

Key Messages

- Regulation of pasture use is urgently needed.
- Discontinue policies favouring haymaking from pastures
- Provide arable land, subsidized equipment and soft loans for fodder cropping to herder cooperatives and livestock farms
- Create value chains involving multiple marketing opportunities for fodder crops
- Support existing fodder producers before creating additional production capacities
- Establish a centrally coordinated advisory service system that utilizes local government capacities as well as private sector initiatives
- Initiate a subprogram on “Livestock Fodder” in connection with government programs in both crop and livestock sectors

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Increasing domestic livestock fodder supply and use in Mongolia

A major obstacle in increasing livestock productivity is insufficient domestic production and consumption of fodder. Increased domestic fodder production is also required for balancing the current overuse of pastures. Furthermore, increased cultivation of fodder crops that are beneficial for soil fertility such as legumes will respond to the need for sustainable cropping systems in Mongolia. The German-Mongolian cooperation project “Sustainable Agriculture” conducted a fodder market study with the aim of informing policies and stakeholders about the current market trends as well opportunities and constraints for future development of domestic fodder production and fodder consumption in the livestock sector. Key findings and implications of the study are summarized in this policy brief.

Substantial capacity of the livestock fodder market is unutilized.

The current volume of Mongolia’s fodder market is MNT 321 billion. Fodder supply totalled 1.4 million tons in 2016. Roughages (forages and succulent fodder) account for 75% of total fodder supply, mineral fodder for 21% and concentrates for 5%, respectively.

Fodder buyers include herders, state and local governments (which are in charge of emergency fodder



reserves that are channelled to herders as well) and

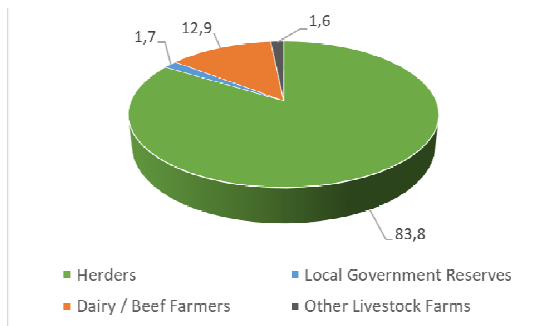


Figure 1: Structure of roughage consumption measured in monetary value (2016)

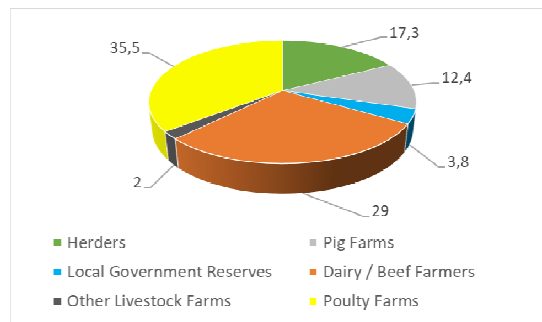


Figure 2: Structure of concentrated fodder consumption measured in monetary value (2016)

intensified and semi-intensified livestock farms. Herders’ fodder consumption was MNT 232.8 billion, and the fodder consumption of livestock farms was MNT 88.1 billion. The market for roughages is dominated by hay supply and herders as the main consumers (Figure 1). The market for concentrated feed, on the other hand, is shaped by the relatively high concentrate feeding intensity of livestock farms. The latter account for 78.9% of the total consumption of concentrates (MNT 65.9 billion in 2016). The biggest consumers of concentrates are poultry farms with a 35.5% market share (Figure 2).

The current fodder supply of intensified livestock farms meets 86% of their roughage requirements and 51 percent of the concentrate requirements. The unsatisfied fodder requirements offer an additional market capacity of an estimated MNT 50 billion. In pastoral livestock production, fodder consumption is expected to increase by 10 to 20% per year along with the increasing number of animals, but this will also depend on as factors such as weather conditions. Domestic fodder cropping can be increased by MNT 14.5 billion by substituting imports of fodder crops that are partly used in industrial fodder production. Further increase can be expected from policy and private sector initiatives facilitating increased fodder consumption. The total market capacity to be targeted by policies promoting domestic supply and consumption of livestock fodder is estimated at MNT 370 to 500 billion.

Major constraints of the market for livestock fodder as well as weaknesses identified in the policy framework of domestic fodder production are briefly discussed below, along with policy recommendations responding to each issue.

**Pastures are overgrazed and domestic capacity of hay production is limited.**

71% of Mongolia's territory is used as pastures free of charge. Roughage consumption of herders and dairy as well as beef farms is dominated by grazing and supplementary feeding of hay harvested from pastures. While 65% of pastures are already overgrazed the number of animals is constantly increasing and herders' hay requirements are expected to increase by up to 100 thousand tons per year. However, at the current scale and severity of overgrazing the domestic capacity for hay production from pastures is exhausted. Further increase in haymaking from pastures should be prevented. Policies targeting an increase in domestic supply of forages need to prioritize increased biomass production over exploitation of limited natural resources. Regulation of pasture use is urgently needed and the use of hay should be repressed by increased use of green fodder, cultivated perennial grasses, legumes and silage in livestock feeding. The key recommendations are:

- Introduce a legislative framework on controlled and sustainable use of pastures;
- Discontinue distribution of subsidized haymaking equipment to herders and livestock farms.

Herders and livestock farms lack land, equipment and funds for fodder cropping.

As of 2016, green fodder crops are grown in 20 aimags, perennial grasses such as alfalfa and clover in 14 aimags and silage crops such as maize and sunflower in 8 aimags. A major share of the growers are herder cooperatives and livestock farms. Most of those herders and farmers are cultivating plots as small as 0.1 to 1 hectare, hence merely experimenting with the possibility of fodder cropping. These initiatives need to be scaled up with policy support. For fodder cropping at sufficient scales herders and livestock farms need access to arable land, cropping equipment, seeds and funds. The key recommendations are:

- Distribute seeds of fodder crops and allocate arable land and subsidized cropping equipment to soum governments, herder cooperatives and intensified livestock farms;
- Prioritize herders and livestock farms planning fodder cropping as recipients of soft loans;
- Establish aimag- or soum-level fodder production units as public-private-partnerships (PPPs) between local governments and herders organized in cooperatives in areas where fodder cropping is possible.

In the suggested PPP model, the local government will provide arable land and experts and facilitate sales while local herders, possibly supported through soft loans, contribute



equipment, labour and operational funds. The main benefit of this model is that, given their lack of experience with fodder cropping, herders will be institutionally and professionally supported by the local governments, hence less exposed to production and marketing risks.

Incentives and market opportunities for commercial fodder cropping are missing.

Supporting fodder cropping by herders and livestock farms is essential but this will have limited impact since in many areas of the country fodder cropping is not feasible or economically not profitable due to unfavourable agro-ecological conditions. In order to increase domestic fodder production policies therefore need to also facilitate commercial fodder cropping by mechanized crop farms, most of which currently specialize in wheat cropping. However, commercial fodder cropping is only possible if there is actual demand for fodder crops and the prices of the crops justify the production costs. Hence, policies should aim for establishment of value chains involving multiple marketing channels for fodder crops. Also, in view of the benefit of integrating fodder crops in wheat rotations for soil fertility, financial incentives for crop farms to grow fodder crops in rotation can be justified. The related recommendations are:

- Supply green fodder, cultivated perennial grasses and protein-rich crops instead of natural hay to the emergency fodder reserves of aimag and soum governments;
- Provide support e.g. soft loans and tax benefits to food processors that utilize nutritious fodder crops such as rape, soy and white mustard as raw materials and deliver by-products such as expellers that can be used in livestock feeding;
- Prioritize livestock farms that are planning fodder cropping or purchase of fodder crops from domestic crop farms as recipients of soft loans facilitated by the government;
- Reward farms growing fodder crops with higher subsidies, e.g. for pesticides and fertilizers and / or wheat.

Creation of additional fodder production capacity is planned while the existing capacity is underutilized.

There are 116 fodder production units with a combined production capacity of 374 thousand tons per year registered at the Ministry of Food, Agriculture and Light Industry. As of 2017, 68 fodder production units are in operation. These facilities include 11 fodder factories, 30 mills with fodder production and 2 small mills with pelleting machines in addition to 23 herder cooperatives and livestock farms in ownership of equipment for small-scale fodder production such as pelleting machines, grain crushers and fodder mixers. The combined production capacity of 41 industrial fodder producers is 263 thousand tons per year but only 38 percent of this capacity is currently utilized. In the case of small-scale fodder production, only 23 out of 53 units registered are actually used. While these facts reveal underutilization of the existing



fodder production capacity the government is planning the establishment of 4 new fodder factories and distribution of more grain crushers, fodder mixers and pelleting machines to herders and farmers (as per Government Action Plan 2017-2020). Establishment of additional production capacities will not improve but rather reduce overall performance of the fodder industry and there is no guarantee that the additional capacity will be utilized. Policy focus is better placed on supporting the existing fodder producers, most which have not received any policy support but are operating on an uncertain market. The recommendations are:

Delay the plan of establishing new fodder factories until at least 50% of the existing fodder production capacity is utilized. Instead, provide support e.g. through soft loans and tax reduction to existing fodder producers;

Discontinue distribution of subsidized equipment for small-scale fodder production to herders and intensified livestock farms.

Lack of know-how is limiting the sufficiency and effectiveness of livestock feeding.

Lack of know-how and poor farm management are among the major reasons for insufficient and inadequate animal feeding among the majority of herders and intensified livestock farms. Policies on fodder production and livestock feeding need to target establishment of a functioning structure of extension and advisory service as an essential requirement for facilitating increased and enhanced livestock feeding practices. The following actions are recommended:

- Train the livestock specialists at Animal Health and Breeding Units in all soums in providing information and advice on improving animal feeding to herders;
- Provide the AHBUs with information materials, illustrated brochures and training videos on fodder preparation and use in pastoral livestock production for use in informing and advising herders;
- Restore the former Extension Centres at the Aimag Departments of Food and Agriculture, and provide each Extension Centre with demonstration plots, small-scale equipment for fodder cropping and a training room as well as operational budget;
- Create a position at the MoFALI in charge of agricultural extension and advisory services;
- Facilitate regular training of intensified livestock farmers on fodder production and livestock feeding.
- Prioritize intensified livestock farmers who employ livestock specialists or contract specialists for advisory services as recipients of soft loans.



Policies on fodder production are divided between crop and livestock sectors, thus missing a holistic framework of intervention.

The issue of livestock feeding has a cross-sectoral character in that it is relevant for both livestock and crop sectors. This involves the disadvantage that the political attention on the subject is divided between the two sectors and overshadowed by other priorities in each sector. In addition, statistics on fodder production are limitedly available and not reliable. In response to these obstacles, the following is recommended:

- Elaborate and implement a subprogram on “Livestock Fodder” within the broader framework of the State Policy on Food and Agriculture and in connection with government programs in both crop and livestock sectors;
- Promote applied research on fodder production and animal feeding through facilitation of research grants;
- Collect and publish reliable statistics on fodder production;

Conclusions

- The current volume fodder market is MNT 321 billion, but the potential market volume that needs to be targeted by policies is between MNT 370 billion and MNT 500 billion.
- The current dominance of hay in fodder consumption, combined with the expected increase in the number of animals, strongly contrasts with the need to reduce overgrazing and calls for urgent policy initiatives to regulate pasture use and increase fodder cropping.
- Fodder cropping relates to priorities in both livestock and crop sectors, and requires engagement of herders and livestock farms as well as crop farms. There are small-scale initiatives of fodder cropping throughout the country that need to be scaled up through policy support. Herders and livestock farms need access to basic production inputs such as arable land and cropping equipment while crop farms require incentives and value chains with multiple marketing opportunities for fodder cropping.
- Policies targeting the establishment of additional capacities of industrial fodder production need to be redirected to increase the utilization of the existing production capacities.
- The lack herders’ and farmers’ know-how as a major obstacle in increasing fodder supply and consumption needs to be recognized and adequately responded to by agricultural policies. The establishment of an extension service structure involving public and private sector providers of information and advisory services is an essential requirement for sustainable improvement of livestock feeding. Without a structure for building the



knowledge capacity of herders and farmers, impacts of policy interventions targeting increased fodder production and consumption will be limited.

- Given the cross-sectoral character of the subject, policy interventions on fodder production need to be coordinated within a systematic framework that should be established in the form of a subprogram on livestock fodder within the broader framework of the State Policy on Food and Agriculture.

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