

Policy Brief

Enhancing Farmers' Access to Improved Forage Seed in Kenya

Policy Recommendations for Advancement of the Regulatory Framework for Forage Seed

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1. Introduction

This Policy Brief reflects on the required actions at policy level for increasing availability, affordability and accessibility to certified improved forage seed in Kenya, with a view on the regulatory framework for forage seed listing, release and commercialisation. It draws from - and is anchored in - a Working Paper by the same authors that includes besides the policy issues summarized in this brief, and operational recommendations.

2. Objective of the Policy Brief

The key objective of this Policy Brief (and the Working Paper) is to enhance access to affordable, cost effective and suitable novel forage seeds, and the diversification of certified forage seed options available to farmers in Kenya. This is a necessary building block for increasing feed availability, livestock productivity and food security, while addressing environmental concerns, sustainability and resilience of livestock keeping systems - including conservation and use of Kenya's rangelands.

3. Ruminant livestock sector in Kenya: size and ambitions

The ruminant livestock sector in Kenya contributes up to 42% of the agricultural Gross Domestic Product (GDP) and 12% of the national GDP (ILRI, 2021) and plays a significant role in the livelihoods, food and nutrition security, and incomes of rural households.

The dairy industry accounts for 3-4% of national GDP and supports 1.8 million rural households in addition to 700,000 jobs along the dairy value chain (Ministry of Investment Trade and Industry, April 2023). According to

the Kenya National Bureau of Statistics Census 2020, Kenya counted 5.1 million dairy cows with an annual production of 4 billion litres of milk, representing a market value of Kshs 181.5 billion (National Information Platform for Food Security and Nutrition). Kenya has a deficit in milk production to meet domestic demand, this stood in 2023 at over 200 million litres according to the Kenya Dairy Board. The latter, in its Strategic Plan 2023-27, targets to boost milk production from the current (2023) 5.2 billion litres to 11 billion litres in 2027 and to increase export of milk and dairy products in this period by 20% (Dairy Business Africa, July 2024).

The meat sub-sector contributes 8-10% to Kenya's Gross Domestic Product (GDP) with red meat accounting for the bulk of this. Kenya National Bureau of Statistics (2020 census) reports 16.5 million beef cattle, 35.9 million goats, 25.3 million sheep and 4.2 million camels. The total value of the meat sector was in 2023 USD 10.2 million or Kshs 130 billion (Statista, 2024). Annual meat deficit is 300,000 metric tons. Currently the value of Kenya meat exports is USD 55 million or Kshs 7 billion (Kenya Export Promotion and Branding Agency, 2024). Government targets to transform the red meat sub-sector through commercialisation (i.e. feedlot system), with the aim to reduce importation and tap into the large export market in the Gulf States and the Far East.

In 2023, Kenya launched its National Action Plan to Reduce Short-Lived Climate Pollutants (NAP), which is meant to contribute to decrease greenhouse gas (GHG) emissions by 32% of 2010 levels in 2030. The NAP is aligned to Kenya's Climate Smart Agricultural Strategy (KCSAS) 2017-2026 and Kenya's Climate Smart Agriculture Implementation Framework (KCSAIF) 2018-2027. The latter prioritizes moving towards a climate resilient agricultural sector and taking actions to adopt practices that lead to reduced GHG emissions. Livestock – in particular ruminants – is the largest source of GHG emissions in the agricultural sector, accounting for over 50% of GHG emissions mainly due to enteric fermentation. The livestock sector is therefore of key importance as regards the Governments strategies and actions to mitigate GHG emissions and to achieve the goals set for 2030 (UNIQUE/SDLD, Livestock sub-sector NDC report, 2019).

4. Performance and constraints

Livestock performance in the dairy and red meat value chains is constrained in all agro-ecological zones by lack of year-round supply of good quality and adequate quantity of feed. This causes low productivity, reduced growth of the sector and high emission of greenhouse gases per unit of livestock output (Leitner et al 2021). Poor quality and seasonal lack of feeds - especially good quality forages which form the bulk of ruminants' diets – results in dairy animals that have the genetic potential to produce 3,000-4,000 litres of milk per year to only produce 1,500-2,000 litres per year, and extensively grazed beef cattle that gain less than 0.5 kg per day reach a liveweight of 385-400 kg over a 40 months period, versus feedlot systems that - if well managed - have the potential to reach the same live weight in a shorter period (20 months).

However for this to be realized, forage availability – in terms of grasses, legumes and dual-purpose crops, including pastures for grazing and planted forages for fresh feeding or for conservation as hay or silage –, forage quality and effective utilisation, need to be dramatically enhanced.

In Kenya's arid and semi-arid lands (ASALs), frequent lack of forage causes high mortality rates amongst livestock and makes pastoralist and agro-pastoralist communities economically and nutritionally vulnerable, against the backdrop of climate change and degradation of landscapes. The National Drought Management Authority (NDMA) estimated in 2023 2.6 million livestock deaths attributed to prolonged drought, representing a loss of Kshs 226 billion (NDMA, February 2023; Kenya Drought Response 2023, United Nations Office for Coordination of Humanitarian Affairs).

5. Access to quality forages: The key driver of the ruminant livestock sub-sector

Since livestock sector growth is key in supporting Kenya's GDP, there is a need for congruent growth in support systems, one of which is improved feeding. Feed resources account for more than 55% of production costs for cattle kept in more intensive livestock production systems (Odero-Waitituh, 2017).

However, low quality and quantity and high seasonal variation of feed availability remains a major problem which reduces the ability of the sector to grow and prosper. The cultivation and use of improved forages on the other hand, enables livestock producers to sustainably and competitively increase milk and meat production and is a sine qua non for achieving the targets set for sector growth - both in high and low potential agricultural zones. In addition, improved forages (higher feed quality and lower fibre content) and feeding management - promoting balanced rations - are key contributors to achieve GHG mitigation or emission intensity reductions. Reseeding and managing degraded landscapes in ASALs offers livestock producers in ASALs further opportunity to improve livestock productivity, livelihoods and enhance provision of ecosystem services. In addition, permanent grasslands and use of improved forages contribute to reduced environmental and carbon footprint.

6. Forage seed

For livestock and commercial forage producers, one of the most pressing challenges is access to affordable, cost effective and suitable quality - and sufficient quantity - of forage seed for the prevailing agro-ecological conditions. This becomes more precarious in a sector that is commercializing fast. Enhanced availability, choice and access by livestock keepers and commercial forage producers to suitable certified forage seed in sufficient quantities, are key in enhancing year-round availability of quality forages for the different ruminant livestock production systems in Kenya that produce milk and meat for Kenya's fast-growing population. The need for efforts to enhance availability and use of improved forage seed and planting material cannot be overemphasized, and part of the solution lies in reviewing the regulatory framework for forage seed certification and variety release. This calls for Government to adopt new - or enhance current - policies and strategies that assure that livestock is feed-secure and to consider forages key for food security at the national level.

7. Seed policy

The Kenya Government is currently reviewing the National Seed Policy 2010, which includes a process of public participation as enshrined in the Constitution. This Policy Brief contributes to this process, by sharing expert views from the research and development sectors, with consideration of gaps identified by stakeholders from the public and private sector, including seed companies and livestock producers. The authors of this policy brief are willing to support this process if called upon.

8. Policy recommendations

Realisation of the objective to enhance access to affordable, cost effective and suitable novel forage seed varieties, can be achieved faster if the following policies are considered and implemented.



a).	Consider the need to make livestock “feed-secure” to achieve food security and sector growth. i. Prioritize forages for food security considering the importance of livestock (products) in Kenya’s economy and allocate more long term funding to forage research and development initiatives. ii. Domicile forages in the State Department of Livestock Development (SDLD) and involve forage crop experts rather than food crop experts. iii. Develop a forage sub-sector improvement strategy for Kenya. iv. Initiate a study of market size and demand, an inventory of new potential, suitable forages for Kenya’s agro-ecology and (transforming) livestock production systems, and for local (or regional) seed improvement programmes. v. Develop and pass a Forage Bill.
b).	Prioritize development of a strategy to enhance registration, maintenance, marketing, distribution, awareness and adoption of novel forages.
c).	Review and update the forage crop list with suitable and potential new forages for Kenya at genus and species level - using scientific names and internationally used nomenclature consistently and uniformly - and include provision for regular updates in Seeds and Plant Varieties Act CAP 326 and Crops Act CAP 318.
d).	Facilitate through diplomacy or policy change the inclusion of forages in the COMESA Variety Catalogue (and as a separate chapter).
e).	Support the development of instruments to maximize effective use of ongoing harmonization within regional trade blocks, i.e. East Africa Community (EAC), Common Market for Eastern and Southern Africa (COMESA), Southern Africa Development Community (SADC), Intergovernmental Authority on Development in Eastern Africa (IGAD), and seek bilateral engagements with countries of interest outside these regional blocks for sharing of information on Pest Risk Analysis (PRA) and National Performance Trial (NPT) data, as well as Distinctiveness Uniformity and Stability (DUS) data, to facilitate fast-tracking of novel forages for listing and release.
f).	Increase the capacity of the Kenya Plant Health Inspectorate Service (KEPHIS) and enable it to implement the operational advancements recommended in the Working Paper. This includes amongst others: i. Adequate capacity to access PRA data from countries with suitable forages for the tropics but with no history of prior importation. ii. To assess performance of forage crops, to review standards for testing of range grasses, and iii. To enforce regulations more actively against fake forage seed and commercial sales of uncertified seed thereby protecting farmers and intellectual property (IP) rights.
g).	Government should actively promote, facilitate and initiate partnerships (bilateral and/or multilateral) with donors, research institutions, development organisations and farmer organisations, to unlock funding for the enhancement of the forage sub-sector and for strengthening KEPHIS’ capacity to exercise its mandate in the forage sub-sector more effectively.
h).	Government (national and counties) to consider reducing or waving Value Added Tax (VAT), cess and other levies on forage seeds and on sales of conserved forages such as hay and silage.

9. Abbreviations

COMESA	Common Market for Eastern & Southern Africa
DUS	Distinctiveness, Uniformity and Stability
EAC	East African Community
GHG	Greenhouse Gas
IGAD	Intergovernmental Authority on Development in Eastern Africa
KCSAIF	Kenya Climate Smart Agriculture Implementation Framework
KCSAS	Kenya's Climate Smart Agricultural Strategy
KDB	Kenya Dairy Board
KEPHIS	Kenya Plant Health Inspectorate Service
KEPROBA	Kenya Export Promotion and Branding Agency
KNBS	Kenya National Bureau of Statistics
NAP	National Action Plan to Reduce Short-Lived Climate Pollutants
NCVL	National Crop Variety List
NDMA	National Drought Management Authority
NPT	National Performance Trial
PRA	Pest Risk Analysis
SADC	Southern Africa Development Community

