FODDER: EMMA and Barrier Analysis

BACKGROUND
In pastoralist areas of Ethiopia, recurrent drought, conflict, increasing number of animals reared, and rangeland degradation have created pasture shortages resulting in a decline in livestock productivity.

Livestock products and by-products such as meat, milk and eggs provide vital animal protein, and play an important role in contributing to child health and nutrition. Low productivity of livestock is associated with milk shortages that result in high rates of malnutrition among children of pastoralists and negatively impact the nutrition of pregnant and lactating mothers. Findings from a Milk Matters study in the Somali region of Ethiopia (Tufts University, 2009) found that livestock interventions can improve the resilience of milking livestock and thus ensure an uninterrupted supply of milk and necessary nutrients for children. As such, access, availability and use of fodder are therefore essential in pastoralist areas.

At project inception, USAID-PRIME examined the fodder market and fodder use with two studies: a Fodder Emergency Market Mapping and Analysis (EMMA) and a Fodder Barrier Analysis. Both studies contribute to our increasing understanding of the attitudes, practices, and market situation around fodder, and demonstrate that the availability of fodder in times of need (dry season) is constrained due to a variety of factors and that pastoralists do not have sufficient information on fodder production and markets.

Key action points based on study findings
1. Enhance awareness in the community on fodder use by developing and communicating strong behavior change communication messages. Focus on how and when to produce fodder, provide information about fodder and seed market while encouraging production or purchase of fodder during the wet season and providing information for proper storage.

2. Support existing groups promoting the use of fodder including extension workers and traditional structures such as rangeland management councils.

3. Support agricultural inputs and feed and fodder suppliers to reach remote pastoralist communities.

4. Conduct ongoing assessments on the change of fodder use and market access.

5. Work closely with emergency units/and OFDA’s crisis modifier for appropriate rapid responses during crises.

6. Test and introduce new potential and appropriate technologies for fodder production.

PRIME’s baseline survey (Kimetrica, 2013) shows that supplemental feed as the main source of fodder, is only used by 2% of households in Oromiya, 1.6% of households in Afar, and 0.2% in Somali region. Fodder production as a coping strategy is considered important by less than half of all households across wealth quartiles.
Fodder Barrier Analysis
Date: August 2013

Locations:
Gursum, Fafan Zone of Somali Region
Yabello, Moyale and Negelle in Borena and Guji zones of Oromiya Region

Objectives:
• To understand pastoralist households’ current practices and behaviors surrounding fodder access.
• To understand pastoralist households’ perceptions about the importance of fodder use for animal productivity and child nutrition.
• To identify household-level barriers to fodder access and availability.
• To explore the existing experience of accessing fodder during the dry season.

Methodology and sampling:
Using head-of-household interviews, 90 households per region/cluster with children 6-59 months old who have at least one milking animal in their homesteads were selected. Half of households were then identified as ‘doers’ (households intentionally producing or purchasing fodder for the purpose of feeding their milking livestock) and half as ‘non-doers’ (households that do not produce or purchase fodder for their milking livestock and who allowed them to graze on communal lands).

OVERVIEW OF FINDINGS

• Both ‘doers’ and ‘non-doers’ have a good understanding of the problems and consequences related to the lack of fodder and recognize its importance for milk yield, though not always to nutrition and health of their children.
• Both groups reported that fodder shortage is severe, especially during dry seasons and droughts.
• The vast majority of respondents said they kept milking livestock near their homesteads during dry seasons. The decision-making process for both groups was mostly done by the husband (final say/alone) or jointly.

Only a few households reported the wife making the decision alone in Oromiya, whereas no households reported that in Somali region.
• The main barriers to producing or purchasing fodder include irregular rainfall, lack of awareness on producing fodder and fodder markets, lack of access to markets to purchase seed and fodder, and financial constraints. In Oromiya, Development Agents and NGOs were the primary supporters of fodder, while in Somali, family members and seed/fodder suppliers were the most important supporters.
**ANALYSIS AND RECOMMENDATIONS**

The barrier analysis shows that the most significant challenges that affect fodder production and purchase in pastoralist communities include:

- Lack of knowledge on how to produce fodder when needed
- Lack of knowledge on sources of information for purchase of fodder
- Lack of knowledge of fodder and fodder seed markets and availability
- Production-related factors such as workload, low rainfall/water availability, and insufficient access to land

To address issues at both the demand and input supply-level, market-based interventions as well as behavior change communication and training were recommended.

**To promote household fodder demand**
- Organize promotional events through drama and other performance groups
- Develop soap opera storylines and other behavior change materials to link the relationship between fodder, milk availability, dry season and child malnutrition

**To increase demand for fodder production**
- Training on fodder production in collaboration between PRIME’s Nutrition and Economic and Market Development teams
- Test and introduce new potential and appropriate technologies for fodder production

**To promote fodder input supply**
- Working with fodder retailers and wholesalers to link markets in pastoralist areas
- Invite fodder suppliers to agricultural trade fairs in PRIME areas

**To increase demand for extension services**
- Support groups promoting the use of fodder through technical assistance and training
- Promoting extension services through key leverage points and tailored behavior change communication products and dissemination activities

“Fodder is crucial in our lives—if we do not have fodder for our animals, our income and milk will be reduced, and our animals’ condition will also be affected. For us, reduced milk means that the health of our household will be affected” – Female respondent in Yabello district.
Fodder EMMA Report

Date: August 2013

Locations:
PRIME intervention areas in Afar, Oromiya and Somali regions, and central markets around Addis Ababa

Objectives:
• To determine the overall functioning of the fodder market system
• To identify actors operating in the market system
• To identify the constraints and opportunities in the market system

Methodology and participant selection:
Semi-structured key informant interviews, market place observations, and site visits. The assessment focused on the major actors of commercial and subsistence fodder production and trade including: producers, regional and local wholesalers, retailers, pastoralist and rural development offices (PDOs), research centers, public seed enterprises and cooperatives.

Overview of Findings
1. Two Market Systems Operating Within the PRIME operational area

1. Commercial Fodder Production and Marketing
Operated by business actors who produce fodder for commercial use and/or supply the fodder to markets for sale, commercial fodder production is found around Addis Ababa (Sululta, Mulo, and Koka) and is predominantly done by smallholder farmers working on natural pastures.

2. Subsistence Production
NGO- and Government of Ethiopia- driven, subsistence production is primarily limited to local seed multiplication and subsistence use. In this system, agro-pastoralists obtain the seed free of charge from non-governmental organizations (NGOs), research centers and Pastoralist Livestock Development Offices (PDOs). It is found in all of PRIME intervention areas.

2. Production & Marketing Trends
At the time of the assessment, fodder sales were low in all PRIME intervention areas as production was limited and used only to fill the gap during natural pasture run-down. Largely influenced by NGOs and PDOs supplying inputs and buying seed, this weak market-oriented production system contributes to farmers not producing or using fodder. In the areas where the assessment was conducted, natural pasture was the major source of livestock feed while fodder use was negligible.

Fodder produced through the commercial market system, in comparison was strong throughout the year. An estimated 64,000 metric tons of grass hay and an equivalent quantity of teff and wheat straw was produced and supplied to central markets like Adama, Modjo, Metahara and Awash. It is important to note that fodder from the commercial market system often does not reach the pastoralist community unless NGOs or the government supply it in response to severe droughts. With this exception, it ends up in the central market where it sold to large feed-lot operators, live animal traders and urban-based fattening and dairy farms. This indicates there are supply and demand constraints in fodder markets.

3. Types of Fodder Available:
The types of fodder used and supplied in PRIME intervention areas differ depending on the production system, availability of water and agricultural practices.
<table>
<thead>
<tr>
<th>Fodder type</th>
<th>Afar</th>
<th>Somali</th>
<th>Oromiya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panicum</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Sudan grass</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<tr>
<td>Alfalfa</td>
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<td>✓</td>
<td>✓</td>
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<tr>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Sesbania</td>
<td></td>
<td>✓</td>
<td></td>
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<tr>
<td>Maize</td>
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4. **Most significant challenges:**

**Fodder production:**
- A lack of knowledge about how to produce and use fodder as needed
- Preference to move to find grazing land instead of producing fodder
- Prosopis invasion of land cleared for cultivation
- Fodder producers prefer selling fodder seed than producing fodder
- Communities lack confidence to produce fodder and fear market failures
- In subsistence fodder production, unavailability of pest control is a major threat
- Small areas of land are allocated for fodder production by agro-pastoralists
- Floods damage river bank areas traditionally used for fodder production

**Access to markets**
- Free distributions of fodder during emergencies undermine the market actors that are trying to provide fodder in pastoralist areas. Private actors lack confidence and doubt the feasibility of markets in pastoralist areas
- Regional seed or private input suppliers are not strong enough to supply seeds and in some cases are non-existent (such as in Afar and Oromiya)
- Lack of technical staff to deliver adequate extension services at district level
- Marketing and handling problems—no appropriate storage sites and techniques for seeds

5. **Response Options**

**High**
1. Promote and support commercial supply of fodder to pastoralist areas by working with wholesalers and retailers.
2. Strengthen the extension service and input supply to increase local fodder production and upgrade the subsistence production to marketable products.
3. Create awareness to show the importance of fodder to pastoralists, agro pastoralists and farmers to increase livestock productivity and household nutrition.
4. Strengthen linkages between private sectors, small/farmer individual seed producers and cooperatives involved in the fodder market system.
PRIME's fodder interventions were designed based on EMMA and Barrier Analysis results. Since the beginning of the project, PRIME has:

- Linked feed and fodder wholesalers to retailers in pastoral areas, initially using an emergency response through the use of feed and fodder vouchers
- Promoted feed and fodder suppliers through trade fairs in PRIME areas of influence
- Organized experience sharing sessions for fodder production and storage
- Promoting fodder production and use through drama and circus groups as well as camel caravans. A soap opera in the three PRIME languages has been designed with messages that include the use of fodder was launched in March 2015.
- Where appropriate support development of commercial feed and fodder producers through provision of competitive cost shared grants for expanded feed/fodder production and marketing.

DEFINITIONS:

**Fodder**: coarse food for livestock especially ruminant livestock species, biomass consisting of dried natural pasture species, forage legumes, grasses, crop residues (teff, wheat and maize) and fodder tree species.

Where can I find the full reports?
Visit www.prime-ethiopia.org for a full version of these reports and other learning materials from USAID-PRIME.

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