leading to lower cereal prices in the market.*

In summary, the operations of the settlement schemes were vexed by government bureaucracy, in that the ministries of agriculture and land and special-purpose parastatal organizations were the main bureaucratic beneficiaries of the settlement schemes (Hulme, 1987).

### **The Agricultural Experimentation in the Settlement Schemes Through the 1960s**

The pre-independence settlement schemes in Tropical Africa were mere ideologies advocated by the colonial power to subjugate agrarian communities to the colonial state due to the significant challenges in controlling rural Africa (Bonneuil, 2000). These challenges include lingual, cultural, environmental, and occupational differences in addition to family structures which presented weak linkages between households and the market economies thereby hindering the participation of rural Africa in the capitalist modes of production. To solve these challenges, the colonial government devised and introduced an experimental 'developmentalist' strategy characterized by the emerging developmental state working to 'modernize' agriculture through education, irrigation, transportation and integration of producers into the market economy(Bonneuil, 2000).

Bonneuil (2000) observed that the 'developmentalist' paradigm in the settlement schemes gave the state responsibility for organizing economic development and assumed that society was a complex ecosystem. Thus, the developmentalist discourse and experimentation flourished when the developmental state sought to shape the agrarian societies and environments to render them compliant to development. As such any activity such as off-scheme jobs, development of small-scale industries and formation of interest groups were viewed as subversive to the attainment of the economic objectives of these schemes and were therefore discouraged (Hulme, 1987).

The colonial state sought to materially transform the social and environmental conditions in rural Africa through settlement schemes. Such a 'developmentalist' narrative included the Swynnerton Plan which promoted and expanded agricultural development in pre-independent Kenya and embodied the extended role of Government in planning (Bonneuil, 2000). A closer examination of the Ndalat Settlement Scheme indicates standardization of operation procedures and detailed planning during its establishment as observed by Mr. Malakwen, a pioneer Resident Farmer.

*The 15-acre plot was split into 3 sections; 0.5 Acre, 3.5 Acres and 11.5 acres; where the smallholder farmer cultivated 3.5 Acres for white hybrid maize sourced from the Kenya Seed Company in Kitale, 11.5 acres for grazing and 0.5 acres for a homestead. The settlement scheme was carefully planned to ensure accessibility and convenience to the smallholder farmer and provided capital and social welfare infrastructural facilities such as cemeteries, schools, health facilities, and shopping centres.*

*Each farmer was given 3 – pedigree animals and agricultural tools and implements among other equipment. The dairy cows were kept on an extensive system where one cow consumed not less than three (3) acres per acre based on the restrictions of the number of animals kept*



*and the minimum land preserved for pasture. The program also emphasized and provided technical expertise on agronomic practices for crop production and livestock extension services for livestock production. Animal health assistants/scouts provided AI services and disease prevention, control and management. Cattle dips were constructed and operationalized by the settlement offices controlling tick infestation (Oral interview, pioneer resident farmer, Mr. Malakwen, June 12<sup>th</sup> 2022).*

A pioneering farmer/former senior settlement officer, Mr John Kosgei also contributed to the discussion;

*The settlement scheme was structured with the settlement office being the overall in charge, and under him was the agricultural extension office, the veterinary office, the health office, the cooperative office and the farm economic survey office. These offices worked synergistically under the settlement office to ensure that the objectives of the settlement were achieved such as the production schedule and arrangement, loan repayments, agricultural development and socio-economic advancement. (Oral Interview, pioneering farmer/former senior settlement officer, Mr John Kosgei, February 12<sup>th</sup> 2021).*

As observed from the informants, their narratives hold similarities with Bonneuil (2000) whose view on the 'developmentalist' paradigm called for uniform agricultural and social activities in fields and villages, with rigid schedules. Farmers were told what to plant, and what cropping systems to use and each farming operation was centrally controlled. The limitation of the 'developmentalist' paradigm came to the foreground in the late 1960s when the settlement offices in the schemes were closed down and this had serious repercussions on the experimental 'developmentalist' strategy as former agricultural inspector, Mr. Kebenei (Oral Interview, May 28<sup>th</sup> 2022), stated;

*Whereas in the 1960s, the white settlement officers ensured that all the farmers received substantial support and supervision and that the cooperative society was run as an autonomous body corporate to the settlement offices. When the settlement offices wound down their activities, the white settlement officers left the settlement scheme and immediately the smallholder farmers were reluctant to pursue the objectives of the settlement scheme. This necessitated the failure of the smallholding mixed-farming systems in the scheme as the lack of supervision led to overstocking and bull breeding which consequently led to a drop in milk production. Further, the land mechanization efforts and processes stalled immediately after the departure of the white settlement officers. This meant that there were delays in the land preparation and planting seasons with a consequential impact on the desired farm output.*

*Further, the cooperative society was 'overwhelmed' by the needs of the smallholder farmers because of overreliance on an executive manager and few literate committee members for future direction. On the other hand, the operations of the cooperative society depended on the goodwill of the manager and by extension the management committee. The staffers at the cooperative society were largely illiterate and untrained except the veterinary scouts and thus their productivity was marginal. Thus, the manager was tasked with all the responsibilities of the cooperative society and this sometimes overwhelmed one individual. The tasks ranged from employee supervision, membership relations, and agency relationships with different marketing bodies, supplier organizations and banks among other responsibilities. All this had a consequent effect on the optimal efficiency and effectiveness of the manager and by extension, the returns to the cooperative society and all membership at large.*

Further, the delinking of the Cooperative society from settlement activities affected the Ndalat Farmers' Cooperative Society as indicated by a farmer, Mr Kiptalam Seurei also observed that there was insufficient supervisory support for the Ndalat Farmers' Cooperative Society once it was delinked from settlement activities;

*Due to insufficient farm supervision, the farmers introduced prohibited livestock such as sheep and goats which effectively competed for the same grazing pastures with the cows. The introduction of goats and sheep to the scheme impinged on the production arrangements of three acres per dairy cow and this had a consequent reduction in the milk productivity per cow due to insufficient feed resources. This had a cyclical effect on the productivity and thus as time passed the overall milk productivity from the scheme declined* (Oral Interview, farmer, Mr Kiptalam Seurei, August 20<sup>th</sup> 2021).

In support, Harbeson (1967) noted the inadequacies of the 'developmentalist' paradigm in the post-independence settlement schemes which have enormous challenges relating to economic, social, structuration, political, and marketing aspects among others. In terms of economic structuration, oversupply constrained the quota system in all sectors from dairy to pyrethrum. For instance, smallholder farmers in the Kinangop settlement scheme oversupplied milk and pyrethrum which depressed their economic returns. In other instances, any settler initiative that deviated from the prescribed plans was prohibited as smallholder farmers were controlled through a series of rules and sanctions, such as halting subsistence allowances, loan disbursement and lease forfeitures (Hulme, 1987).

The articulation of capitalist agriculture to the traditional peasant mode inevitably expanded commodity production (Lonsdale & Berman, 1979), as the peasantry and the capitalist modes of production in independent Kenya were mutually reinforcing and flourishing (Leys, 1971). In the end, the smallholder agricultural sector was predominantly subsistence-oriented and

supported perhaps 80% of Kenya's settled population. Thus, a subsistence orientation was reflected in land use patterns with a preference for food self-sufficiency (Von Pischke, 1977).

According to Ruthenberg (1966), the colonial administration in the immediate pre-independence period doubted the ability of the African agricultural officers to participate in the fieldwork and provide agricultural knowledge and skill to the smallholder farmers in the settlement schemes. They presumed that these agricultural officers preferably liked to be assigned administrative duties as opposed to fieldwork. The author noted that '*It is, therefore, open to some doubt whether agricultural extension of this kind introduced by the British colonial officers would continue after Independence*'.

### **The Outcomes of the Colonial Agricultural Policies in Kenya**

The main outcome of colonial agricultural policy was the organization and development of agricultural programmes beginning in 1947 (Leys, 1971, Heyer, 1974, Thurston, 1987) which raised the productivity and revenue for African agriculture and inducted Africans into assuming a greater role in the agricultural economy. Much has been done in both directions, especially since the Swynnerton Plan was adopted. Settlement activities in the former scheduled areas may partly be an extension of small-scale peasant farming as a response to the desire for land by Africans and partly serve as a way of replacing the settler production system (Ngugi, 2001). As observed by Bonneuil (2001), the economic and production activities in the former scheduled area largely remained out of the reach of most Africans in the reservation. Thus, LDSB settlement schemes achieved several objectives that included population redistribution, resettling landless communities, relieving environmental problems, improving the welfare of target groups, sedentarizing nomads, increasing food production, raising the value of exports, creating jobs and fostering national security (Bonneuil, 2001).

The major settlement schemes initiated by the colonial agricultural policy included the ALDEV/ALUS schemes (Ruthenberg, 1966), the Swynnerton plan (Leys, 1971, Thurston, 1987, Heyer, 1974) and the LDSB schemes (Leys, 1971, Heyer, 1974, 2011, Leo, 1984, Storrar, 1964; Belshaw, 1964). In general, all the settlement schemes were criticized for failing to achieve the social, agricultural and economic objectives although a few actualized the desired objectives (Chambers, 1969). A case example is the World – Bank 1978 reports which indicated that the settlement schemes in Africa had a 50 % economic return rate three to five years after their implementation (Hulme, 1987). All is not lost as ALUS/ALDEV programmes in 1947 raised the net national income to £53 million, with over 50% being drawn from agricultural output and 60% being the imputed value of African non-marketed production (Leys, 1971).

Ruthenberg (1966) noted that there was a critical assumption that the provision of agricultural services would stimulate the economy of the smallholder production systems. However, the post-independence government moved away from the agricultural development efforts in the LDSB settlement schemes and sought to develop specific schemes: high-value crop development, land irrigation, and the Million-Arce settlement schemes among others which diverted the crucial funds away from the institutionalized LDSB settlements. These competing objectives could not be sustained in the long – run because of the fiscal needs of the government operations and thus in some instances, the provision of agricultural services suffered from neglect.

The informants nuanced the evolution in the agricultural development in the Ndalat Settlement Scheme as observed by a resident pioneering farmer, Mr Kebenei (Oral Interview, May 5<sup>th</sup> 2022).

*Despite the evolutionary challenges faced by the African smallholders in the Ndalat Settlement scheme, the strict supervision of the settlement office under the white settlement officers managed to shepherd the*

*agricultural and economic growth and progress until the SFT dismantled the settlement offices in the scheme. Once, the settlement activities had begun in earnest, everyone was virtually working on his/her farm. The settlement officers always insisted on agricultural development and provided support to the smallholder farmers in the settlement scheme. Every farmer was expected to meet the production quota and aid in the achievement of the development agendas of the SFT. The best farmers were recognized and given new impetus. For instance, I was the first person to be conferred the honours to import AI straws from Holland. This had a significant impact on my farm productivity as I was able to triple my milk output.*

*The growth and development of the smallholder farming system were also attributed to the individual farmer's efforts as the settlement offices expected the farmer to participate in all farming activities. At the onset of the settlement scheme, the farmers themselves provided direct labour for all the activities. This meant that there was near full employment of labour in the scheme as was decreed in the settlement objectives. Things took a wrong turn when the White settlement officer, Mr. Gibson left upon which the progress of the smallholding agriculture faced new inherent infrastructural and economic challenges.*

## CONCLUSION

Based on the foregoing analysis and discussion, the paper makes the following conclusions.

The colonial agricultural policy embedded land redistribution reform with the agricultural policies and thus 15 – acre plots in the Ndalat Settlement scheme are a testament to demands for land reform and served as the minimum economic acreage for settling the landless African population and in turn cooled the political and social tension in the country before independence. Thus, the colonial policy is credited with the land

reformation processes that shaped the political and socio-economic events in independent Kenya and laid the foundation for the Million–Are schemes that succeeded the LDSB schemes.

The colonial agricultural policy holds the legacy of having initiated and institutionalized smallholding mixed farming agriculture in independent Kenya and contributed to the current situation of commercialization of food crop production. The commercialization of the food crop production sharply contrasts with the economic potential of varied agricultural systems which involves the growth of high-value crops such as horticulture, coffee, and tea among others in concert with the food crop production would introduce specialization in production and value chain processing for consumption and exports.

The policy also suppressed the development of competitive market pricing structures for agricultural commodities as it preferred the use of marketing boards which operated under political influence. The monopsonic structures such as the KCC, KFA, and NCPB among others impeded the growth of alternative and competitive markets for the smallholder farmers and deprived them of revenue potential and therefore led to the regression to the peasantry agriculture.

The colonial agricultural policy offered economic opportunities for the progressive African farmer in the Ndalat Settlement scheme to participate in the cash economy by providing an opportunity to earn income from the agricultural land and sustain the employment of the Africans from the former reservations. This had significant ramifications for the Africans as it enabled them to stabilize the economic foundation of the nation and benefit from the ensuing participation in economic activity.

### Recommendations

Considering that the colonial agricultural policy has a legacy which cannot be undone because of the social, economic and political pressure on land and productive capital in Kenya, the study proposes that the government introduces alternative viable and efficient marketing

structures through the use of information technologies to ensure that farmers achieve maximum returns on the productive capital. The use of commodity markets for agricultural produce would alleviate the problem of pricing as it would bypass the monopsonistic market structure created by the KCC and NCPB. Since, the marketing boards determine the market pricing structure and ensuing farm incomes, therefore by bypassing them with alternate and efficient market structures, the farmers are more likely to benefit from the competitive pricing structure.

Because of the limited land sizes, the prospects of diversification into crop production are suitable for the agroecological zone. Originally, the white settlers grew coffee but were uprooted during the settlement of Africans and therefore coffee can be planted in the Ndalat Settlement Scheme. The most prevalent subsistence diversification is the growth of dry weather-resistant crops such as bananas, cassava and potatoes. With the availability of water, there exists the enormous potential to diversify into zero-grazing dairy production systems and the production of horticultural crops, especially vegetables. These two have ready markets both locally and in the nearby urban centres. Further, the zone offers good potential for potato crop production and therefore there is a need for the exploration of appropriate and suitable crops for the scheme.

### REFERENCES

- Belshaw, D. G. R. (1964). Agricultural settlement schemes on the Kenya highlands. *East African Geographical Review*, 1964(2), 30-36.
- Bonneuil, C. (2000). Development as experiment: Science and state building in late colonial and postcolonial Africa, 1930-1970. *Osiris*, 15, 258-281.
- Chambers, R. (1969) Settlement Schemes in Tropical Africa: A Study of Organisations and Development, International Library of Sociology and Social Reconstruction, London: Routledge



- Clough, R. H. (1968). *An appraisal of African settlement schemes in Kenya highlands* (Doctoral dissertation, University of Nairobi).
- Coldham, S. (1978). The effect of registration of title upon customary land rights in Kenya. *Journal of African Law*, 22(2), 91-111.
- Fibaek, M. (2020). Rural Income Diversification, Employment, and Differentiation in Kenya and Implications for Rural Change. [Doctoral Thesis (compilation), Lund University School of Economics and Management, LUSEM]. Lund University (Media-Tryck)
- Harbeson, J. W. (1967). Land resettlement and development strategy in Kenya. Discussion Paper 38, Nairobi: Institute for Development Studies, University of Nairobi
- Heyer, J. (1974). A survey of agricultural development in the small farm areas of Kenya. Working Paper 194, Nairobi: Institute for Development Studies, University of Nairobi
- Heyer, J. (2011). A survey of agricultural development in the small farm areas of Kenya. Working Paper No.194, Institute For Development Studies, University Of Nairobi
- Herz, B. K. (1970). *Land reform in Kenya* (Vol. 1970). Agency for International Development.
- Hulme, D. (1987). State-sponsored land settlement policies: theory and practice. *Development and Change*, 18(3), 413-436.
- Kenyanjui, S. (1992). "European Settler Agriculture." In Ochieng, W. R., & Maxon, R. M. (Eds.). (1992). *An Economic History of Kenya*: 111-127. Nairobi: East African Educational Publishers.
- Leys, C. (1971). Politics in Kenya: The development of peasant society. *British Journal of Political Science*, 1(3), 307-337.
- Lonsdale, J., & Berman, B. (1979). Coping with the contradictions: the development of the colonial state in Kenya, 1895-1914. *The Journal of African History*, 20(4), 487-505.
- Maxon, R. M. (1992). The establishment of the colonial economy. *An economic history of Kenya*, 67.
- Ngugi, J. (2001). The decolonization-modernization interface and the plight of indigenous peoples in post-colonial development discourse in Africa. *Wis. Int'l LJ*, 20, 297.
- Omore, A. O., Muriuki, H., Kenyanjui, M., Owango, M. O., & Staal, S. J. (1999). The Kenya dairy sub-sector: a rapid appraisal.
- Oloo, A. (2020). *Colonial Crop, Maize: Land Appetite and Economic Subsidies in Colonial Kenya: 1895-1965*. University of California, Los Angeles. (Master's thesis, University of California)
- Oyugi, W. O. (1980). Government and Public Enterprises: Some Observations on Kenya. *The role of public enterprises in development in Eastern Africa*. Occasional Paper No. 39, Institute For Development Studies, University of Nairobi.
- Ruthenberg, H., & Ruthenberg, H. (1966). Future Aspects of Agricultural Policy. *African Agricultural Production Development Policy in Kenya 1952-1965*, 111-147.
- Ruthenberg, H. (1966). Future Aspects of Agricultural Policy. *African Agricultural Production Development Policy in Kenya 1952-1965*, 111-147.
- Segal, A. (1967). The politics of land in East Africa. *Africa Report*, 12(4), 46.
- Shaffer, N. M. (1967). Land resettlement in Kenya. *Yearbook of the Association of Pacific Coast Geographers*, 29, 121-139. Theses and Dissertation
- Storror, A. (1964). A guide to the principles and practices of land settlement in Kenya. *Journal*

of *Local Administration Overseas*, 3(1), 14-19.

Resident pioneering farmer, Mr Kebenei, May 5<sup>th</sup> 2022.

Swynnerton, R. J. (1955). A plan to intensify the development of African agriculture in Kenya. *A plan to intensify the development of African agriculture in Kenya*. Government Printer, Nairobi.

#### Archive sources

KNA/DS/Annual report/62/63

KNA/DS/ Annual report/65/66

Van Arkadie, B. (2016). Reflections on land policy and the independence settlement in Kenya. *Review of African Political Economy*, 43(sup1), 60-68.

Von Pischke, J. D. (1977). *The political economy of farm credit in Kenya* (Doctoral dissertation, University of Glasgow).

Yoshida, M. (1966). *The Historical Background to Maize Marketing in Kenya and Its Implications for Future Marketing Reorganisation*. Makerere Institute of Social Research.

#### Primary Sources

##### Oral Interview

Farmer/retired senior settlement office, Mr John Kosgei, February 12<sup>th</sup> 2021

Former Mosop Divisional Agricultural officer, Mr Morton Lelei, March 22<sup>nd</sup> 2023

Former agricultural inspector, Mr. Kebenei, May 28<sup>th</sup> 2022.

Farmer/former chair, Ndalat Farmers' Cooperative, Mr Nathaniel Mengich, November 4<sup>th</sup> 2020

Pioneering Farmer, Mr Kipkosgei Butuk, May 9<sup>th</sup> 2022.

Resident farmer, Mr Daniel Chepsiror, Oral Interview, 10<sup>th</sup> March 2022

Former Agricultural Officer, Mr Tarus. March 29<sup>th</sup> 2023

Former cooperative inspector, Mr. Tarkwen, February 15<sup>th</sup> 2022

Pioneering Farmer, Araap Boit, October 3<sup>rd</sup> 2020