Enhancing dairy based livelihoods in India: Mid-term progress report of the MilkIT project

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The ILRI-led project on ‘enhancing dairy-based livelihoods in India and Tanzania through feed innovation and value chain development’ – commonly known as MilkIT – has been implemented since 2012 with support from the International Fund for Agriculture Development (IFAD).

The overall goal of the project is to contribute to improved dairy-livelihoods in these countries via intensification of smallholder production focusing on enhancement of feeds and feeding using innovation and value chain approaches. The overall objectives of the project include:

- Institutional strengthening: To strengthen use of value chain and innovation approaches among dairy stakeholders to improve feeding strategies for dairy cows.
- Productivity enhancement: To develop options for improved feeding strategies leading to yield enhancement with potential income benefit.
- Knowledge sharing: To strengthen knowledge sharing mechanisms on feed development strategies at local, regional and international level.

The northern hilly state of Uttarakhand is the project implementation area in India. This area has been selected to link better with an IFAD-loan project which has been implemented in this state since 2004. The MilkIT project has been implemented in close coordination with governmental and non-governmental organizations active in this area.

Because of increasing demand for milk and new opportunities for marketing, Almora and Bageshwar districts were selected for program implementation. Local NGOs are the implementing partners: INHERE in Almora and CHIRAG in Bageshwar.

Basis for selection of mid-clusters

- Road accessibility
- Dairy animal population
- Institutional base
- Milk marketing opportunity
- Feed availability

Site selection was started with identification of administrative blocks: Sult and Bhikyasian are the two blocks selected in Almora and there is one single block in Bageshwar. For program implementation 42 villages were selected in 2 blocks of Almora district and 39 villages in Bageshwar district.

For effective and efficient program implementation villages were grouped into different clusters based on geographical location. Mini-clusters were formed with 2–4 neighbouring villages or settlements and mid-clusters were formed with 2–4 neighbouring mini-clusters. 2 Mid-clusters were selected from each block for program implementation.

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<thead>
<tr>
<th>District/Block</th>
<th>Mid-cluster</th>
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<tbody>
<tr>
<td>Almora/Sult</td>
<td>Barkinda (5)</td>
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<td></td>
<td>Titoli (6)</td>
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<tr>
<td>Almora/ Bhiyaksian</td>
<td>Control</td>
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<td>Bageshwar</td>
<td>Saing (4)</td>
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<td></td>
<td>Chhona (5)</td>
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*Value in parentheses indicates number of villages.

Though the Chhona mid-cluster is still getting technical support from the service providers, there are fewer opportunities for improving the dairy value chain due to land constraint (low feed availability) and to already good relational marketing of milk to the workers in a nearby magnesite mine.
In innovation platform formation

To achieve its objectives, the project has implemented innovation system principles to tackle feed and value chain constraints and issues. Innovation platforms\(^1\) (IPs) have been formed to bring diverse actors (government, NGO, private, research and civil sector society) together to connect and collaborate for program implementation. In each mid-cluster one feed IP has been formed and one dairy value chain IP has been formed in each block.

Members in the IPs are mainly farmers, representatives from governmental and non-governmental organizations.

\(^1\) An innovation platform is a space for learning and change. It is a group of individuals (who often represent organizations) with different backgrounds and interests: farmers, traders, food processors, researchers, government officials etc. The members come together to diagnose problems, identify opportunities and find ways to achieve their goals. (cgspace.cgiar.org/handle/10568/34157)

Major constraints identified

Participatory rural appraisal was carried out to discover constraints and issues related to the milk and feed value chains.

Constraints to the dairy value chain include:
- Low production (breeding problem, local breed, health care)
- Limited marketing options
- Quality of milk
- Price of milk
- High transaction cost

Constraints to the feed value chain include:
- Land constraints for grass production
- Unavailability of green grass during winter and summer
- Lack of concentrates
- Wastage of fodder during feeding (up to 40%)
- Shelter management

Outcomes

Various activities were initiated after discussion in IP meetings to address the constraints identified. Because this is still an ongoing process it is too early to see the exact impact of these platforms. Nonetheless, the platforms have allowed the resolution of some constraints through pilot interventions.

Linkages among stakeholders

After the IP was formed, formal linkages between farmers and governmental and non-governmental organizations were established. The veterinary department and BAIF are increasing their services on animal health, providing artificial insemination services and distributing grass seeds. The forestry department, Himmothan and watershed projects are providing fodder and forage seeds, and saplings. The National Bank for Agriculture and Rural Development is providing loans to farmers to purchase crossbred animals. KVK is providing technical support to improve shelter and feed mangers.

Feed innovations tried and tested

Farmers participating in the project are now cultivating grasses like Guinea, Sita, Napier, Dolni, Brome and Kucchi in uncultivated private land, and crops like dual-purpose wheat, millet and oats on cultivated land; these provide year-round green fodder. Since more than 40% of fodder was being lost due to feeding on the ground and using un-chopped fodder options for the construction of feed mangers and the use of chaff cutters were discussed and are now being implemented. A participatory feeding trial in villages is planned to try improved feeding technologies (use of chaff cutter, feeding in manger, mixing with concentrates) to prevent this fodder loss. GB Pant university of Agriculture and Technology will provide technical support for this participatory research.
Similarly, farmers have started to prepare urea-treated straw and silage. The animals’ response to these feeds still has to be assessed.

Innovations in marketing
In Bageshwar, there were two dairy cooperatives: one government based (Aanchal, a marketing wing of DDB) and another IFAD based. Since there was not much improvement in the price and payment system by these institutions, farmers also established the Jeganath milk cooperative. Farmers are encouraged to produce quality milk after setting a price based on quality, which is measured through lactometer readings and fat content.

In Saing, farmers are motivated to purchase cross-bred cows by seeing improvements in other farmer’s livelihoods through selling milk. Further motivation to improve their herds comes as they receive reasonable prices for their milk. The number of farmers selling milk has increased from 32 to 108 in Bageshwar. Increased demand for concentrates is motivating farmers to operate feed shops at local level, which was also discussed within the feed IP. With the establishment of the dairy cooperative at the local level there is now positive competition between Aanchal and the local dairy cooperative to provide services and incentives to farmers.

In Sult, farmers used to sell milk to consumers directly. Aanchal has supported the establishment of a milk collection centre (village milk producer society) in Baseri and another is going to be established in Barkinda. Aanchal is also supporting the supply of other types of inputs such as feed, improved breeds, etc.

Two more milk producer societies have been formed in Saknara cluster (collecting milk from Basarbagarh and Chirangasheet villages) and Gehnaheet cluster (with two villages of Gehnaheet and Gahnatiimi). This producers’ organization was set up despite it being outside the project intervention area after a request came from the villages to help them link with Aanchal because they had seen the milk collection activities in Baseri village.

All these efforts linked to the IP resulted in a reduction in transaction costs in the value chain.

Women empowered
Members of the IP are mostly women farmers. Through the discussions during IP meetings women are now able to express their views to other stakeholders. Their role has been expanded from household activities to social activities. The IP has also allowed women to become employed thanks to the new dairy collection centre in Basarbagarh village. Women can supplement their income by collecting milk from Basarbagarh and Chirangasheet villages and carrying it to the collection centre, earning INR 50-80/day.

Successes disseminated
The members of the IPs are sharing their best practices with others outside the intervention area of the program.

Farmers from neighbouring villages of Pagna, Khobra, Okhliisol and Raikholi of Bageshwar District have also started selling their milk to the cooperative (Jeganath), to improve their livelihoods.

In Sult, some other villages are now demanding to set up a dairy cooperative in their villages through this program.

Lessons learned
At mid-term, the MilkIT project in India has already made progress on its three objectives. The following main three lessons can already be highlighted:

- Feed improvement: Innovation platforms have enabled farmers to receive feed processing and handling technologies; farmers have discussed adaptations to these technologies to fit better their local context and shared these innovations with other farmers.
- Market linkages: Through the Aanchal cooperative and self-help group cooperatives, farmers have been encouraged to increase their milk production and marketing. This has led to new enterprises being developed in the communities and income increased for farmers and women.
- Institutional strengthening: After the initial prompting and facilitating by the project, farmers are now initiating meetings to continue innovating. This is a good sign for the sustainability of the activities past the end of the project.
The following interventions are still needed from the project to consolidate its early successes:

- Help innovation platform members set up new objectives for their groups to expand their activities and innovations further;
- Better include private sector stakeholders in the innovation platforms;
- Further work to sustain the activities of the innovation platforms after the program is over;
- Hand over facilitation to leading stakeholder that have emerged;
- Participatory evaluation of the institutional and feed level interventions or innovations to identify the key success interventions for scaling up to other areas and to disseminate the outputs to governmental organizations to influence policies.

Project partners include: IFAD, Dairy Development Board (DDB), Block Development Office, Animal Husbandry Department, Forestry Department, Krishi Vikas Kendra (VPKAS), Himmothan (Sri Ratan Tata Trust), BAIF (national NGO for breed improvement), GB Pant University of Agriculture and Technology.

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