



AgriFoSe2030

Agriculture for Food Security 2030
- Translating science into policy and practice



Regreening the drylands: Fodder groups as a potential pathway for upscaling commercial fodder production

Fodder scarcity in pastoral areas of Kenya

Livestock feed insecurity remains a constant challenge to livestock production in the drylands of many low-income countries. In Kenya, the feed deficit is estimated to be as much as 70% of the total annual fodder requirements for all livestock. This feed shortage is the leading cause for 80% of livestock deaths in the arid and semi-arid lands (ASALs). Scarcity of grazing resources has reduced the cattle population in the ASALs by 27% as reported in a study conducted in 2016. Feed scarcity has largely been driven by recurrent droughts associated with climate change, as well as expanding livestock and human populations that result in overgrazing, encroachment and fragmentation of arable rangelands. These factors constrain livestock productivity, leading to increased food and income insecurity for over 14 million resource-poor pastoralists residing in the ASAL regions of Kenya.

This brief showcases the key challenges of feed scarcity and outlines policy measures needed to upscale initiatives, such as the World Food Programme's (WFP) Food Assistance for Assets (FFA) initiative, and increased commercial fodder production in order to attain sustainable livestock-

Key messages

- Forage scarcity associated with prolonged and recurrent droughts impedes livestock productivity and threatens pastoralists' livelihoods in the drylands
- Cultivation of fodder may increase livestock productivity and provide an opportunity of livelihood diversification by selling excessive fodder resources
- Key challenges to fodder production include recurrent droughts, limited storage facilities, intrusion by both livestock and wildlife, and inadequate inputs.
- Establishing fodder groups provides pastoralists with a platform for shared learning and expanding social networks.
- Strengthening the existing fodder groups through enhanced access to support services is critical for up-scaling commercial fodder production.
- The study has shown that traditional pastoralists can change to a more commercially focused approach, as long as interventions are taking into account local needs and perspectives.

Key interventions on fodder cultivation - Food Assistance for Assets (FFA)

As an adaptation strategy, pastoralists in Isiolo County of Kenya, a typical ASAL region, are gradually cultivating more and more fodder to increase livestock production and diversify their livelihood options through sale of hay and grass seeds. This is partly due to the implementation of the [WFP's FFA initiative](#). The main objective of the FFA initiative was to boost the adaptive capacity of pastoralists to withstand shocks, reduce reliance on food aid and promote sustainable diversification of livelihoods.

The project focused on asset creation as opposed to disaster risk reduction expenditure that often result in support in the form of direct food assistance. This entailed empowering pastoralists, through a group-based approach, to adopt practices that could generate a more stable income and livelihood. Such practices could be, for example, rain water harvesting innovations for producing drought-tolerant livestock fodder. Using demonstration plots, the project supported the groups through technical trainings on land tilling, seeding, processing and storing hay, as well as provision of quality rangeland seeds. These led to formation of over 22 fodder groups in Isiolo County and most of them are formally registered with the Kenyan Ministry of Social Services.

based livelihoods for pastoralist communities. Work in the AgriFoSe2030 programme and the TripleL Initiative has included key informant interviews, focus groups discussions and a survey of 20 fodder groups in Isiolo County. This brief is summarizing main insights from this work.

Fodder groups – part of a solution to fodder scarcity?

The FFA initiative introduced fodder groups in the arid and semi-arid regions of Isiolo, Kenya, which provided food incentives to encourage active participation in fodder production. The fodder groups have now been in existence for about 6 years. Over 80% of members are women, and they collectively undertake commercial pasture production. The average fodder groups has about 60 members and more than 2000 pastoralists are supported by the FFA initiative through various groups. The groups have leaders who act as liaison people between donors, local implementing partners and the fodder groups. Fodder production is carried out on a small-scale basis with low-output due to high dependence on rainwater, which is largely unreliable in the area. The average fodder groups' collected fodder farm size is almost 10 hectares, while the total area under fodder production for all sampled groups in Isiolo County is close to 200 hectares, about 40% of the overall area under fodder production in region. The groups produced an average of 57 bales of fodder (a bale is equivalent to 20 kilograms),



Over 80% of members are women in the fodder groups initiated by WFP.

and 35 kilograms of grass seeds during the 2017 planting season. However, this was noted to be low production as 2017 was marred with a long dry spell. The fodder groups also engage in fodder and grass seed processing, although on a limited scale. Increasing this capacity could provide additional



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The FFA initiative empowers pastoralists, through a group-based approach, to adopt practices that could generate a more stable income and livelihood.

opportunities for value addition and employment. At least two-fifths of the sampled groups are currently selling hay and grass seeds produced as an income generating activity. Out of the 2017 production, the groups sold an average of 44 bales of fodder and 6 kilograms of seeds.

There are two established fodder marketing channels in the study area. The primary marketing channel comprises of the group members who bought over 70% of the fodder produced by their own group at a lower rate. The low fodder price was one of the benefits enjoyed by members and it acted as an incentive for their commitment in the groups. The secondary markets include neighboring livestock keepers and traders who bought hay at higher prices.

Key challenges in fodder production and marketing

Recurrent drought was noted as the main factor constraining fodder production in the region, and it also affected the FFA initiative, since the group farms are abandoned when the pastoralists migrate in search of pasture during the dry spells. Inadequate storage was also a key challenge since many groups did not have appropriate storage facilities for hay and

grass seeds. The temporary wooden structures that are currently used are prone to termite infestation and are therefore not sustainable. Proper and adequate storage facilities are necessary to maintain the nutritive value of hay and ensure constant supply to mitigate shortages during droughts.

The groups also complained of invasion of their farms by both domestic animals and wildlife due to poor fencing that do not provide enough protection. To address this challenge, some groups contribute money for hiring a guard to look after the farms while others used a rotating schedule where members guard the farm on shifts. However, proper fencing materials such as electric barbed wire would be more effective and less costly over time.

Inadequate technical skills on fodder agronomy was another challenge affecting fodder production. This relates to extension services being very infrequent, such as trainings and visits by the Ministry of Agriculture extension officers. Additionally, the group activities were constrained by insufficient access to agricultural tools such as ploughing tools, wheelbarrows, harvesting and baling equipment. This meant that less work could be carried out on the group farm during the course of a day.



In Kenya, the feed deficit is estimated to as much as 70% of the total annual fodder requirements for all livestock.

Ways forward

Strengthening existing fodder groups would provide a viable platform for up-scaling commercial fodder production in ASAL regions such as Isiolo County. Fodder commercialization requires efficiency in production and thus the need to ensure that producers have access to essential institutional and support services. These can be achieved through:

- Incorporation of fodder production as a priority area for livestock development in the County Integrated Development Plans. This will facilitate budgetary allocation for investment in rainwater harvesting technologies and inputs necessary for upscaling commercial fodder production
- Provision of reliable extension services, through organized platforms such as fodder events, conferences and exhibitions and trainings to create awareness and sharing of ideas and experiences in regard to fodder production and management

- Investment in appropriate and reliable hay storage facilities is necessary to enhance better post-harvest management and conservation of fodder
- Establishing effective market links between producer groups and potential buyers through contract farming will enable fodder groups to take advantage of ready market opportunities within and outside their county. This could create business and employment opportunities, such as processing, transporting and trading fodder in the various markets, especially for women and youths.
- The national and county government, as well as development partners, should harmonize and direct funds for emergency responses to support sufficient fodder production ex-ante

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