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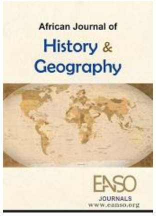

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Original Article

How Colonial Policies Stalled the Agrarian Revolution in Independent Kenya: 1954 To 1992

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ABSTRACT

Considering that the Swynnerton plan of 1954 arose because of land crises and widespread impoverishment in African areas, this primal colonial agricultural policy was experimental in design and execution. Other significant experiments on African agriculture in pre-independent Kenya include the 'communalism' agricultural approach by Governor Sir Philip Mitchell in 1947 through the African Land Development Board (ALDEV) and the Land Development and Settlement Board (LDSB) schemes of 1961 – 62, which sought to integrate Africans into the capitalist economy. Empirical evidence shows that the colonial agricultural policy for improving African agriculture in pre-independent Kenya largely failed and directly compromised the realisation of the agrarian revolution's political, economic, and social benefits in independent Kenya, from 1954 to 1992. Farmers have regressed to subsistence food production as the smallholding mixed-farming units have failed, and so are monopsonic market structures. Based on the foregoing view, the study evaluated how the colonial agricultural policy in pre-independent Kenya largely stalled the agrarian revolution in independent Kenya by examining the historical development of the Ndalat Settlement Scheme, Nandi County, Kenya, as one of the LDSB schemes. The study adopted a historical descriptive design with a sample size of 48 key informants who were conveniently sampled from 32 farmers, four cooperative officials, five pioneering settlement officials, two Ministry of Agriculture officials, and three retired agricultural officers. Interviews were the main research instrument, complemented by archival and government policy documents. The findings indicated that the Ndalat settlement scheme was part of the colonial LDSB initiatives to resettle the landless Nandi people based on a loan facility under Her Majesty's Government (assisted–owner) schemes. In reflection, the colonial policy stalled the agrarian revolution through the experimental LDSB settlement schemes, which formed the basis for land redistribution in independent Kenya, institutionalised smallholding mixed-farming systems, commercialised food production systems supported monopsonic market structures that were linked to value addition in metropolitan capital London. In conclusion, the study idealized the alternate idyllic activities that would have supported agricultural development in independent Kenya such as the introduction of medium to large-scale specialized farms, commercialization of high-value crops such as coffee, tea, macadamia, avocado

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production, competitive marketing structures based on the producer cooperative structures, and local value addition processing. Based on the findings, there is a need to review the current agricultural policy and align it with the development needs of the independent Kenya.

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INTRODUCTION

Contemporary evidence indicated that there was no large–scale effort by the colonial government to develop African agriculture before the 1950s, and the Swynnerton Plan of 1954 was the first and most comprehensive post-war colonial development plan for promoting agricultural development in African areas (Thurston, 1987). Before then, the African areas faced significant challenges that included overcrowding, land degradation, and fragmentation (Coldham, 1978). This problem continued during the war periods, and by the mid–1940s, an agricultural crisis had evolved as soil resources had deteriorated visibly during the war (Heyer, 2011).

As a measure, the colonial government established two boards; A Board of Agriculture for the European areas and an African Settlement Board for the African areas in 1946. The African Settlement Board, named African Land and Utilization Scheme (ALUS) and later renamed the African Land Development Board (ALDEV) in 1947, controlled a three-million-pound grant from the Colonial Development and Welfare grant under the Ten-Year Development Plan (Thurston, 1987). However, the official colonial agricultural policy for the African areas began with the Swynnerton plan of 1954 (Ruthenberg & Ruthenberg, 1966) and ended with the Land Development and Settlement Board (LDSB) programs which initiated the planning and settlements of Africans in the scheduled areas between 1961 and 1962 (Belshaw, 1964).

The Swynnerton Plan represented a new phase of African agricultural development policy and served as an agricultural policy in Kenya today. It expanded cash crop production, introduced new crop and livestock enterprises, and had a strong emphasis on agricultural income (Heyer, 1974). In Nandi County, the Swynnerton plan had a pilot scheme in the Ndalat region for demonstrating agricultural land development and was funded to the tune of £ 12,960 (Leys, 1971). The plan also supported the most comprehensive land tenure reform through the consolidation of fragmented land holdings and land intensification and large-scale introduction of cash crops complemented by marketing programs in Central Province between 1956 and 1960 (Thurston, 1987). Much has been done in both directions, especially since the Swynnerton Plan was adopted.

The settlement activities in the scheduled areas may partly be an extension of small-scale peasantry, and partly a response to the desire for land ownership by Africans, but also serve as a way of replacing the settler production system (Ngugi, 2001). These LDSB schemes introduced smallholding agriculture for integrating Africans

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into the Highlands (scheduled areas) and had two important economic purposes: develop previously underdeveloped areas in the 'Highlands', and restore land market structures (Harbeson, 1967). The LDSB schemes were the yeo-man(low–density) schemes and the Assisted - Owner (high-density) schemes (Shaffer, 1967; Storrar, 1964) based on funding organization; International Bank for Reconstruction and Development/Colonial Development Corporation (IBRD/CDC)/ low – density schemes and Her Majesty's Government (HMG)/ high-density schemes (Department of Settlement 1962/63 annual reports, 1963).

The Yeoman Farmer Scheme (low-density scheme) was initiated in 1961 but discontinued in 1962 due to heavy capital demands (Leys, 1971), while the Assisted-Owner Schemes (high-density schemes) was initiated in 1961 for smallholder farming systems and provided loans and working capital to inexperienced African farmers (Belshaw, 1964). These high–density schemes had a huge impact on the realisation of the economic potential of the land holdings (Harbeson, 1967), but the political change called for a much greater effort and brought about depletion rather than accretion of resources (Ngugi, 2001). The immediate post-independence government then initiated the five-year 'million-acre scheme' in June 1963 for land purchases in scheduled areas for African smallholding farming systems (Leys, 1971; Herz, 1970).

What started as the emergent policy to starve off the land degradation crisis and widespread poverty in African areas in 1947, became a nationwide land and agricultural policy by the early 1960s. Thus, the Swynnerton Plan of 1954 can be construed to be a continuation of the ALDEV program, which had largely introduced individualised land holdings in the African areas while the Swynnerton Plan was credited with opening up economic opportunities for African smallholders but also marginally introduced Africans to cash-crop farming ventures (Van Arkadie, 2016). The LDSB schemes then extended the smallholding farming systems into the former scheduled area in 1961 as a way of reducing pressure on land capacity in the African areas (Harbeson, 1967).

As per official records, 36 low-density (yeo-man) schemes on 187,757 acres, settled 5,166 families, and 68 high-density schemes on 688,170 acres settled 25,433 families (Shaffer, 1967). The first African government headed by Jomo Kenyatta initiated the first five–year Million-acre Scheme in June 1963 to fast-tracking land transfers (Leys, 1971) and support the development needs of the independent state through smallholding agriculture subjected it to close administration control, to hinder the development of a new social class (Leys, 1971).

In Nandi County, the iconic LDSB schemes include the Ndalat Complex scheme (Ndalat, Sosiani, and Kaptebe schemes), designed for dairy and maize production and the Lessos Complex scheme (Lessos, Koilot and Keben schemes), designed for tea, maize and dairy production, which had both low- and high-density schemes (Belshaw, 1964). Because of its founding, the Ndalat Settlement Scheme provides a unique background in explaining the integrated nationwide colonial agriculture and land policy in pre-independent Kenya from 1954 to 1962. In investigating the impact of the colonial agricultural policy on the Ndalat Settlement Scheme in Nandi County from 1954 to 1992, the study interrogates how colonial agricultural policy directly compromised the realisation of the political, economic and social benefits of the agrarian revolution taking place in independent Kenya.

METHODOLOGY

The study was situated in the Ndalat settlement scheme located in Ndalat Location, Nandi County, and employed a historical qualitative design to provide a historical description of the events during the establishment of the LDSB schemes in 1961 through 1962. The study largely used interviews complemented with archival documentary evidence. The study purposively sampled 48 informants, which include 32 farmers, four cooperative officials, five pioneering

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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. An authorisation letter for the study was obtained from the NACOSTI, and county administration structures were obtained after which consent were verbally sought and obtained from the key informants. Further, voluntary participation was observed. The mode of collecting data from informants was evaluated in order to enhance the information collection environment. The field data were first transcribed, classified, and presented into thematic categories supported by narrative presentation. The documentary data were then evaluated and sorted, and presented in themes to support the interviews.

RESULTS AND DISCUSSION

The Experimental 'Developmentalism' Strategy in Lieu of Economic Planning for African Colonies

Based on several authors (Heyer, 1974; Leys, 1971), among others, the colonial government overlooked African areas as evidenced by the uneven distribution of veterinary and agricultural officers. All through the colonial conquest till mid – 1940s, Africa was dependent on the communal agricultural production system thus in 1946, the colonial government experimented with a communalism approach to agriculture which gained momentum in Western regions of Kenya, but land subdivision and enclosures were a common occurrence in the productive 'scheduled' areas of central and Rift valley regions (Heyer, 1974) and thus counteracted the communalism approach (Thurston, 1987). With the imminent breakdown of law and order in Central Kenya in 1951, the colonial government turned to an agricultural officer from mainland Tanzania, Mr. Roger Swynnerton, to craft a plan to assuage both the settler farmers and colonial authorities (Thurston, 1987).

Mr. Swynnerton conceptualised a plan titled 'Revised and Consolidated Agricultural Policy for Central Province' based on peasantry agriculture, calling for the intensification of agricultural development through smallholding mixed-farming agriculture to support development, economic recovery and re-established order and control during the emergency period (Thurston, 1987). Upon its success in Central province, the plan later morphed into a nationwide agricultural plan titled 'A Plan to Intensify the Development of African Agriculture in Kenya' (Thurston, 1987).

The foregoing review indicates that the colonial authorities considered the development of African areas as an afterthought (Heyer, 1974). For instance, while the districts in the central province had been allocated agricultural officers in the 1930s, the Rift Valley districts of Baringo, Elgeyo-Marakwet, Nandi, and West Suk (West Pokot) had veterinary officers only while tasking the administrative officers with agricultural development. In 1948, the Rift Valley districts had only five agricultural officers, which put them at par with other parts of the country in that respect. The Rift Valley districts were way behind some of the others at that time (Heyer, 2011).

Because of the significant impediments to controlling African communities, the colonial state introduced an experimental 'developmentalist' strategy to transform the social and environmental conditions of rural Kenyan communities. This emergent 'developmentalist' state strategy sought to modernise agriculture through educating, irrigating, transporting, and integrating farmers into the market economy. The strategy required pre-packaged settlement schemes as the main building blocks of the experiment (Bonneuil, 2000). The colonial state undertook to transform materially the social and environmental conditions of life in rural areas through its 'developmental' narrative (Bonneuil, 2000).

Bonneuil (2000) observed that the settlement schemes were designed with the physical and social space in accordance with *"plans"* produced by the scientific bureaucracy. The settlement scheme introduced a new control system headed by an individual household head rather than the

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indigenous communal ways of life. The model scheme favoured the nuclear family, which was granted tenancy after accessing land through the bureaucratic control system scheme, where the household head held exclusive legal responsibility for agricultural operations on his plot in accordance with experts' and inspectors' prescriptions. Through this model, personal relationships between the individual household head and the state were created to support the agricultural and economic transformation.

The historical account from the former agricultural officer, Mr Tarus, and former cooperative officer, Mr Takwen, in the Ndalat settlement Scheme provided a detailed description of the settlement process in the scheme.

> *The resettlement process was preceded by a vetting process. In the first stage, the settler farm to be redistributed to the Africans was identified, and the necessary regulatory land sale transactions were made. Once the processes had been completed, the district commissioner established a settlement office in the former settler farm. In 1962, Mr. Gibson was tasked with the settlement office for the whole Ndalat Complex Settlement scheme. In the second stage, a vetting committee comprising 20 individuals headed by Amai (Pseudo name for the Headman) and Kiptaiyat (pseudo name for the Chief) and African government officers drawn from the various locations in the Nandi District was established. This vetting committee would vet all the Africans from the local African reservation based on the following criteria; all former squatters and persons native to the Nandi district, non–natives residing in the district such as the Luhya community, and lastly all former employees of the white settler farmers that include cooks, foreman, herdsmen and housekeepers. Women were also allocated land as long as they proved that they were landless at that time. However, because most women lacked identification cards, they weren't allocated the plots* (Oral interview (OI), former Agricultural inspector, Mr Tarus, May 5th, 2022).

> *Once the settlement office was established, the district commissioner set a date for a formal gathering (Baraza) through which the land allocation was initiated. In the third stage, individuals (squatters or landless) made applications to the district commissioner through the chief. Once the District commissioner receives the applications, he collates all the applications and sends them to the vetting committee to verify the veracity of the applications and then submits the names to the settlement office.*

> *In advance, the Department of Agriculture focused on land use planning surveys on the former settler farm, and the local settlement office demarcated and numbered the plots for redistribution through balloting. On the fateful day, the District Commissioner presided over a baraza, where the successful applicants drew ballots representing the plot number in the scheme, after which the individuals were taken to their plots. Once allocated land, the new smallholder owner was supposed to immediately pay 10% of the land value to acquire a letter of allotment allowing him to settle on the land. Once allotted the land, the smallholder was given 24 months to fence the land, build a house, construct a dairy shed and sanitation facilities, and acquire the dairy cows from the settlement office. Any failure to partake in these activities meant that the allotment letter was recalled and the plot given out during the next allotment* (OI, former cooperative inspector, Mr. Tarkwen, February 15th, 2022).

As observed by the Department of Settlement 1962/63 Annual reports (1963), the land purchased from the former white settlers based on 1958 – 1959s land values but with strict agricultural user value, permanent improvements (such as houses for a maximum of £ 1,300) and permanent crops and in consultation with land valuers and the Kenya National Farmers' Union. Once purchased, the settlement scheme started with a land use survey with both ground and aerial surveys to detail the land potential areas, road network, and communal areas by the planning

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committee, which was then approved by the Department of Agriculture before any settlement activity commence (Department of Settlement, annual reports, 1962/63).

Upon successful survey, budgets prepared by the Department of Agriculture for the land purchasing cost the type of crops and stock on the land and the targeted income for the particular settlement scheme or area. The IBRD/CDC schemes targeted subsistence + £100 income, while the HMG scheme targeted subsistence + £25. By June 1962, all 301 plots for the Ndalat settlement scheme had been taken up (Department of Settlement, annual reports, 1962/63).

Both the historical narrative and accounts indicate the elaborate planning by the colonial government structures that include the departments of agriculture and settlement, and a special purpose vehicle, the LDSB, involved in land resettlement programs in the former scheduled areas. This scenario tallies up with what Bonneuil (2000) observed that developmental settlement schemes initiated by the colonial government were products of planning culture that gave the state responsibility for organising economic development.

Further detailed planning culture was drawn from Mr. Malakwen, a pioneer resident farmer, who described the processes that took place in the settlement scheme from the original initiation of the settlement scheme to the standard procedures and the details of operations.

> *The 15–acre plot was split into 3 sections; 0.5 Acres for homestead, 3.5 acres for cultivation, and 10.5 acres for grazing. The new African smallholder constructed a homestead on half an acre, cultivated three and a half acres, planted hybrid maize sourced directly from the Kenya Seed Company, and used 10.5 acres for grazing grade cows only.*
>
> *The major agricultural development initiatives in the Ndalat Settlement scheme included; the application of modern agronomical practices such as land preparation and planting through leased tractors, plows, and planters from the Contractor (Steinkamp and Smith Company limited) while milking equipment and other implements, farm input (hybrid maize and inorganic soil improver/fertilizer) where acquired from Meyer Limited while Dalgety Limited provided grade cows.*
>
> *Each farmer was given 3 pedigree animals, and to maintain the same all year round as any excess cow or bullock was sold. Indigenous livestock breeds such as bulls, sheep, and goats were not allowed on the farms. Farmers were provided with technical expertise in the form of agronomy practices for crop production and livestock extension services. Animal health assistants provide AI services and disease control through preventive and curative management of diseases. Tick control was achieved through weekly dipping arrangements in the cattle dips that had been constructed and operationalised by the settlement offices* (OI, pioneer resident farmer, Mr Malakwen, June 12th, 2022).

One pioneering farmer, Mr David Simbolei, also observed that the settlement scheme was structured to detail.

> *Essentially, a subdivision of the former white settler farms was based on a structured plan that provided for a road infrastructural network to ensure that the smallholder farmers accessed the main road for effective transportation purposes. For instance, the milk collection was done in designated shades on the main and feeder roads, while the AI services were offered to all farmers in a designated area at the main and feeder roads every other day. Other benefits included veterinary visits, farm visits, and extension services were easily and efficiently accessed because of the road network and plot numbering* (OI, farmer, Mr. David Simbolei, May 15th, 2021).

The LDSB provided land for the establishment of social infrastructural amenities such as hospitals

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and schools, as observed by farmer/pioneer headteacher, Nyigoon Primary School, Mr Peter Keino (OI, May 6th 2021).

> *The settlement offices reserved two localities to serve as shopping centres at Kaigat and Ndalat Township for the welfare of the smallholders, the policing services, as well as a three-acre plot for the cemetery at the Kaigat Township. In terms of education, the settlement office planned for two schools at Kaigat and Ndalat to cater to the education needs of the dependents of the smallholder farmers. Whereas the settlement offices provided and demarcated the plots for the educational infrastructure, the schools at Kaigat (Kaigat Primary School) and Ndalat (Kamulat Primary School) were built through the Harambee method, where the smallholders contributed in monetary and non-monetary terms. For the overall health and well–being of the smallholder farmers, the settlement office mandated the Reformed Church of Eastern Africa (RCEA) and allocated a two-acre plot for the construction of a healthcare facility at Ndalat township to provide subsidised healthcare to the smallholder farmers in the scheme.*

The 1963 annual report also called for rational planning from surveying to documentation in the resettlement policy (Department of Settlement, annual reports, 1962/63). These activities and processes in the Ndalat settlement schemes mirror what Bonneuil (2000) alluded to experimental 'developmental' strategy, which called for uniform agricultural and social activities in fields and villages, with rigid schedules. Farmers were told what to plant, what cropping systems to use and where each farming operation was centrally controlled. The settlement schemes were mere ideologies introduced by a scientist and advocated by the colonial authorities in an attempt to shift the balance of power between agrarian communities and the state (Bonneuil, 2000).

This emergent 'developmentalist' state strategy also educated and trained the African farmers to integrate them into the market economy. Thus, as time went by, the developmental discourse of experimentation flourished when the developmental state shaped agrarian societies and environments to render them compliant to development (Bonneuil, 2000). The training and induction of the new smallholder farmers into agrarian revolution were evidenced in the Department of Settlement annual report 1962/63 which observed that agricultural training was a necessity in all the assisted–owner (HMG) schemes as the three farmers training centres on Lugari, Ol Joro Orok, and Njabini trained both farmers and cooperative officials (Department of Settlement /Annual report/62/63).

These structures in the LDSB schemes stimulated the demand for services, which were provided by individual consultants or service providers. In terms of service providers, Dalgety's Ltd, New Zealand Loan Co. Ltd, and Kenya Farmers' Association opened stores and acted as service providers in all the IBRD/CDC and HMG schemes. In particular, Dalgety's Ltd provided farm inputs and other agricultural devices in the Ndalat Settlement scheme (Department of Settlement 1962/63, Annual reports, 1963). In support, Bonneuil (2000) observed that technical and research services in different disciplines such as agriculture, soil and forestry, education, public health, and public works were provided by the colonial state to support the development needs in the settlement schemes. However, these experts received status and power as the state affirmed its 'developmental' approach as the state sought to master African environments, pathologies, and societies.

To integrate the Africans into the market economy, colonial government administrative structures persisted in the production and distribution function of the settlement scheme because the formal economic production function largely remained out of the reach of most African reservations. This shortcoming stemmed from a lack of information on the diverse languages, cultures and ecologies, work techniques, and family structures, the weak connection between household economies and the market and the peasantry production systems (Bonneuil, 2000).

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The Adoption of Smallholding Mixed-farming Systems in Lieu of Medium-scale Commercial Farms

There is no evidence to counter the fact that there was no other concretised plan to support the agrarian revolution in the African areas. Hence, the evidence to support the extension of the plan is found in the successful completion of the first five–year plan of the Swynnerton plan in 1959 (Thurson, 1987). It is drawn from Thurston (1987) and Heyer (1974) that the Swynnerton plan of 1954 formed the foundation for the future success of the agricultural development of the African areas, but the plan was constrained by the land resources. Hence, the land ordinance of 1959 enabled Africans to purchase land in the former 'scheduled' areas and by extension formed the next large–scale colonial agricultural policy which created the settlement schemes through the Land Development and Settlement Board (LDSB) in 1960 to deal with the land question (Thurston, 1987).

Whereas economic planning requires the exhaustion of all the options, the scenario presented by the colonial agricultural policy for African agriculture indicates the simplicity of a decision relating to the land question. Based on the Department of Settlement Annual Reports 1962/63, the Israeli experts advocated against collective farming enterprises and called for the 'peasant' holdings with individualized optimum land holding size supported by strong collaboration in marketing, processing, and farming operations such as plowing (Department of Settlement, 1962/63 Annual reports, 1963).

This mirrors the historical accounts by the retired senior settlement officer, Mr John Kosgei, who described the characteristic features of the land plots in the Ndalat Settlement Scheme;

> *The plots differed in size based on the quality and topography of the land. The size of a good arable plot measured 15 acres (approximately six hectares) while plots in the marshy, hilly, and lowlands measured 30 acres to even 100 acres. The Ndalat Complex scheme began with the plot numbers originating from 1 to 64 in 1962, with the size for these plots being 15 acres. The next phase had plots numbering 65 to 372, and later on, the plots numbered 373 to 572 lastly, there were two large farms in Kaptebe Scheme with land holding size of about two hundred acres each* (OI, farmer/retired senior settlement office, Mr. John Kosgei, February 12th, 2021).

In support, Omore *et al.* (1999) point out that smallholder milk production systems were a well-established commercial economic activity in the high-potential zones of Kenya, and represented a complementary commercial enterprise alongside other food or cash crops such as coffee, tea, fruits or vegetables. In appraising the settlement scheme, Clough (1968) observed by June 1966, the Ndalat Complex Settlement scheme covered 11,200 acres made up of 515 small-scale farms and 16 medium- to large-scale farms with an average farm size of 19 acres and was considerably smaller than the average farm size on all high-density schemes which had a median farm size of about 26 acres (Clough, 1968).

The nuanced observation was also captured by the official Department of Settlement records, which showed 425 of 515 plots in the Ndalat complex Settlement scheme had been occupied by June 1964, with an average plot size of 19.3 acres (Department of Settlement, 1962/63 Annual reports, 1963). Further, Thurston (1987) observed that the Swynnerton Plan initiated a shift in Kenya's agrarian policy from large-scale European farming with subsistence African agriculture to commercialised peasantry agriculture, which has continued to form the basis of policy for Kenya's farming sector.

The Commercialisation of Food Production in Lieu of High-value Crops

Empirical literature considers Kenya to be an agricultural–based economy. Thurston (1987) noted that it was by design that a colonial state viewed Kenya as an agricultural commodity producer. As part of agricultural experimentation during the protectorate period, mixed farming

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systems of maize and milk largely became the main economic mainstay (Kenyanjui, 1992) and later served as a basis for integrating Africa into economic activity in the late 1950s (Leys, 1971). In supplementing the large-scale commercialisation of food production, the colonial agricultural policy called for the enlargement of the market opportunities for peasantry agriculture to produce food and cash crops not only for subsistence and local consumption, but also for export (Maxon, 1992).

In particular, maize production has largely been successful due to the colonial large-scale commercial farming and favourable agricultural policies that supported research, inputs, and extension services (Gilbert *et al.,* 1994). At independence, maize production remained crucial in part as a food commodity requirement for the state, and as a cash crop in areas where it is agro-ecologically suited (Oloo, 2020). Maize production in independent Kenya was expanded into smallholder agriculture to tackle food security and was supported by complementary investments in agronomic research, extension, seed distribution systems, and rural infrastructure, and institutionalised infrastructural support mechanisms to coordinate grain marketing with seed, fertiliser and credit delivery (Jayne & Smale, 2005).

By design, all the LDSB schemes were designed for commercialised food production as evidenced by their structuration along tribal lines (Belshaw, 1964). For instance, the Nandi community was settled in Ndalat, designed for mixed farming production of maize and milk, while Lessos and Keben were designed for tea, maize, and milk production. Other cases include Kibigori (Luo/Maize), Muhoroni and Tamu (Luo/Sugar, Maize, and Milk), Kipkaren (Abaluhya/Maize), Lugari (Maragoli-Bunyore/Sisal and Maize), West Sotik (Kipsigis-Kisii/Maize and Cream), East Sotik (Kipsigis/Cream, Maize and Coffee), Ol–Kalou (Kikuyu/ Dairy, Wool, Pyrethrum and Wheat), Machakos (Kamba/cream onions, beef cattle and peas), to mention a few. Von Pischke (1977) also supports this view that the settlement agriculture had a broad view of food production systems that included: beef, sheep, pyrethrum, sugar cane, potatoes, maize, wheat, barley, coffee, tea, and other minor crops.

According to an informant, a former cooperative inspector, Mr Tarkwen, the Ndalat settlement scheme was structured as a mixed–farming settlement scheme;

> *The whole Ndalat complex scheme (Ndalat, Kaptebe, and Sosiani scheme) was initiated as a mixed–fing system producing maize, beef, and dairy production with an annual net target income of about 40 US dollars. The average maize yields range between 12 – 13 bags per acre and had a milk quota of 248 gallons per day, with the surplus designed to be sold as butter fat. The policy emphasised the monocropping of maize at the scheme, though at the initial stage, only vegetables on a small portion of land were allowed. The settlement scheme policy only allowed a maximum of three cows and calves, largely grade dairy cow breeds including Friesian and Ayrshire, Guernsey, and Redpoll. Initially, the settlement scheme provided Artificial Insemination straws at Kshs. 2/straw and later on the AI straws were acquired at a cost of Kshs. 10/straw. The settlement offices had several African assistant veterinary scouts trained on insemination techniques and disease surveillance and included, Mr. Christopher Araap Samoei, Mr. Matayo Araap Biy, Saulo Olayo, and Kiboit* (OI, former cooperative inspector, Mr Tarkwen, February 15th 2022).

> *The white veterinary officer only recommended the acquisition of the dairy cows after the smallholder farmers had fulfilled all the requirements of the settlement office. The settlement office had a central store located within the settlement scheme where the smallholder farmers accessed farm inputs and implements. Stenkamp and Smith Company managed the stores, which were stocked with maize hybrid seeds, phosphate fertiliser, and other farm implements such as hoes and machetes, among other things. The*

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> *settlement scheme had several tractors to plough the farms at a certain cost, as local variegated maize seeds were not allowed in the scheme* (OI, farmer/former treasurer, Ndalat Farmers' Cooperative, Mr. Naftali Nyango, September 28th, 2022).

Based on an informant, farmer/former chair of Ndalat Farmers' Cooperative, Mr Nathaniel Mengich,

> *The indigenous cattle breeds were prohibited in the scheme, and the smallholder farmers at the initiation stage acquired dairy cows from a former settler farm based in Uasin Gishu County owned by Dalgety's Ltd (local pseudo-name, talket). The farmers obtained necessary approvals from the local AFC agents, Stenkamp and Smith Ltd, and bought the grade cows from Dalgety's Ltd, which delivered the cows to the farms. In the transaction of animal acquisition from Dalgety Ltd, the local AFC agents were recorded and managed through the settlement office, which was headed by a white settlement officer, Mr Gibson. Later on, the settlement office set up a central location (Kapng'ombe) where the farmers acquired the grade dairy cow breed.*
>
> *The agricultural extension services were led by a senior agricultural extension officer who was either Whiteman or African (depending on the availability), but in this case, Mr Shitaka was seconded from the ministry headquarters in Nairobi to oversee the agricultural development of the settlement activities. These extension officers provided extension services such as farming technologies, management of soil erosion, and monitoring the agricultural techniques and productivity among other issues* (OI, farmer/former chair, Ndalat Farmers' Cooperative, Mr Nathaniel Mengich, November 4th, 2020).

According to the former agricultural inspector, Mr Tarus, the underlying arrangement for the farmers in the settlement scheme was as follows;

> *The dairy cows were kept on an extensive system where one cow consumed not less than three (3) acres based on the restrictions of the number of animals kept and the minimum land preserved for pasture. The milking of animals was done by family labour, and the morning produce was transported to the creameries at Eldoret (KCC). Later on, the settlement scheme through the cooperative society bought several tractors and took over the transportation of the milk. The afternoon milk was commonly used for subsistence purposes, and the surplus was transported to the cooperative society for skimming into butter at 'Kaspigirio'* (OI, former Agricultural inspector, Mr Tarus, May 5th, 2022).

Former Mosop Divisional Agricultural Officer, Mr Morton Lelei, elaborated on the contradictions introduced by the colonial settlement policy.

> *Though Coffee as a crop was available and was suited to the agroecological zone in the Ndalat Settlement scheme, the colonial administration uprooted the coffee plantation in 'Nyigoon' (Macdonald's farm) during the establishment of the settlement scheme. Thus, coffee as a crop was not embraced despite the presence of coffee plantations, the scheme only promoted monocropping culture 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 post-independence government appeared to have focused only on the agricultural colonial structures, and thus there was no alternative economic paradigm for the farmers in all the settlement schemes* (OI, Former Mosop Divisional Agricultural Officer, Mr. Morton Lelei, March 22nd 2023).

In support of monocropping, in the late 1950s, maize production dominated the value of marketed output in Nyanza province while coffee dominated the value of output in Central province (Heyer, 2011). At independence, the predominance of the colonial agricultural policy

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meant that maize and milk production would dominate mixed farming systems for both export and local consumption (Heyer, 1974). The mixed farming systems then took root during the 1960s (Belshaw, 1964), and this trend has been maintained up to the early 1990s with little changes to it, as this European mixed farming represented a neo-colonial ideal and way of life for the educated Africans. In the defence of the economy and national interior linchpin, the independence leadership justified the transfer of the mixed farms as they were, along with the apparatus of monopsony structures (Leys, 1971).

The Preference for Monopsonistic Marketing Structures in Lieu of Competitive Market Structures

In the 1930s, the colonial authorities implemented an elaborate system of marketing controls and structures (Heyer, 1974) which included the Kenya Cooperative Creameries (KCC), the Kenya Coffee Producers Union (KCPU), among other bodies (Heyer, 1974; Kenyanjui, 1992). According to Leys (1971), these settler – bodies; Kenya Farmers Association (KFA), and Kenya Nation Farmers Union (KNFU) KNFU dictated that marketing arrangements for the settler – agricultural through monopsonic structures and over time, the colonial agricultural policies created regulatory bodies that included; the maize control board (1942), the Kenya Dairy Board (1959), the Wheat Board (1957), the Pyrethrum Board, Tea Development Authority (1951) Kenyanjui, 1992) and marketing boards such as the Maize and Produce Board (1946), maize marketing board would define the market structures for the smallholding farmers in independent Kenya (Leys, 1971).

Where the White settler agriculture used farmer bodies such as (KFA) and the Kenya National Farmers Union (KNFU) (Kenyanjui, 1992) for regulating and controlling farmers, the colonial agricultural policy called for the introduction of cooperative societies at the local levels and directly linked them to the settler bodies such as KCC, KPCU, and KFA (Leys, 1971). The cooperative societies played a significant role and function in the settlement scheme by coordinating the desired economic, social, and political development from an institutionalised point of view (Harbeson, 1967).

As observed from informants, the Ndalat Farmers' Cooperative Society provided the social structure that underpinned the desired economic and social change in the Ndalat Settlement Scheme. As per the former agricultural inspector, Mr. Tarus.

> *The LDSB structured the management of the settlement scheme based on the socio-economic structure in the form of the Ndalat Farmers' Cooperative Society, which was established within two years of the Ndalat Settlement Scheme. At first, the fiscal arrangement, including marketing of the milk and maize produced from the scheme and the repayment of the loans, was carried out by the local settlement offices under the LDSB. Once established and operationalised, the settlement office ensured that all the smallholder farmers in the scheme were registered with the Ndalat Farmers' Cooperative Society and allocated production quotas. 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. In turn, the cooperative society provided transportation and logistics services for the farmers' produce at the nearby Kenya Co-operative Creameries, daily to Eldoret Plant, and KFA on a seasonal basis.*
>
> *The cooperative also acted as the clearing house for the settlement financial arrangements, where the farmers' records for all the settlement and development loans were kept. The accounting clerk at the cooperative society maintained ledger accounts for every farmer in the scheme, their outstanding settlement and development loans, their farm produce, and total sales. In this manner, the settlement loans would be deducted every six months and transferred to the settlement authorities and later the Ministry of Lands*

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(OI, former cooperative inspector, Mr Tarkwen, February 15th, 2022).

Cooperative societies became vehicles for socio-economic transformation in the settlement schemes and were purposed with the bulking and sales of the produce to established agencies, and arranging the supply of seeds, fertilisers, and agricultural requirements to its members. The first producer cooperative society was established in October 1962, and by 1963, their numbers had risen to 34 with the expectation of over 120 cooperatives to be established (Department of Settlement, Annual report/62/62). Further, the 1965/66 annual report indicated that dairy products, wheat, and pyrethrum formed the bulk of the produce sold through the cooperative society (Department of Settlement, Annual report/65/66).

In support, Von Pischke (1977) observed that the agricultural development in the settlement scheme was shaped by the farmers' producer cooperatives and monopsonic marketing organisations. These cooperative societies' act was strengthened by the post-independence government and linked to the statutory marketing monopsonies through the settler–created bodies for all the agricultural sectors. Whereas, the nationwide cooperative provided a strong foundation at the local farm levels, their alignment with the monopsonic marketing boards largely affected farmers' returns as the framework of controls established in the colonial era was largely maintained with no major changes to it after independence (Von Pischke, 1977) and continue to plague the agricultural sector up to early 1990s (Leys, 1971).

The preference for marketing monopsonies conferred benefits to large–scale commercial farmers while disadvantaging smallholding agriculture (Leys, 1971) as these monopsonic marketing arrangements had statutory control of resources and markets and permeated the entire sphere of operations of European capital in Kenya. These extensive institutional managerial arrangements in the agricultural sector, made up of settler-controlled marketing and regulatory boards, production committees, and land boards, handled particular products. This arrangement benefits European maize farmers through effective sales monopolies in the towns and substantial consumption subsidies (Leys, 1971).

As indicated by Leys (1971), the agricultural productivity of the settlement scheme was negatively influenced by the preference for regulation and control through marketing boards. The Royal Commission on East Africa in 1953 was puzzled by the automatic preference for regulation and control as opposed to the market forces and regulation which favoured the merchant capitalist class (Leys, 1971). These monopsonic marketing structures had both positive and negative implications for the smallholder farmers dealing with milk and maize (Oyugi, 1980; Kenyanjui, 1992).

The Metropolitan-linked Value Chain Processing of Agricultural Commodities in Lieu of Local Value Chain Processing

At the onset, Kenya began with a restricted periphery role to the capitalist system, and this created a highly elaborate system of economic discrimination (Leo, 1984). This trend continued in independent Kenya when the post-independence leadership made little changes to the economic system due to concerns of economic failure. This economic alignment to the metropolitan capital meant that any organisation and development of the smallholder farming systems in the settlement schemes would be characteristically aligned to the economic dynamics of the metropole, which had negative consequences on the economic returns of the settlement schemes (Leys, 1971).

Berman (1984) argued that the existence of subordinate and dominated pre-capitalist modes is essential for the continued reproduction of capital in metropolitan centres of development. The settlement scheme had a hierarchical and bureaucratic administrative system that blended colonial, neo-colonial and imperialistic tendencies, coupled with national–international contest on behalf of the neo-colonial state, which expropriated energy, materials, and information

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from agrarian satellite areas to metropolitan centres (Hulme, 1988). As such, the LDSB settlement program placated the former settler communities by sustaining a land market and preventing an economic collapse (Van Arkadie, 2016) and thus, the LDSB schemes were economically aligned with the needs of the metropolitan capital (Leys, 1971; Maxon, 1992).

The colonial land policy reform allowed both the continued international and minority communities to be involved in large-scale agriculture and urban economic activities while making provision for the remarkably rapid emergence of the African capitalist class (Van Arkadie, 2016). At the macro-economic level, agricultural development stalled after independence due to the lack of critical capital outlay in terms of human technological and financial resources, the pursuit of the metropole's demands, and the nascent industrialisation bases. The independent Kenya policymakers could not make informed decisions on matters relating to their developmental agendas because the developmental paradigms were modelled after the colonial economy, which was oriented toward the export of primary produce. The metropole orientation meant that the country could not access other markets unless those were offered by the colonial master, and thus the farmers could not benefit from a large market pool (Chune, 1997).

The Consequential Effects: Regression to the Peasantry Agricultural Forms

The national expectations at independence in 1963 were that land and settlement policy served both political as well as development objectives that included increasing agricultural productivity, furthering rural agrarian development, solving landlessness, and easing population pressure in the native reserves (Hoorweg, 2000). However, very few settlement schemes achieved their objectives (Chambers, 2013). For instance, a World – Bank 1978 report observed that the settlement schemes in Africa had a 50 % economic return rate three to five years after their implementation (Hulme, 1987) as the settlement schemes faced enormous challenges relating to economic, social, structuration, political, marketing aspects among others (Harbeson, 1967). Based on this viewpoint, Bonneuil (2000) criticised the propagation of the settlement schemes in tropical Africa as being experimental objectives of the colonial policies.

In independent Kenya, Hulme (1987) observed that the operations of the settlement schemes were vexed by government bureaucracy as the ministries of agriculture and land and special-purpose parastatal organisations were the main bureaucratic beneficiaries of the settlement schemes. The foreign funding associated with the settlement schemes and their operations tended to increase staff numbers, creating new project management units and hence new bureaucratic sub-empires. More so, official bureaucracy was observed by the colonial administrator in the immediate pre-independence period, as the colonial administrators doubted the ability of the African agricultural officers to participate in the fieldwork and support knowledge and skill transfers to the smallholder farmers in the settlement schemes. They presumed that these agricultural officers preferred to be assigned administrative duties as opposed to fieldwork (Ruthenberg, 1966). The author noted that,

> '*It is therefore open to some doubt whether agricultural extension of the kind introduced by the British officers would continue after Independence. It was assumed that the newly promoted African Agricultural Officer would prefer to be assigned clear-cut administrative duties which he could execute rather than to have the task of selecting local priorities, developing innovations on his own, and persuading farmers to follow them.'*

In general, the colonial agricultural policy either had significant limitations in design or execution, or the changing political and environmental circumstances ensured that it hindered the agrarian revolution in independent Kenya. The consequential effects of the colonial policy on the agrarian revolution can be viewed from the micro-level on the challenges of settlement (Harbeson, 1967; Chune, 1997; Leo, 1984) and landholding

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(Mwangi, 1987; Leys, 1971) or at the meso–level regarding the failure of monopsonic marketing structures (Jayne & Smale, 2005) and at the macro–levels concerning the agricultural philosophical approach (Von Pischke, 1977; Leys, 1971; Bonneuil, 2000), structuration (Harbeson, 1967) and overall slowdown in agricultural productivity and regression to peasantry agricultural systems.

The challenges facing the settlement schemes are largely related to the problem of settler participation in the cash economy, which not only occurred in the marketing but also in the production. For instance, inadequacy in agricultural planning underrated the incentive for cash crop production, while overestimating the suitability of the existing economic arrangements to incentivise any economic activity. The shortage of mechanised farm implements meant that there were delays in land preparation, with inordinate delays in the planting and consequent decimation of farmers' earnings (Harbeson, 1967). In other instances, the under-investments in capital infrastructure meant that there was no supporting infrastructure for the development of the dairy sector in the Naitiri settlement scheme Chune (1997) observed farmers hawked raw milk at reduced prices and this stalled the agrarian revolution by halting the value chain addition processes in terms of higher milk income, access to AI services and in-kind financing facilities for farmers.

Harbeson (1967) highlighted the impact of economic structuration where quotas were prevalent in all sectors, from dairy to pyrethrum. For instance, smallholder farmers in the Kinangop settlement scheme, farmers had surplus output over their milk and pyrethrum quotas, and this prevented the new smallholder farmers from participating fully in the cash economy and depressed their economic returns (Harbeson, 1967). Besides, the quotas and provision of agricultural services were a bone of contention in the independent Kenya. The provision of these services depended on the availability of funds and sustenance of developmental efforts, as the post-independence government had competing interests in terms of institutionalising the development efforts in the already–established settlement schemes through the provision of agricultural services or initiating and expanding new agricultural projects in the African areas. These competing objectives could not be sustained in the long run, and in some instances, the provision of agricultural services suffered from neglect (Ruthenberg, 2012).

As observed by Former Mosop Divisional Agricultural Officer, Mr. Morton Lelei, the government bureaucracy hindered the agricultural development in independent Kenya, as foreign funding was moved to other areas to cater to the demands of services all over the country.

> *The agricultural staffing ratio in the 1960s and 1970s was sufficient to cover the whole of the Ndalat Settlement Scheme, which at the onset had its agricultural extension officer and in the late 1960s. However, in the 1970s, the administrative unit (Ndalat Location) had three extension officers, but later in the 1980s, the location had only one agricultural extension officer. This reduction in the number of field officers in the settlement scheme reduced the agricultural information access and farm supervision, and this had a consequent impact on the productivity of the settlement scheme* (OI, Former Agricultural Officer, Mr. Lamai, March 29th 2023).

The size of landholding in the settlement schemes hindered further agrarian revolution as the average size of 15 acres in the high–density scheme, as the demand for land was far greater than the supply, necessitating small farm sizes which were considered unsustainable in the long run. Thus, the more people settled on a given acreage of land, the smaller the land portion and the smaller the net income derived from smallholder farms to meet the essential family expenditure (Leys, 1971). For instance, Leo (1984) observed that a 1996 mission found that poorer settlers had to spend 70% of their net income on debt repayment and were left with a sum of £25, which was insufficient for educational expenditures for children. On the

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contrary, a default on the part of the smallholder farmers would have left the whole agrarian credit structure to collapse. In some cases, farmers in high-density settlements lacked the requisite skill and capital to undertake agricultural development in the settlement schemes (Leo, 1984).

Since the Swynnerton Plan's inception in 1954 through the first decade of Kenya's independence, the official agricultural statistics show steady growth in farm output and income on smallholdings with an estimated gross farm revenue of African smallholdings rising from under eight million pounds to over 34 million between 1958 and 1968, an increase of 425% (Leo, 1984). While smallholder agriculture reportedly produces about half of the marketed agricultural output in terms of value, the sector is predominantly subsistence-oriented and supports perhaps 80% of Kenya's settled population. Rather, subsistence orientation was preferred for household self-sufficiency in basic foods, and this orientation was reflected in land use patterns (Von Pischke, 1977).

Smallholder farmers in the schemes faced significant challenges in accessing credit, as there were preferential financial lending arrangements to various classes of farmers, and this had an effect on the productivity within the settlement scheme. For instance, farmers in the LDSB schemes had accessed long-term credit in terms of land and development loans and therefore could not be granted access to other types of agricultural loans. On the other hand, Agricultural Finance Corporation (AFC) provided short- and medium-term loans and cooperative credit to smallholder cash crop production only (Von Pischke, 1977)

A former settlement officer, Mr John Kosgei, observed that the smallholder farmers in the scheme were curtailed by the initial land and development loans, which were to be repaid in 30 years and 10 years, respectively.

> *Since the loan repayments took a minimum of 10 years and thus most of the settlers could not access any other capital outlay for production. Thus, in the earlier days, smallholder farmers could not access AFC loans for agricultural production because of the outstanding land and development loans offered by the LDSB to support smallholding agricultural development in the country. It was only in the mid-1970s, when most farmers had repaid their development loans and a huge part of their land loans, that the smallholder farmers were now allowed to access the AFC loans for development. The AFC loans were uniquely structured such that farmers who were able to acquire these loans procured farm inputs through the KFA and accessed these inputs through their cooperative society. The AFC loan repayments were handled by the cooperative society through the banks and marketing bodies (KCC and KFA).*
>
> *Initially, the settlement office, after having seen the production output, offered a conditional loan facility through Stenkamp and Smith Company, acting on behalf of Agricultural Finance Corporation. These AFC group loan arrangements to three farmers were supposed to pull up 15 acres for increased acreage for producing maize, but only six farmers were able to access this facility in the late 1960s. Later on in the 1970s, some farmers were able to access AFC loans based on stricter supervision mechanisms from the SFT program* (OI, former cooperative inspector, Mr Tarkwen, February 15th, 2022).

The colonial agricultural policy maintained close linkages between the cooperative societies as farmer organisations with the marketing and regulatory boards, such as Kenya Cooperative Creameries and Dairy Board, to regulate supply quotas between large-scale farmers and smallholder farmers in the schemes (Department of Settlement Annual report/62/63). The statutory boards typically had the responsibility for a broad range of functions such as collection, storage, marketing, and distribution and had considerable influence over the pricing of major food crops such as maize, wheat, and beans. The structure of statutory control and the strength of board

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monopoly varied considerably as there were two levels of intervention; one at the policy-making and control, and the other involved operational responsibility for processing, storage, marketing, and related functions (Von Pischke, 1977). This support mechanism was implemented through controlled pricing and marketing systems that incurred large subsidies and treasury costs, and which eventually contributed to the fiscal crisis and agricultural policy failure (Jayne & Smale, 2005).

The colonial agricultural policy also established an agricultural value chain activity that roped producers to the cooperative sector through the marketing boards and the consumer. This was detailed by farmer/former treasurer Mr Naftali Nyango;

> *The LDSB created a cooperative society as a farmers' body that intermediated the farmers with the marketing board. Ndalat Farmers' Cooperative Society supplied farm produce to either the Kenya Cooperative Society (milk) or the Kenya Farmers' Association (Maize). Furthermore, the cooperative provided an avenue for bulk purchasing arrangements for the acquisition of farm inputs (fertiliser, seeds, equipment, milking equipment, etc) from the Kenya Farmers' Association Stores. This arrangement enabled the farmers to access farm inputs at a cheaper cost and on favourable terms through the check-off system. The farmers were expected to 'sell' their milk to the Ndalat Farmers' Cooperative Society every morning, and quantities were recorded in the ledger books before being pooled and transported to KCC, Eldoret plant. The KCC would, at the month, remit the amount of the money to the cooperative society unto which the society would pay each farmer for the quantity of milk delivered to the cooperative, less any other financial arrangements* (OI, farmer/former treasurer Mr. Naftali Nyango, September 28th, 2022).

Former agricultural officer, Mr Morton Lelei, observed that the marketing monopsonies (KCC and KFA) as pseudo-public enterprises played a key role in the failure of the colonial–linked policy;

> *Originally, the KFA was the original marketing agent for the maize produced by the farmers in the Ndalat Settlement Scheme, and in turn, KFA provided farm inputs, and gunny bags among other inputs through the Cooperative Society. The systematic organisational failure in agricultural development occurred through the mismanagement of the marketing agents (KCC & NCPB) and farmer associations (KFA). NCPB first took maize produce in 1984 after the dismantling of the KFA. Previously, the marketing agents for the cereals were the Maize Board and the Wheat Board, which operated as individual entities before being merged into NCPB* (OI, Former Mosop Divisional Agricultural Officer, Mr Morton Lelei, March 22nd, 2023).

The marketing monopsonies of maize and milk faced significant political interference as KFA was replaced by Kenya Grain Growers' Cooperative Union (KGGCU) in 1984. The proponents of the KGGCU avowed that the union was a post-independence body that would replace the KFA and shed the colonial tag of the KFA, and that KGGCU, as the body, was aligned with the grain growers as opposed to the general objective of the KFA as a national body representing the farmers (The Weekly Review, 1984). Government policies also influenced the farmers' fortunes in the Ndalat settlement scheme, as informed by Mr. David Simbolei.

> *In 1984, KFA, a farmer organisation, was replaced by the KGGCU, a parastatal for the farmers that robbed the farmers of good in-kind farm financial arrangements. Farmers could not access farm inputs from the new body, which led to challenges as it impinged on the in-kind financial arrangements with the now-defunct KFA. Further, in the early 1980s, farmers could not access the AFC loans because of the challenges in the input and output markets for agricultural produce. In many other cases, the AFC loans were*

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subjected to more scrutiny by almost all farmers, including pioneer farmers, where their descendants were not allowed to access any loan facility based on the initial pioneering settler arrangements.

When the marketing monopsony of the KCC collapsed due to political interference, farmers could not access steady markets for their produce, as milk vendors bought raw milk at low prices. The collapse of the KCC also exacerbated the operations of the Ndalat Farmers' Cooperative Society as the organisation was unable to pay its employees, nor fulfil its obligations to the farmers. This had a roll-on effect on every other objective of the society, such as bulking of the farm produce, bulk purchasing of farm inputs, and settling farmer obligations, among other operations. This consequently led to the massive underperformance of the Ndalat Cooperative society, which nearly collapsed with outstanding debts largely held by KCC (OI, farmer, Mr. David Simbolei, May 15th, 2021).

As early as 1966, the annual reports by the Department of Settlement indicated that the producer cooperative societies in the LDSB settlement schemes faced significant challenges arising from financial mismanagement and malpractices by the committee, insufficient staffing, fraud, embezzlement, and fund misappropriation (Department of Settlement Annual Report/65/66). The LDSB schemes also faced significant headwinds arising from the changing social conditions in the settlement schemes constrained the economic progress as elaborated by Mr. Malakwen.

The growth in households through the 1970s and 1980s saw the smallholding farmers in the scheme add more responsibilities in the form of family obligations such as the payment of tuition fees for their descendants, and this transfers from the farm income impinged on further agriculture development and progression as the farmers could no longer service their loans. Alternatively, the farmers stopped accessing the AFC and KFA loans altogether (OI, pioneer resident farmer, Mr Malakwen, June 12th, 2022).

A farmer/retired senior settlement officer, Mr John Kosgei, shared his view on the chronological progress of the Ndalat settlement scheme;

The growth and development of the smallholder farming system were attributed to the individual farmer's efforts, as the settlement offices expected the farmer to participate in all farming activities. When White settlement officer, Mr. Gibson, left in 1968, the progress of the smallholding agriculture faced new inherent infrastructural and economic challenges. The LDSB programme functions for the Ndalat Settlement Scheme now under the Settlement Fund Trustees, was run by new African settlement officers and was transferred from Eldoret to Kapsabet in 1976. Later on, in 1977, the SFT staff were withdrawn from local levels and moved to district levels and headquarters.

Some of the functions of the SFT program include the management and supervision of the settlement scheme was transferred to the Ministry of Lands and Settlement in 1977, but SFT continued to monitor the SFT funds till 1992, which was the final repayment year for the land loans. Other important agricultural development activities were where agricultural extension officers were transferred to the Ministry of Agriculture. Some of the settlers had not repaid their SFT land loans by 1992, with some farmers having outstanding loans as of that moment. In early 1992, the extension officers for the settlement scheme were reduced due to government funding (OI, farmer/retired senior settlement office, Mr John Kosgei, February 12th 2021).

For instance, former agricultural inspector, Mr Tarus, observed that the Ndalat Settlement scheme was left to run on its own with reduced investments in terms of human, capital, and technology.

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In the late 1970s, when most farmers had repaid ¾ of the SFT loans, the SFT structures and staff withdrew their oversight functions. When the SFT structures and staff withdrew, the farmers increased the arable land for maize production and kept more than three animals. This increased the grazing pressure by animals, thereby negatively affecting animal nutrition and production, leading to a reduction in the quantities of milk produced.

The downturn and regression of the Ndalat settlement scheme to peasantry agriculture gradually took shape as commercialisation could not take place because of the lack of sufficient financial capital outlays to enable farmers to expand their production capacities. At the micro-level, the settlers had an overt dependence on the LDSB settlement structures for their economic progress, as indicated by the resident farmer, Mr. Chepkesir Rono.

Whereas farm intensification techniques required a farmer with a minimum of basic education, most of the smallholder farmers had little or basic education when they were settled into the settlement scheme, and thus their productivity was a function of the settlement offices. They were attuned to the demands of the settlement offices that once the settlement offices folded up, the farmers were without close farm supervision. Since most farmers were semi-literate, they ignored agricultural extension officers and introduced sheep, goats, and indigenous cattle breeds, which increased the grazing pressure on the land. Bulls were also kept, and the use of AI services was significantly reduced. When the settlement scheme offices handed the cattle dips to the cooperative society, and animal health officer was withdrawn, and this led to weakened disease surveillance systems. Further, animal husbandry techniques are quite low and inadequate to promote milk production. More and more farmers no longer focus on improved farm management techniques such as feed supplementation to the dairy cows, use of improved cow breeds and inadequate feeding of the cows. Milk prices dropped due to surplus milk, and the farmers didn't have alternate markets for their produce and consequently reduced their efforts in the dairying (OI, resident farmer, Mr Chepkesir Rono on April 7th 2022).

Mr Kebenei, a former agricultural officer, highlighted the indifference on the part of the smallholder farmers in the scheme.

In terms of maize production, farmers have maintained the same maize H614 seeds since the 1970s because of their favourable taste but low productivity and overlooked the appropriate hybrid seeds for the high-altitude zones, such as H629, H6213, H6218, which have higher yields. Furthermore, farmers were no longer using the appropriate fertiliser and early plant preparation. The hybrid maize seed adulteration in the 1980s due to the mismanagement of the Kenya Seed Company has also had significant ramifications on overall farm productivity (OI, former agricultural instructor, Mr. Kebenei, May 28th, 2022).

As far as Bonneuil (2000) is concerned, the LDSB settlement schemes encountered challenges since their origination was a purely abstract policy. For instance, the planners could have relied more on priorities for the poor Africans in the reservations and less on the theoretical abstraction and 'experimentalist' paradigm. The direct relationship between poverty and land cannot be overemphasised, as every colonial state in the 20th century didn't grasp the nature of the individual African habitats in the reservation. The colonial agricultural policy had broad objectives of promoting agricultural development as well as increasing productivity and income, and training the Africans to assume a greater role in the economy upon independence (Ngugi, 2001). Bonneuil (2000) alludes to the 'experimentalist' developmental state proposed by the colonial authorities later acted as an impediment to the economic development in the independent Kenya. These plans were driven by high modernist, top-down diffusionist, and narrow experimentalist concerns. Prepackaged development schemes

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acted as powerful mechanisms to repress indigenous knowledge and initiatives.

Van Arkadie (2016) suggests that in Kenya, almost 50 years ago, the colonial agricultural policies pursued in respect to the land transfer and resettlement programs were crucial in the design of the decolonisation framework, which managed the transition from colonial to self-rule. The outcome of the land policy was the creation of a black middle class of prosperous farmers, the preservation of the position of white farming, a transition to capitalism, and the creation of a black capitalist class eagerly embraced by post-independence governments and successive governments, but not solving the problems of land hunger and accompanying rural poverty (Van Arkadie, 2016). consequently, many Africans were saddled between peasantry and bourgeoisie, which led to class differentiation, landlessness (Leo, 1984), and peasantization (Ochieng & Maxon, 1992) as household composition, subsistence needs, individual preferences, and future requirements affected the level of agricultural production in various ways (Chune, 1997). The pressure for peasantization was far more intense than the pressure from commercialisation, as the agrarian developments in the LDSB settlement scheme were in a dynamic state and rife with conflict. Some African settlers tried their way into large–scale agricultural /commerce, others were seeking to expand their land holdings into modest scales, while other marginal peasants were being forced to sell off some of their lands (Leo, 1984).

CONCLUSION AND RECOMMENDATION

Based on the discussion and analysis, the paper makes to following conclusions. The colonial policy stalled the agrarian revolution through the experimental LDSB schemes, which formed the basis for land redistribution, institutionalised smallholding mixed-farming systems, and commercialised food production systems, supported monopsonic market structures which were linked to value addition in metropolitan capital, London.

There is a need to review the current agricultural policy and align it to the development needs of independent Kenya in the 21st century, as the dynamic competitive structures are evolving faster.

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