



NATIONAL FODDER COMMERCIALIZATION REPORT

@Sarova Woodlands, Nakuru
14 and 15 December, 2017



Slogan: “Tujijenge na Fodder”

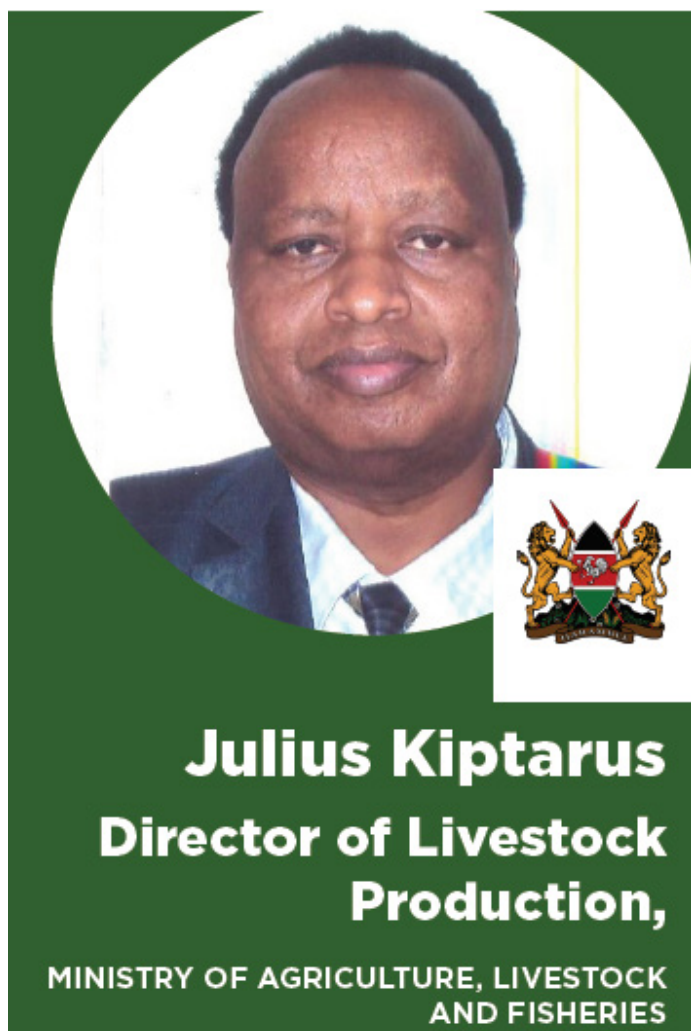


“Re-positioning the Fodder Value Chain for Sustainable Livestock Production in Kenya”

TABLE OF CONTENTS

Table of Contents.....	1
Forward.....	2
Acknowledgment.....	3
Acronyms and Abbreviations.....	4
About the Conference.....	5
Overview of the conference.....	6
Conference Day 1.....	9
Setting the Stage: Why the National Fodder Commercialization Conference?.....	10
The opening plenary.....	10
Official Remarks.....	11
Remarks by Mulinge Mukumbu, DCOP–KAVES.....	12
Remarks by Omar Salat, Deputy County Commissioner, Nakuru County.....	12
Remarks by Dr. Andrew Tuimur, Permanent Secretary – State Department of Livestock.....	13
Key note Address by Dr. Joseph G. Mureithi, Deputy Director General- Livestock (KALRO).....	14
Official Opening of the Ceremony by Willy Bett, CS – Ministry of Agriculture Livestock and Fisheries.....	15
Plenary Presentations.....	16
PARALLEL BREAKAWAY SESSIONS.....	21
Conference Day 2.....	22
Recap of day one.....	23
Feedbacks from the parallel breakaway sessions.....	24
Breakout 1A: Fodder and fodder seed farming challenges, opportunities and interventions to increase productivity, production and quality.....	24
Breakout 1B: Tapping into Emerging niche Markets for Fodder and Fodder Seed in Local and Export Market (Aggregation and Marketing).....	25
Breakout 1C: National and County government Policy, regulatory framework and institutions necessary for a robust fodder value chain.....	26
Breakout 1D: Inputs supply and services opportunities.....	27
Breakout 1E: Opportunities in post-harvest handling, quality and feed safety.....	28
Breakout 1F: Opportunities in research, technology, innovation and extension.....	29
Way Forward.....	30
Conference Communiqué.....	32
Annexes.....	34
1. Conference program.....	35
2. Picture speak.....	38

FORWARD



Challenges in the livestock feed value chain necessitate the need to re-position the pasture and fodder value chains in Kenya, with a view to addressing fodder availability, quality and affordability issues. Due to the dynamics of the various livestock production systems in Kenya the exact fodder demand is not clear due to the inaccurate information on livestock populations and acreages under fodder production and conservation.

Recent studies suggest that Kenya suffers large deficits of livestock feeds. It is therefore recommended that unless targeted strategic fodder interventions are implemented on a national scale, productivity of livestock is likely to be grossly affected resulting in reduced yields of animal products in the medium and long term. The demand is further expected to increase in view of the emerging fodder demand by neighbouring countries.

Production of additional quantities of fodder would require putting more land under fodder crops and pasture production. While the land size required is massive, this investment can be realized if focus was to shift to utilization of arid and semi-arid land areas.

Gross margin analysis shows pasture and fodder farming is profitable and there is effective demand. However, institutional and regulatory framework governing production, processing and marketing of fodder including private sector support is underdeveloped, leaving farmers vulnerable to unscrupulous market actors. Market analysis further suggests there is significant market opportunities for small-scale fodder farmers if they increase productivity, reduce cost of production, improve quality and safety, and enhance efficiency in marketing.

The First National Fodder Commercialization Conference was a milestone in efforts towards increasing pasture production and fodder conservation to meet livestock feed demand in Kenya. Livestock feeding is a key factor influencing animal production, health and reproduction. Poor animal nutrition remains a key constraint to sustainable animal production in Kenya today. Most livestock enterprises are operated under poor animal husbandry and management practices resulting in malnourished animals producing below the breed potential due to overreliance on seasonal rain-fed poor quality forage production.

ACKNOWLEDGMENT

I wish to thank all the individuals and institutions who worked tirelessly to make the First National Fodder Commercialization Conference a success. Even though it is impossible to name each and every one who participated by name, we wish to commend all who made this conference a success by dedicating their time and resources.

Gratitude is also extended to all the plenary speakers and Session Moderators for steering the conference discussions to the full realization of the desired conference objectives.

I would also like to appreciate all the conference participants for sharing their personal for sharing their personal insights and aspirations.

Special thanks go to the **Ministry of Agriculture, Livestock and Fisheries** through the State Department of Livestock and **USAID, Kenya Agricultural Value Chain Enterprises Project (KAVES)**, for leading the team from various organizations in the planning of the fodder conference. The Conference would not have succeeded without the additional substantial support from the **Council of Governors (CoG), Kenya Market Trust (KMT), SNV, 3R, GIZ, Kenya Agriculture and Livestock Research Organization (KALRO)** and the **Joint Agriculture Secretariat (JAS)** among others.

Albin Sang
Chairman - National Fodder Conference Secretariat

ACRONYMS AND ABBREVIATIONS

ACTS	African Centre for Technology Studies
ASAL	Arid and Semi-Arid Lands
CIDP	County Integrated Development plan
COG	Council of Governors
CS	Cabinet Secretary
EGH	Elder of the Golden Heart of Kenya
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GIZ	German International Development Cooperation
GoK	Government of Kenya
ILRI	International Livestock Research Institute
JAS	Joint Agriculture Secretariat
KALRO	Kenya Agricultural Research and Livestock Organization
KAVES	Kenya Agricultural Value Chain Enterprises Project.
KCB	Kenya Commercial Bank
KEBS	Kenya Bureau of Standards
KEFRI	Kenya Forestry Research Institute
KEPHIS	Kenya Plant Health Inspectorate Service
KMT	Kenya Market Trust
MOALF	Ministry of Agriculture, Livestock and Fisheries
SDL	State Department of Livestock
SNV	Netherlands Development Organization
USAID	United States Agency for International Development



ABOUT THE CONFERENCE

The 1st National Fodder commercialization Conference was held in Nakuru on December 14th and December 15th 2017. This is the first conference of its kind. The conference presented a platform for stakeholders within fodder value chain to discuss different strategies to ensure increased production and commercialization of fodder and guarantee quality feeds for livestock within the country. The conference theme was, **“Re-positioning the Fodder Value Chain for Sustainable Livestock Production in Kenya.”** The conference provided an opportunity for the USAID-Kenya Agricultural Value Chain Enterprises (KAVES) project to share the findings of the pasture and fodder value chains study conducted earlier in the year. The Conference Slogan **“Tujijenge na Fodder”** was informed by the realization that fodder and fodder seed farming and marketing is highly profitable and if undertaken commercially, it presents a pathway out of poverty for many living in arid and semi-arid areas. Different stakeholders including local dairy and fodder farmers, scientists, private sector and policy makers to understand the challenges and opportunities for upgrading in the fodder value chain. The overall objective of the conference was to review the status of the fodder value chain in Kenya including challenges and opportunities and to identify viable interventions by public and private sector to support competitive development of the sector. The conference raised awareness of the opportunities in the fodder value chain, identified strategic interventions by public and private sector actors and stimulated the collaboration among the fodder value chain actors.

Based on feedback from participants and the extensive interaction that was witnessed throughout the conference proceedings, the 1st National Fodder Commercialization Conference proved to be a highly successful two days of learning, interaction and networking. We were immensely encouraged by the large turnout and diversity of representation at the conference. Furthermore, the delegates set a number of ambitious yet achievable goals which are shared later in this report.

This report has been prepared in order to capture the conference proceedings for the benefit of our delegates, other fodder value chain stakeholders and the wider public.

Joyce Mutua,
Technical Director Dairy – USAID -KAVES

OVERVIEW

This report presents the proceedings and key recommendations from the 1st National Fodder Commercialization Conference held in Nakuru, Kenya. The Conference brought together more than 350 participants representing all counties and across multiple sectors.

The Conference hosted at Sarova Woodlands Hotel from 14-15 December, 2017, was held with the main objective of providing a platform for sharing the fodder value chain study and developing strategies for increasing pasture production and fodder conservation to meet livestock feed demand in Kenya. The Conference also sought to showcase efforts and progress made over the last few years in commercializing the fodder value chain.

The 2-day Conference whose overall theme was: **“Re-positioning the Fodder Value Chain for Sustainable Livestock Production in Kenya.”**, was graced by key guests, among them; Hon. Willy Bett, the CS Ministry of Agriculture Livestock and fisheries, Dr. Andrew Tuimur, the Principal Secretary – Livestock, Mr. Mulinge Mukumbu, Deputy Chief of Party, USAID – KAVES, Dr. Joseph Mureithi, Deputy Director General KALRO, Julius Kiptarus, Director of Livestock Production, Omar Salat, Deputy County Commissioner, Nakuru County among other guests.



Dr. Stanley Mutua
Head of Animal Feeds
Ministry of Agriculture, Livestock and
Fisheries

The Conference Program was carefully developed to meet the set objectives. The program included speeches from a key-note speakers that set the stage for the Conference agenda; plenary and panel sessions that brought together multi-professional and multi-sectoral stakeholders to give insights into various topics of discussions; and breakaway parallel sessions that provided an opportunity to all Conference attendees to participate by sharing their insight in different aspects of the fodder value chain.





Alongside the conference, there were exhibitions showcasing different fodder varieties suitable for varying ecological zones, fodder value addition and fodder harvesting and conservation machinery. Nine exhibitors representing various organizations showcased their innovative projects and programs, generating great interest among the Conference attendees who had an opportunity to witness practical demonstrations and have useful engagements with project/program implementers. Innovation on fodder conservation and ration formulations were key highlights from the exhibitions. Exhibitors were drawn from successful fodder farmers, development partners, county government, regulators, fodder seed dealers and technology providers. The participants were entertained by local artistes, who kept the audience highly entertained and energized!



The Conference plenary proceedings were moderated by Dr. Joshua Wathanga,. The breakout session moderators were Josephine Kirui, Chris Shamba, Vincent Githinji, Dr. Cathrine Kilelu, Prof. Charles Gachuri and Prof. Tuitoek. The proceedings were documented by Dr. Charles Odhong', assisted by Joan Otiang, Dr. Janet Muthusi, Peter Musembi, Blaise Okinyi and Felix Nyakach.

The Conference ended on a high note with all the participants committing to support the Conference Communique in which they resolved to ensure the development of the fodder value chain and continue collaboration across sectors to mainstream fodder value chain in Kenya and to hold the Bi-annual National Fodder Commercialization Conference.



CONFERENCE DAY ONE
14TH DECEMBER, 2017

SETTING THE STAGE: WHY THE NATIONAL FODDER COMMERCIALIZATION CONFERENCE?

A plenary session made up of different stakeholder in the fodder value chain was constituted to set the stage for the 1st National Fodder Commercialization Conference. Each stakeholder shared their view on the importance of the fodder commercialization conference and their expectations at the end of the conference.



PANELIST: (L-R)

1. Ephraim Wachira
2. Julius Nyagaga
3. Alphonso Laboso
4. Ken Lumet
5. Njangi
6. Joyce Mutua
7. Dr. Donald Njarui

OPENING PLENARY

Chaired by the lead Conference moderator, Dr. Joshua Wathanga, the opening plenary brought together eight stakeholders playing different but key roles in the fodder value chain. Under the overall theme of “Re-positioning the Fodder Value Chain for Sustainable Livestock Production in Kenya.” The panelists gave their insights as they addressed the core question: ‘Why the National fodder conference is important and what are the indicators of success in the future?’ The panelists also shared their personal and organizational experiences in supporting fodder production and marketing.

From the session, the following were some of the panelists’ views on the importance of the fodder conference:

“The country is at a crossroad, drought is a reality and farmers are not able to feed their animals and as a country we need to stimulate the production. The conference provides an opportunity to stimulate production and address feed shortage among livestock producers” **Njagi, Director of Livestock production, Nakuru County.**

“The government has a national duty to feed the growing Kenyan population, grow the economy, create jobs and ensure food and nutrition security. This conference will help identify areas of policy prioritization, development and review to cater for the demands of the feed industry. The conference will also provide an opportunity to share information from different stakeholders in order to align data and information reporting to help review the fodder assessment tools.” **Dr. Stanley Mutua, Head of Animal Feeds Section, State Department of Livestock**

“Fodder producers face many challenges in production and marketing of fodder. It is our hope as farmers that the conference will help to find a solution to some of the challenges experienced by farmers.” **Ken Lumet, Manager, Rift Valley Hay Growers Association**

“On one hand the production is low and there are a lot of losses during transport and marketing while on the other there is a lot of demand for hay. I hope this conference provides the link between production, productivity and market.” **Julius Nyagaga, Consultant, Kenya Market Trust**

“The conference will provide an opportunity for stakeholder in the fodder value chain to interlink and develop innovative way to increase fodder production even in the rangelands where a significant percentage of the population depend on livestock.” **Dr. Donald Njarui, KALRO**

“Fodder crop are most often neglected, beside Boma Rhodes, other pasture crops are missing. It is important to discuss how to bring the other seeds to the main stream and enhance production of fodder.” **Epraim Wachira, KEPHIS**

“Kenya is sufficient when it come to milk production. However, as from 2016 Kenya is losing the self sufficiency because the cows are producing way below the potential due to lack of feeds. We are here to develop strategies on how to get more quality feed available to increase livestock production.” **Joyce Mutua, Director, USAID – KAVES**

“Climate change is here with us, and has brought a lot of challenges to the agribusiness. The conference should provide information on how the farmers can diversify and develop a network of stakeholders to enhance fodder production in the future.” **Alphonso Laboso, Kenya Seeds**

The panellists also discussed the indicators of future success. Some of the indicators identified by the panellist include;

- More fodder varieties made available to farmers
- Knowing the demand for fodder and targeting production to meet the demand
- Developing and implementing policies to guide fodder production and marketing
- Research providing solution and technology to enhance commercialization of fodder
- Quality fodder available to the farmers in all seasons
- Rehabilitation of degraded pasture land
- Providing sufficient data for policy formulation
- Building up knowledge base on available fodder technologies for a vibrant dairy sector
- Increasing feed quantity, availability, affordability and policy and environment under which the

OFFICIAL REMARKS

Remarks by Mulinge Mukumbu, DCOP – KAVES



Mr. Mulinge gave an overview of the USAID – KAVES project. He mentioned that during the initiation of the KAVES dairy activities, fodder was not one of the areas of focus. However, the project realised that it was not possible to develop the dairy sector without being actively being involved in the fodder value chain. As such it was important to get more information on the fodder value chain – thus the commissioning of the fodder value chain study.

He reported that during the KAVES project there was aggressive adoption of fodder production as a commercial enterprise in places that had very limited choices like Taita Taveta, Kitui and Makueni County. Fodder therefore became a commercial alternative to subsistence farming in these areas.

The fodder commercialization conference provided an opportunity to share the findings of the study and initiate discussions on how to develop and commercialize the fodder value chain given the opportunities identified during the project and in the fodder value chain study.

Notable Quotes

“The forum is a major opportunity for us to sustain some of the activities we have started and we hope the stakeholder will follow through to ensure the gains in the fodder value chain are not lost.”

“It is obvious that fodder production has great potential and is a viable business opportunity.”

Remarks by Omar Salat, Deputy County Commissioner, Nakuru County

Mr. Salat welcomed the participants to Nakuru County on behalf of the governor and the county commissioner who were away on other official duties. He said that Nakuru County was privileged to host the 1st National fodder commercialization conference. He thanked the USAID – KAVES for organizing the conference in Nakuru County which is a major producer of hay. He said the deliberation at the conference will make it possible to enhance production of fodder and provide employment *among the farmers*.

Mr. Salat asked the participants to take time and also visit Nakuru town to see the major development taking place since Nakuru was soon going to be a city!



Remarks by Dr. Andrew Tuimur, Permanent Secretary – State Department of Livestock



Dr. Tuimur recognized that livestock keeping is one of the easiest pathways out of poverty for many households since each household kept different kinds of livestock. He pointed out that livestock production was constrained in many cases due to high cost of feed and lack of sufficient quality feed. Against this background, he challenged the participants to find ways of reducing the cost of feeds and guaranteeing quality feed for livestock since the cost of feed in Kenya was among the most expensive item in livestock production as opposed to Uganda.

He thanked the conference organizers for providing an opportunity to examine a sector which is critical to livestock production and has been neglected for a while and expressed confidence that the fodder system in Kenya will be prioritized to ensure that it contributes to better livelihood among the fodder producers and the livestock farmers.

Take home messages:

- The ministry is working round the clock to promote sustainable livestock production which contributes effectively to our national economic growth
- There is need to develop the capacity of extension workers who provide information to these farmers in order to increase productivity.
- Livestock farmers especially those in the marginal areas are now enjoying access to market for their livestock and it is expected that the markets and prices will continue to improve
- To support pastoral systems in Kenya the department is currently undertaking two projects on ending drought emergencies under World Bank funding namely; Regional Pastoral Livelihood Resilience Project (RPLRP) and Kenya Livestock Insurance Project (KLIP).

Notable quotes:

"We must find a way of reducing the cost of feed so that we can reduce the cost of producing a kilogram of milk or meat and increase farmers' incomes."

"How come the price of manufactured feed is still high even though we have removed duty in most of the raw material that are used to manufacture feed?"

"The only way to ensure that we produce enough milk and meat for our ever growing population is to ensure that our feed system works."

Key Note Address by Dr. Joseph G. Mureithi, Deputy Director General- Livestock (KALRO)



Dr. Mureithi gave the key note address which was devoted to sensitizing the delegates on the importance of adopting a value chain approach to re-position the fodder sector. He gave a historical perspective of forage dissemination support, identified forages suitable for different regions, highlighted the various technologies for rangeland rehabilitation and emphasized the need for fodder conservation. Further, he stressed the need for a joint strategy to commercialize the fodder value chain for the benefit of all stakeholders. He urged all the development partners, national government and county government to support the fodder crops as other crops. Dr. Mureithi identified the following barriers to forage adoption;

- Poor seed production systems
- High labour requirement for establishing and maintaining forages
- Poor persistence of legumes in grass/legume mixture
- Low priority given to forage research and development
- Limited knowledge on benefits of forages
- Declining per capital land availability

- Weak linkages and communication between research and extension officers for effective delivery of technologies
- Emergence of new diseases

He concluded his address by encouraging all stakeholders to embrace work together and identified opportunities to improve forage adoption. These opportunities include;

- Strengthen forage seed system to improve seed availability
- Identify best options for dissemination of forage technologies for increased adoption
 - Development and promotion of forage cultivars that is compatible in association with food crops (crop-livestock integration)
 - Breeding- productive and highly nutritive forages that are tolerant to biotic and abiotic stresses
- Agronomic and management practices - to enhance persistence and productivity and sustainability.
- Research to identify effective dissemination methods for forage technologies to increase adoption.

Official Opening of the Ceremony by Willy Bett, CS – Ministry of Agriculture Livestock and Fisheries



The chief guest address for opening ceremony was given by Honorable Willy Bett, EGH, the Cabinet Secretary (CS), MoALF. The CS appreciated the fact that agriculture is the mainstay of Kenya's economy and its performance directly and indirectly affected Kenya's overall economic growth. He noted that in past he has participated in forum discussion specific crops, dairy livestock but has never been to a conference to discuss issues related to fodder. Mr. Bett identified fodder as one of the main contribution to the success of livestock production at the household level as it contribute the highest cost among the production inputs.

He reiterated the government commitment to providing technical, financial and policy support to ensure that commercialization of fodder becomes a reality and becomes a viable enterprise. In conclusion, his expectations from the Conference were for the stakeholders to identify key areas where they expected both county and national government support the fodder value chain.

Notable quotes:

"The conference has come at an opportune time when the focus of the country is shifting to food security and creation of jobs to make agriculture commercially oriented and I expect fodder value chain to contribute to that objective."

"We would like farmers to make agriculture production viable through cost minimization. We need to focus on reducing animal feed in Kenya and fodder should be one of them."

"We do not want to do business as government, we want the private sector to do the business and the government facilitate the investors."

"You need to link fodder production to the off takers, when that is done and a contractual arrangement is facilitated it become easier for fodder stakeholder to do much more."

PLENARY PRESENTATIONS

Five plenary presentations were made by Dr. Hezekiah Agwara (USAID-KAVES), Piers Simpkin (FAO), Humphrey Kiruaye (PIONEER), Jos Creamers (SNV) and Dr. Catherine Kilelu (3R). The presentation focused on various aspects of the fodder value chain with a focus on the viability production and commercialization of fodder.

1. Dr. Hezekiah Agwara (USAID-KAVES)

Presentation: Unpacking the Kenya National Fodder Value Chain Study

“Kenya’s most daunting development challenge is how to properly feed the 70 million heads of live-stock to meat growing demand for ASF.”

Dr. Agwara presented the findings of the Kenya National Fodder Value Chain Study. He noted that important information of the fodder value chain was still missing and urged the stakeholder especially the learning institutions to conduct more research on the fodder value chain. Below are some of the key findings of the study;

▣ Large unmet & expanding markets for fodder (50-90% annual feed deficit - about 53-57 million tons dry matter, which is projected to double by 2035).

▣ A majority of smallholders feed dairy cattle on low quality natural forage, cultivated fodder, and crop by-products. There is very little diversification in fodder production beyond Napier and Rhodes grasses.

▣ There is limited but increased growing of maize for silage, and other emerging fodder crops.

▣ Kenya produces approx. 15.8 MMT of dry crop residues per year – 70% from cereal/pulses straws and haulms. Crop residues contribute about 11% of annual feed requirements.

▣ Fodder prices are highly seasonal – lowest during the wet season (March-June/October-December) and highest in the dry season (July-September/January-March).

▣ The nominal price of fodder ranges from Sh150 to Sh500 per bale of hay; average prices are much higher in deficit markets (Sh300-500). Price of grass hay bale is Sh150-400 – annual average of Sh220.

The study identified key areas that required intervention to ensure that the fodder value chain is profitable. These include;

– Increasing fodder productivity and production by supporting the building of capabilities of extension staff and farmers on fodder production, processing, conservation and marketing, scaling up fodder establishment and providing inputs, credit and quality monitoring services.

– Enhancing harvest and postharvest handling and standards by training and new techniques to improve quality and reduce wastage, facilitating investment to provide mechanization and storage services and promoting the adoption of technologies that reduce wastage.

– Promoting aggregation and marketing by facilitating the establishment of producer and marketing Groups, establishing collection and storage centers and conduct production and market surveys.

– Providing an enabling environment by formulating of supporting policies and regulations at the national and county levels.

– Developing a delivery mechanism by forming an inclusive team of fodder commercialization stakeholders at each county.

2. Dr. Piers Simpkin, (FAO)

Presentation: Viable option/ Strategies for Kenya to meet the fodder demand and Exploit existing opportunities

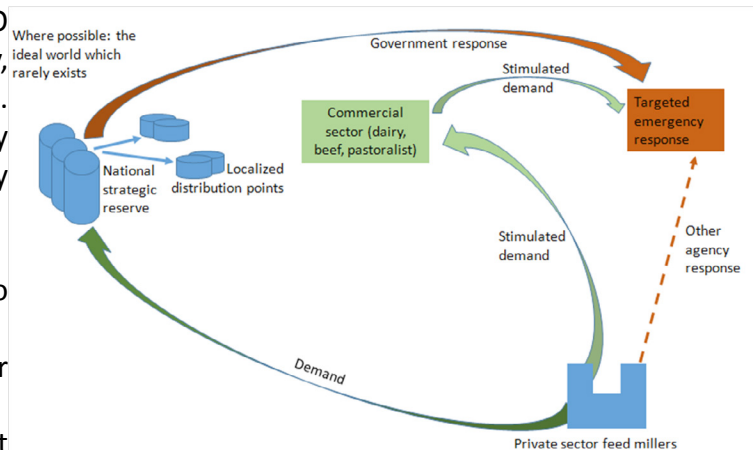
Dr. Simpkin gave a quick glimpse of the role of FAO in addressing inadequate feed quantity and quality, feed safety and fodder regulatory framework. He noted that the fodder supply system is highly dependent on natural pasture – which is highly seasonal, and diminishing.

He highlighted the strategic responses of FAO to monitor availability of feed. These included;

- a) predictive forage availability index in order to foresee sudden shocks to the system
- b) Seasonal feed availability assessment (feeding into food security assessments as availability of livestock feed is directly correlated to malnutrition)
- c) Support to improved range land management
- d) Public, producer, private sector collaboration - Feed is accessible in rural areas (even within pastoral systems) but availability is limited to wealthier families,

He further briefed the participant on the development partner role of FAO in stimulating local demand for fodder. These roles included:

- Assessment of the potential of the livestock sector and potential policy processes needed to support it (Livestock Sector Policy Investment Tool).
- Assessment of feed availability and demand – (can be used as part of the tool)
- Assessment of the requirements of livestock systems (actual and hidden values of animals)
- Assessment of tenure systems
- Advocate for the establishment of national strategic feed reserves (which sell a portion of the reserve each year at subsidized prices in order to avoid produce expiry).



- Community Based Animal Feed Workers – Cascade PFS type training at scale to raise awareness of feed supplementation (using locally available products) – work with private sector extension workers where possible and provide linkages to private sector.
- Support feed cooperatives to access small loans for the establishment of localized feed centers
- Improving range management based on participatory approaches (holistic natural resource management / participatory natural resource management)

Dr. Simpkin assured the delegates that despite the many challenges faced by FAO in executing its mandate, they had learnt many lessons and were making necessary strategic changes to ensure availability of fodder across the region. One of the most important lessons for emergency feed response is the need to plan, and to ensure all procurement processes are in place every year, whether or not an emergency takes place. This will require the use of long term agreements and contracts that are in place well before an emergency happens.

3. Humphrey Kiruaye (PIONEER) and Charles Boit (Farmer)

Presentation: Pioneer Fodder and Fodder Seeds Strategy for EAC Region

Mr. Kiruaye provided an insight on silage investment opportunities for the dairy sector, enablers/drivers behind the shift to corn silage, silage production and challenges facing farmers on silage production, harvesting and post-harvest handling and improved varieties with more nutritional benefits. He identified the driver of fodder forage opportunities from the perspective of DuPont Pioneers and these drivers were;

- Readily available advanced technologies on forage crops breeding and inoculants.
- Address growing demand of forage crops as an alternative to commercial concentrates.
- Diversification into forage crops as a growth lever- new business unit and product lines.
- Internal expertise and competencies on forage crops - Dairy experts, Nutritionist e.tc
- Growth and expansion of the dairy industry.

Charles Boit shared his experience from a large scale farmer, as the manager of Kapsuswa farm in Eldoret, Uasin Ngishu County. He manages a dairy herd of 400 cows. In 2017, the farm has 1200 acres of silage and grass. They ensiled 1542,900 Kilograms of maize silage. One of the major challenges during the production and ensiling was equipment failure and slow rate of ensiling leading to losses. He provided the estimates of production cost of silage at Kasuswa farm. The cost of production of silage ranged between Ksh. 0.96 – 3.22/ kg and the production per acre was between 9.32 - 26.1 tonnes.

Points of discussion

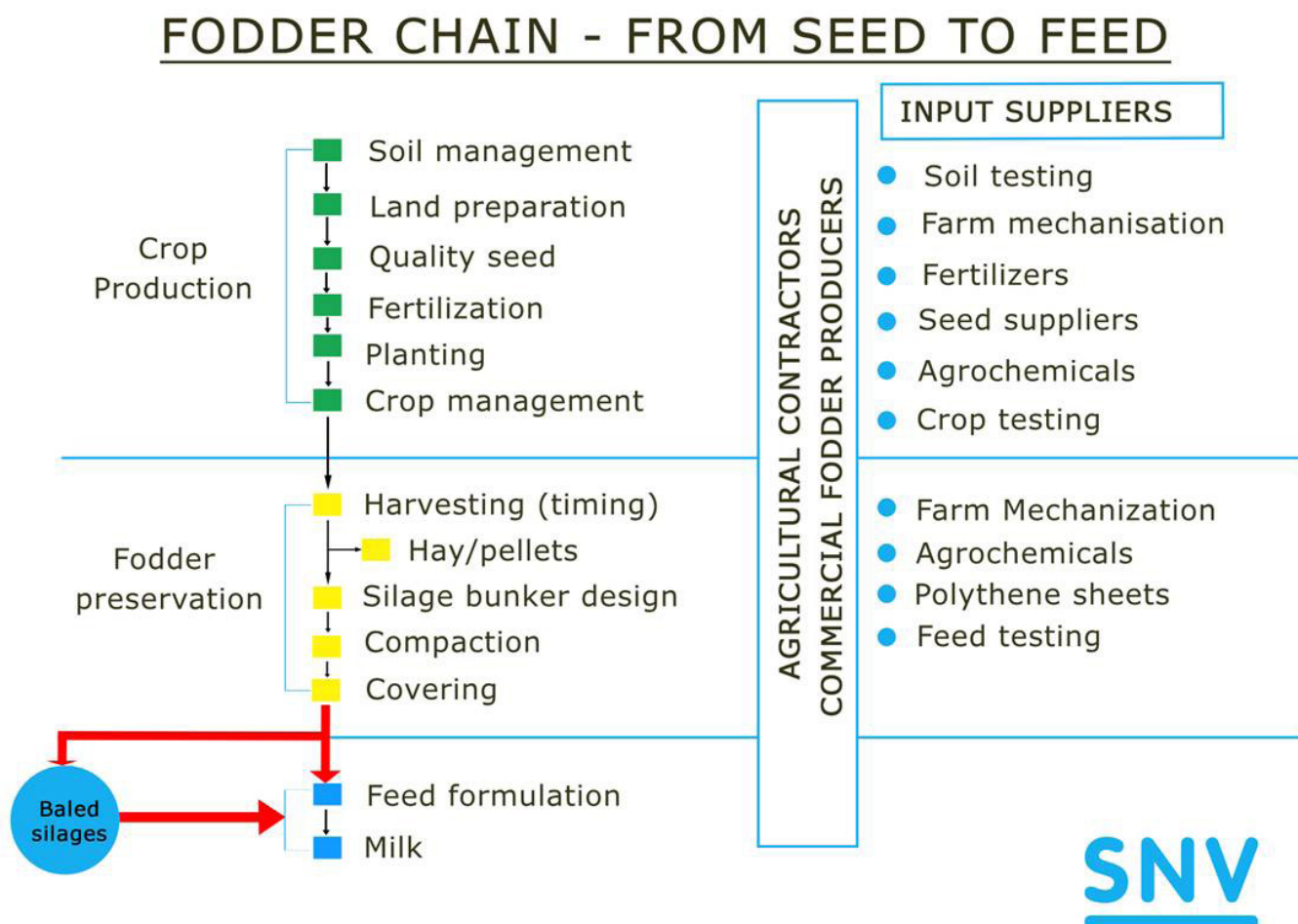
- Competition between food and feed: Food (95%) and feed (5%). There's sorghum varieties that are drought tolerant and highly digestible that are being tested and will be introduced into the market
- Availability of inoculants: The Company is exploring inoculants and trials will be conducted next year. Bacteria introduced to silage crops to increase fermentation and increase nutritive qualities
- There are varieties for different agro-ecological zones

4. Jos Creemers - SNV

Presentation: Case studies of fodder intervention under KMDP

Mr. Creemers provided an overview of the KMDP project funded by the Embassy of the Kingdom of the Netherlands in Nairobi. He shared the fodder intervention activities of the project which included improved on-farm fodder production and preservation practices and/or technologies, promotion of energy and protein rich fodder crops and promotion of silages (maize, oats, fodder sorghums, grasses) among dairy farmers. He further provided a detailed presentation on how to ensure increased production, productivity and reduce losses both during production and feed. Using the figure below he emphasised the importance of each step of feed production.

In conclusion, he emphasised the importance of collaboration between feed producer and livestock farmers to ensure quality feed is available for livestock production throughout the year.



5. Dr. Catherine Kilelu – 3R

Presentation: Agricultural Contracting Services and Commercial Fodder Producers

Dr. Kilelu explained the role of 3R Kenya (Resilient, Robust, Reliable) as a learning initiative supported under the Agriculture and Food and Nutrition security (FNS) program of the embassy of the Kingdom of Netherlands. The 3R project is collaborating with KMDP to undertake action research to generate and document insights on a number of innovation inclusive business models. In relation to feed and fodder, 3R and KMDP have undertaken a research on the performance of the Service Provider Enterprises (SPEs).

She explained that SPE is an innovative youth led group business model that offer commercial services to entrepreneurial smallholder and medium scale farmers. The result show positive outcomes in relation to the contribution of SPE at the farm level with resultant positive outcome in relation to milk supply chain

She provided a detailed technical and enterprise performance of the SPEs, some of these achievement include ensiling 12,000 tons of silage in 2016 worth about US\$ 50,000. The SPE have also served about 950 farmers – approximately 7% of potential client base and are currently making between Ksh 5,000 to 46,000 monthly per member.

Dr. Kilelu concluded her presentation by highlighting the challenges faced by the SPEs in the course of their work. Some of these challenges include lack of equipment, poor quality material, poor quality fodder seeds, farmers' slow adoption of new practices, delayed payment by clients, seasonality of business, lack of investment in equipment and lack of returning for service.

Points of discussion

- SNV's role: Points out opportunities for entrepreneurs to invest in new promising technologies.
- Laboratories for assessing the quality of fodder are something that needs to be looked into.
- Proper fodder management during production is one of the ways that can be used to ensure quality.
- The evidence show success of contracting in many are and the SPE model provides a viable method to create employment for the youth and provide essential services to farmers.

PARALLEL BREAKAWAY SESSIONS

The breakaway sessions were the main activities of the first day's afternoon. The sessions gave an opportunity to the conference participants to make relevant contribution to their major areas of interest and showcase the fodder initiatives that were being implemented by various stakeholders. It also provided an opportunity for the participants to interact with each other and get deeper insights into the work that was being done around the country. For each of the parallel sessions, there was a moderator and rapporteur to manage the time and motivate discussions among participants.





CONFERENCE DAY TWO
15TH DECEMBER, 2017



RECAP OF DAY ONE

Participants were motivated as they began the second day of the conference and were eager to receive feedback from the parallel breakaway sessions. The vigor of the participants was evident! Being the final day of the conference, much was expected in terms of key outputs and commitments both by the conference organizers, and more importantly, the government and strategic partners who provided leadership for the fodder value chain agenda in the country.

To begin the day, Dr. Charles Odhong' took the participants on a remembrance journey. The recap session allowed the audience to share their key take-aways from the array of activities of Conference day one.

Some of the take-home messages participant during recap

"Fodder is highly profitable and can be taken up as an agribusiness."

"The fodder deficits in the country can be attributed to grazing and land management practices, low adoption of fodder as a commercial enterprise."

"The fodder value chain can only make an impact if more investments are made in production, supporting policy and regulatory framework, research, extension and training of key stakeholders."

"The national and the county governments must play a leading role to ensure the fodder value chain is mainstreamed."

Conference Slogan: *"Tujijenge na fodder."*

FEEDBACK FROM THE PARALLEL BREAK AWAY SESSIONS

Breakout1A: Fodder and fodder seed farming challenges, opportunities and interventions to increase productivity, production and quality

Moderator: Josphine Kirui

Rapporteur: Blaise Okinyi

Panelist:

1. Dr. Kariuki, KEPHIS
2. Chales Wasonga, Seed Producer

Key take away points

- Take special interest in rangelands/ASALs. These form the frontier for sustainable production
- Incorporate fodder production in CIDPs and allocate funds for fodder production
- Address land tenure in ASALs to enable concerted efforts by all towards fodder production
- Make fodder production a government flagship project
- Research findings should cascade down to farmers for improved fodder and livestock production
- Stock management – counties need to take up this issue to ensure pasture lands are not degraded
- Government should allocate funds to produce fodder instead of buying emaciated animals at very low prices. This will ensure fodder availability at all times
- Need for policy change to address issue of liability by seed companies in case of losses associated- currently liability is limited to cost of seeds
- Introduce teff which has been doing so well in Ethiopia as a feed
- Fodder crops should be given equal right as food crops in irrigation projects e.g. Tana river can solve the areas fodder problem through irrigation should not be confined to maize, banana etc.
- Land tenure in ASALS: Growing grasses on unused rangelands can be further explored; communal grassland improvement in grasslands.
- Quality control standards and ethics in quality hay production need to be enforced
- Marginalization of people in northern Kenya
- Seasonal variation in supply of feeds can be addressed through irrigation
- Equitable resource distribution to avoid conflict among pastoralists/cattle keepers
- Empowering universities and seed suppliers in provision of quality seeds
- A business approach should be taken when promoting fodder and not necessarily focusing on making them projects/flagships.

Breakout 1B: Tapping into Emerging niche Markets for Fodder and Fodder Seed in Local and Export Market (Aggregation and Marketing)

Moderator: Chris Shimba

Rapporteur: Felix Akatch Opinya

Panelists:

1. Mr. Laboso - Kenya Seed Company
2. Ms. Milka –Kenya Plant Health Inspectorate Service (KEPHIS)

Key take away points

- Consider fodder as part of crops for necessary support
- Enhancing contract farming; establishing formal farmer associations/cooperatives for effective linkages between companies/processors and farmers
- Self-help groups, CBOs aggregation should be facilitated by state department of agriculture, livestock and fisheries to upscale the sector and empower farmers
- Pursue proper training and policy support women and youth for maximization of quality fodder production (advance practices of production) and employment generation at household level
- Enhance post-harvest management of grasses and fodder to improve bioavailability of nutrients and keep quality of finished product
- Domesticating relevant policies in the adoption of CIDPs
- Carry out joint research in association with farmers' organizations, government (national and county), and university and research institutes on best increasing productivity of fodder
- Farmers should be allowed to trade nationally and have a mechanism to test whether farmer seeds produced by farmers are as good as certified seeds produced by companies
- Processed for certification of seeds needs to be reduced to make it easier for farmers to have their seeds certified
- Provision of good data that informs investments for fodder and shows whether the fodder businesses are viable
- Building farmers' capacity to become competitive and not rely on aid

Breakout1C: National and County government Policy, regulatory framework and institutions necessary for a robust fodder value chain

Moderator: Vincent Githinji

Rappoteur: Peter Musembi

Panelists:

1. Sylvester Mungai - Kenya Bureau of Standards
2. Elizabeth Mwangangi - Joint Agriculture Secretariat
3. Michael Gachukia - State Department of Livestock

Key take away points

- A business idea such as fodder development needs a policy framework or foundation to grow
- Data collection is critical to back resource allocation and objective decision making concerning fodder production. A clear database and an M&E system is necessary
- For standardization to be attained, fodder standards would require codes of practices
- Quality control standards and ethics in quality hay production developed and enforced.
- Sustainable interventions like feed banks and common feeding centers would be a viable option
- A fodder authority on fodder can be established – It was pointed out that it would be faster if we identify an already existing authority that deals with fodder than establishing a new one
- Extension training and exposure to farmers on land use and the need to produce fodder as a business venture
- Transport policies need to be enforced to avoid exploitation by authority on payment of cess by transporters
- Reduction in VAT for fodder related resources would be an income to farmers
- Standardization of bale weight for hay also a critical quality control issue
- Storage: Central storage for hay necessary to reduce post-harvest losses. Need for committees to manage hay stores supplied by the county government.
- Need for political goodwill: County government needs to invest in providing machinery, storage facilities and water harvesting equipment to farmers
- Consider fodder production as a priority when planning for irrigation strategies. This will increase the fodder base.
- Reduce conflict in land ownership and educate owners on the economic benefits of such land in terms of fodder production
- Lobbying and advocacy for fodder production where farmers are contracted to produce hay and other fodders

• Key messages:

- Although a national fodder policy is necessary, a national strategy is more crucial now
- All stakeholders in the fodder business to play the lead role in lobbying for this agenda

Breakout1D: Inputs supply and services opportunities

Moderator: Dr. Catherine Kilelu

Rapporteur: Beverly Shitandi

Panelists:

1. Jos Creemers: SNV Consultant
2. Ruth Wangari: Agronomist and Input Supplier
3. Ann Munene: Manager, Lukwai Farm
4. Kipruto Cherigon: Ekule Dairy Ltd, Technical Adviser

Key take away points

- Seed bulking of indigenous fodder, e.g African Fox tail and red oats grass which grows naturally in Laikipia
- Enforcement of feed quality laws and regulations including right quantities (in Kgs per bale) of fodder traded
- Private sector to form associations to drive quality regulation
- Avail small scale technology equipment to encourage small scale hay producers, including the youth
- Promote SMEs involved in machinery production and supply
- Reclaim land that has been heavily eroded. Employ best agronomic practices. Introduce penalties to persons causing adverse effects on land use
- Zero-rate fodder seed. This will lower the high cost of fodder seed
- Integrate programs across counties, especially research players
- Utilization of right mineral fertilizers for fodder
- Target universities for seed production as they have the land available and rich man power, including research
- Explore the idea of land consolidation of small farmer in order to experience economic benefits of fodder production

Breakout1E: Opportunities in post-harvest handling, quality and feed safety

Moderator: Prof. Charles Gachui

Rapporteur: Dr. Janet Muthusi

Panelist:

1. Jane Sawe, Egerton University
2. Elly Koros, RVIST

Key take away points

- There is need for technology especially mechanization for small-scale farmers: There's machinery that can package small quantities of silage for small-scale farmers. Counties need to invest in silage packaging equipment (due to high cost)
- Lack of standardization in terms of weight of a bale
- Imported hay needs to be examined to ensure that it is not contaminated during transportation
- Losses need to be minimized by ensuring proper storage; pulling together structures for shared storage
- There is ready market for fodder which needs to be exploited by people with knowledge
- Training of actors along the fodder value chain activities (including post-harvest handling) need to be made more practical
- Advocating for fodder platforms – sharing of ideas and experiences
- Advocating specialization in one thing i.e fodder production

Breakout 1F: Opportunities in research, technology, innovation and extension

Moderator: Prof. James Tuitoeck

Rapporteur: Joan Otiang

Panelist:

1. Dr. Ondabu, Egerton University
2. Ms. Indetie, Bricketing specialist

Key take away points

- Agronomic and productivity studies should be undertaken to identify appropriate fodder varieties for the various agro-ecological zones
- Pasture breeding: Marker assisted selection and mutation breeding be applied in order to achieve progress in selection faster for the important traits e.g. seeding ability
- Innovation: Research on alternative methods of fodder conservation is required e.g. pelleting, feed block making
- Research on water conservation techniques for fodder production in the drylands is required e.g. ring tank technology used in Australia
- As a first step community fodder seed systems should be utilized to fast track production of fodder as the case for Makueni
- Gender mainstreaming and youth involvement, creating more job opportunities by assessing how they can contribute to the growth of the sub-sector
- Need for more research on fodder e.g. on alternative varieties to what farmers are currently growing in the different areas
- Making proper machinery/equipment available along the value chain e.g. in hay baling to compact the bales more hence easier transportation
- Invasive species problem needs to be addressed
- Information sharing and access or providing outlets where this information is available; considering extension service is dwindling/insufficient
- National government to provide financial support to research institutions
- Undertake research on information sharing (digital) models for extension and establish knowledge information center where extension and research information is deposited after validation for utilization by farmers
- Modeling: Animal nutrition studies on responses to feeding identified pastures (with potential) on performance to generate data for modeling to assist advisory services
- Undertake a study on quality of currently traded fodder (size of bales, nutritional quality) and sell based on quality.

WAY FORWARD

The inaugural National Fodder Commercialization Conference begun and ended on a high note. The stage had been set for collaborative partnerships across sectors, disciplines and counties, which would influence the design, implementation and impact of fodder commercialization initiatives in the future. Moving forward, the expectations were high among all participants. It was envisaged that the recommendations made for National Fodder Commercialization Conference would be implemented in part before the next Conference and there will be clear progress.

Dr. Charles Odhong' made a presentation on the way forward based on the feedback from the parallel breakout sessions. Key issues were identified across the value chain and strategic intervention stated. It is expected that the various stakeholder will take relevant action to re-position the fodder value chain across the country. The key issues and strategic intervention are show in the tables below;

1. Seeds (Local and Exotic)

Key Issues	Strategic intervention
Availability, access and affordability of seeds	Capacity building for seed production and bulking and bulking under supervision
	Diversification of seed looking at suitability to different climatic condition
	KEPHIS to complete certification of fodder seeds to allow for commercialization

2. Fodder Production

Key Issues	Strategic Intervention
Degraded pasture land	Rehabilitation of rangelands.
	Develop policies on land use and rehabilitation
	Develop a platform for inter-county and Inter-country engagement geared towards land use and rehabilitation
Low production and productivity	Develop public and private extension to work with farmers on increasing production and productivity
	Introduction of variety from other areas/countries which can do well
	Explore irrigated pasture production
	Fodder farmers should received support as other crop farmers e.g. fertilizer support
	Promote investment in mechanization for both small and large scale farmers
	Develop products and services to support fodder producers

3. Fodder Marketing

Key issues	Strategic interventions
Lack of adequate handling and storage facilities	Establishment of fodder storage facilities by private sector and government
Multiple taxation in different counties	Develop policy to harmonize taxation
Market linkages	Development of market information systems/ centre
	Explore contract farming of fodder to enhance market access
Standardization of fodder	Develop standards and regulation for quality control

4. Financing and Insurance

Key Issues	Strategic intervention
Financing for investment in fodder production and marketing	Develop financial products targeted towards fodder production and finance for investment in fodder production
Insurance product for fodder to mitigate against losses	Develop investment product targeted to fodder crops
Financing by National and County government	Mainstream Financing at the National and county level and include fodder development agenda in the National and County development plans

5. Research, Technology, Innovation and Extension

Key issues	Strategic intervention
Research on pasture improvement	Promote research of fodder variety and adoption
	Repatriation of pasture and undertake adoption studies to determine suitability for different agro ecological zone
	Research on alternative method of fodder conservation
Information/ data on the fodder value chain	Studies to understand emerging trends and develop database on farmer, productivity, quality of fodder, models for commercialization e.t.c

6. Organization

- Establish National fodder producers forum with branches within each of the counties

CONFERENCE COMMUNIQUÉ

The 1st National Fodder Commercialization Conference was convened by the Ministry of Agriculture, Livestock, and Fisheries in conjunction with the Council of Governors, the United States Agency for International Development (USAID) through its Kenya Agricultural Value Chain Enterprise project (KAVES) and a consortium of development partners including the Kenya Markets Trust, SNV, 3R, GIZ and FAO from 14th to 15th December 2017 at Sarova Woodland hotel in Nakuru. The theme of the Conference was “Re-positioning the Fodder Value Chain for Sustainable Livestock Production in Kenya” under the slogan: “Tujijenge na Fodder”. The theme and slogan embody a call to action to scale up fodder production by commercialization.

The conference provided a platform for 400 delegates drawn from the 47 counties, state and non-state actors to develop actionable plans and strategies to increase fodder production and rehabilitation of pasture lands to meet the feed requirements for Kenya’s livestock herd.

This contributes to global, regional and country agricultural commitments including the Comprehensive Africa Agriculture Development Programme (CAADIP) which focuses on improvement of productivity in agricultural output and the Sustainable Development Goals, that is, Goal 1 - Ending poverty in all its forms and Goal 2 - Ending hunger to achieve food security and improve nutrition and promote sustainable agriculture. At the National level, fodder commercialization will contribute to four major Presidential pillars including; 1) Food and Nutrition Security; 2) Creation of Jobs through Agro-processing and Industrialization.

The theme focused on key components of the fodder value chain including;

1. Fodder and fodder seed farming challenges, opportunities and interventions to increase productivity, production and quality
2. Inputs supply and services challenges and opportunities
3. Tapping into emerging and niche markets for fodder and fodder seed in local and export markets
4. National and County government Policy, regulatory framework and institutions necessary for a robust fodder value chain
5. Opportunities in post-harvest handling, quality and feed safety, research, technology, innovation, training and extension

We, the representatives of the National and County Governments, Development Partners, farmer-led organizations, private sector, Research Institutions and Academia having met in Nakuru, Kenya, from 14th to 15th December 2017 renew our commitment to commercializing fodder production and undertaking pasture rehabilitation for sustainable and competitive livestock sector to safeguard livelihoods, reduce poverty, and improve food security and nutrition.

- Delegates in the 1st National Fodder commercialization conference who included representatives from the 47 counties noted and agreed that Kenya faces major forage deficits estimated at 70 per cent of the total annual fodder requirements of about 5.5 billion bales of hay. The deficit is attributed to grazing and land management practices, low adoption of fodder as a commercial enterprise and effects climate change among others.

- Further, delegates acknowledged that fodder is highly profitable and can be undertaken as an agribusiness. This has been demonstrated by fodder farmers, especially rift valley and eastern areas among others. There is huge potential for fodder production in the Arid and semi-arid areas which present the next frontier for commercial fodder production. This will go a long way in increasing income, poverty alleviation and improving food and nutrition security.

- To build a sustainable and competitive livestock sector, there is therefore need to reposition the fodder value chain in terms of investments in production, supporting policy and regulatory framework, research, extension and training.

- Delegates therefore called upon all fodder value chain actors including national and county governments, development partners, private sector, farmers, academic and research institutions to immediately undertake the necessary measures to ensure that the country has sufficient supplies of quality, safe and affordable fodder.



ANNEXES

1. CONFERENCE PROGRAM

THURSDAY 14TH DECEMBER 2017

7.30-9.00	Arrival and Registration and Tea Exhibitions Opening	Fodder value chain study -highlights slideshow Coordination by: Mercyline Adhiambo (KAVES)
9.00-9.20	Chief Guest Tour of Exhibition	High level delegation
9.00 - 9.30	Opening Ceremony Scene Setting Opening Prayer Introduction of the Participants Panel Session 1: "Setting the Stage: Why National Fodder Conference?" Panelists: (Dr. Stanley Mutua-SDL), Rift valley Hay growers (Ken Lumet.) County government representative (CEC, Agriculture and Livestock, Nakuru County) Dairy representative (Dominic Menjo) Kenya Markets Trust (Julius Nyagaga), USAID-KAVES (Joyce Mutua), Kenya Seeds (Alphonso Laboso), KEPHIS, KALRO (Dr. Elkana Nyambati)	Moderator: Dr. Joshua Wathanga
9.30 -10.10	Official Remarks · National Anthem · Entertainment (Nakuru band) · Welcome Remarks: Governor, Nakuru County (H.E Lee Kinyanjui) · Remarks: USAID Representative, Kenya · Remarks: Director Livestock Production: (Julius Kiptarus, OGW) · Remarks: Principal Secretary (Dr Andrew Tuimur, CBS) · Remarks: COG Chairman (H.E Josphat Nanok)	Moderator: Dr. Joshua Wathanga
10.10-10.40	Key note address: Re-Positioning the Fodder Value Chain for Sustainable Livestock Production in Kenya	Dr. Joseph Mureithi, Deputy Director General KALRO
10.40 - 11.00	Speech and Official Opening of the Conference by Chief Guest	Hon Willy Bett, EGH CS, Ministry of Agriculture, Livestock & Fisheries
11.00-11.30	Photo Session and Press Conference	Coordinated by Mercyline and PRO
11.00-12.00	Plenary Session: Unpacking the Kenya National Fodder Value Chain Study	Speaker: Dr. Hezekiah Agwara USAID- KAVES
12.00-12.20	Viable options/strategies for Kenya to meet the fodder demand and exploit existing opportunities	Robert Allport, FAO

12.20 – 12.40	Pioneer Fodder and Fodder seed Strategy for EAC Region	Humphrey Kiruaye, PIONEER
12.40- 13.00	Agricultural Contracting and Commercial Fodder Supply Services	Jos Creemers - SNV/ Catherine Kilelu - 3R
13.00 – 13.30	Question and Answer – Plenary session	Dr. Joshua Wathanga
13.30-14.30	Lunch	All
14.30-15.30	Breakout Session 1: Business opportunities in the Fodder Value Chain	Dr. Joshua Wathanga
	Breakout 1A : Fodder and fodder seed farming challenges, opportunities and interventions to increase productivity, production and quality Panelists: KEPHIS , Dr. Kariuki,-KALRO, Charles Wasonga, (Seed Producer), Kerio Valley development Authority, CIAT, CDA/CDL- CoG, KEFRI, ICRAF	Moderator: Josephine Kirui Rapporteur: Blaise Okinyi, SDL
	Breakout 1B : Tapping into emerging and niche markets for fodder and fodder seed in local and export markets– (Aggregation and marketing) Panelists: KEPHIS, Kenya Seed, Jeremiah Ngaya, Dairy Farmer, CDL-CoG	Moderator: Chris Shamba, Kenya Markets Trust Rapporteur: Felix Nyakach
	Breakout 1C : National and County government Policy, regulatory framework and institutions necessary for a robust fodder value chain Panelists: Moses Wangai -KEBS, CDL/CDA, SDL- Mike Gachukia, Tegemeo, KEFRI, COG and JAS	Moderator: Earnest Mbogo Rapporteur: Anthony Munyao
	Breakout 1D : Inputs supply and services challenges and opportunities Panelist:: Egerton University (Agronomist), AKEFEMA, KCB/Equity, Sidai-Agrovet, Agrodealers Association, CDA/CDL, Soil Car	Moderator: Catherine Kilelu, 3R Rapporteur: David Maina – Perfometer
	Breakout 1E : Opportunities in post-harvest handling, quality and feed safety Panelists: Mwaitu Enterprises, Jane Sawe – Egerton University, Elly Koros - RVIST, CDL/CDA,KALRO, University of Eldoret	Moderator: Prof. Charles Gachuiiri-UON Rapporteur: Dr. Janet Muthusi
	Breakout 1F : Opportunities in research, technology, innovation and extension Presenters: Dr. Ondabu (KALRO), Ms. Indetie Bricketing specialist, RVIST, Egerton University, CDL/CDA, COG and JAS	Moderator: Prof. Tuitoek- Egerton University Rapporteur: Joan Otiang-SDL
15.30-15.50	Tea Break	All
15.50-17.00	Exhibition Tour by Participants	All Coordination by: Mercyline Adhiambo, KAVES.



FRIDAY 15TH DECEMBER 2017

8.30 –8.50	Welcome and Day 1 Recap	Dr. Charles Odhong'
8.50 – 10.00	Fodder and fodder seed farming opportunities to increase productivity, production and quality Presenter: Josphine Kirui	Moderator: Dr. Paul Gamba
	Tapping into emerging and niche markets for fodder and fodder seed in local and export markets – (Aggregation and marketing) Presenters: Chris Shimba	
	Inputs supply and services opportunities Presenter: Dr. Catherine Kilelu	
10.00 –10.30	Tea Break	All
10.30 –11.30	Opportunities in post-harvest handling, quality and feed safety Presenter: Prof. Charles Gachui	Moderator: Dr. Joshua Wathanga
	Opportunities in research, technology, innovation and extension Presenter: Prof. Tuitoek, Egerton University	
	National and County government Policy, regulatory framework and institutions Presenter: Earnest Mbogo	
11.30–12.30	Plenary session: Way forward, Resolutions and Delivery Mechanism	Facilitator: Dr. Charles Odhong'
12.35–13.00	Closing Ceremony and communiqué · Presentation of the joint communiqué by, Albin Sang, Chairman, National Fodder Conference Secretariat · Formal closing Remarks-CoG · Vote of Thanks	Moderator: Dr. Joshua Wathanga
13.00 – 16.00	Lunch and Departure	All



2. PICTURE SPEAK



RE-POSITIONING THE
Fodder
VALUE CHAIN



USAID
FROM THE AMERICAN PEOPLE



german
cooperation
DEUTSCHE ZUSAMMENARBEIT

SNV SMART
DEVELOPMENT
WORKS

KAVES | Kenya Agricultural Value
Chain Enterprises Project

