Re-assessing the fodder problem

Maintaining the availability of adequate feed for livestock is crucial to smallholders who depend on their animals for their livelihood. Traditionally, efforts to improve the quality and availability of fodder have focused on technology, but the Fodder Innovation Project is revealing that strengthening interactions among the various actors involved books even better results.

Text Mona Dhamankar. Photo Foundation for Ecological Security

Fodder makes up 70 percent of livestock inputs and is crucial to the livelihood of poor livestock-keepers in most developing countries. However, several factors continue to threaten its supply. Most livestock-keepers depend on agricultural crop residues and grass provided by the grazing of common or fallow land supplemented by cultivated grasses. But most crops are rain-fed and can't be relied on. In addition, shifts in crop type and variety tend to reduce the availability of feed, as does encroachment from other land uses. Over-grazing often leads to the degradation of grazing ground, and to make matters worse, a consistent push to develop crossbred animals that are more productive but input-intensive, has accelerated the problem.

Shifts in perspective

The traditional solution to these challenges has always been to promote the cultivation of fodder that is nutritionally beneficial, thus increasing yields. Governments have supported this approach by stimulating the use of high-quality seed varieties and developing new technologies. While this might work for large-scale operators, small-scale and landless farmers don't have the resources to take these new technologies on board. Fortunately, the International Livestock Research Institute (ILRI) decided to look at the issue from their point of view and discovered that the problems related to fodder availability have just as much to do with access to knowledge as with access to appropriate technology. As a result, the UK Department for International Development (DFID) funded a project that was implemented in India and Nigeria. Under the banner title of the Fodder Innovation Project (FIP) its findings keenly illustrate this shift in understanding.

Field-based trials in India and Nigeria

The first phase of the project, which kicked off in 2003, identified new varieties of fodder and dual-purpose food/feed crops, passing on information to its partners (government research organisations and NGOs) with a view to increasing production. Each partner organisation implemented the project within some general parameters, but according to its own mandate and the context in which it worked. In both India and Nigeria it became apparent that issues related to seed production, supply and low survival of the plantations must be addressed before appropriate technologies could be employed. It also showed that while participatory research is useful, innovations need to be introduced in the institutional and policy arenas too. The effective development of technology demands concurrent investment in new local networks; programmes, processes and policies must all be open to innovation.

Photo: SAPPLP

Enabling effective innovation

The second phase of the project, which got underway in 2006, centred on how best to realise this call for innovation. Five partner organisations were identified through countrywide landscaping exercises in India and Nigeria and became the project's Key Partner Organisations*. They included governmental, semi-governmental and non-governmental organisations and were all running livestock-related programmes. To facilitate the process it was decided to select a context-specific innovation theme for each location. For example, one NGO in India, the Foundation for Ecological Security focussed on increasing the marketable surplus of milk on select routes, while a Nigerian NGO, the Justice, Development and Peace

Forests of fodder

In the Indian village of Wankute, in the area covered by one of the project's participating organisations, the Watershed Organization Trust (WOTR), the grass *Stylosanthes hamata* was identified as suitable for cultivation on communal lands as fodder. Representatives from WOTR, the Department of Forestry, Mahatma Phule Agriculture University, the village development committee and the Joint Forest Management Committee (JFM) divided up tasks that included providing the seed and passing on information on its features. The Forest Department worked alongside JFM to create a mechanism that would give farmers access to forest lands for fodder production. Landless farmers would have first access to the forages from the forest, followed by those who did not own enough land for fodder cultivation. It was exceptional for the Forest Department to take an interest in fodder issues and to allow farmers access to forest land for reseeding.

“Small-scale farmers don’t always have the resources to take new technologies on board”

Scaling up goat-rearing in Ikire

In the Ikire area of southern Nigeria, farmers kept goats mostly as a saving and/or insurance against crises. While rearing goats at a subsistence level, fodder was a non-issue. They were mostly being managed by women alongside their domestic chores who preferred to let them browse freely on available feeding resources, irrespective of the season. Traditionally goat farmers do not access markets directly – they depend upon middlemen (who work independently within pre-determined boundaries) who tend to be exploitative. In discussions with farmers, it was found that the farmers recognise the potential of goat rearing as a supplementary livelihood option, as a chance to make extra money during festivals. However, as the right network was not in place, they never took scaling up of the activity seriously. Continued discussions revealed that farmers who were keen to move from subsistence to more systematic rearing of goats (on a commercial scale) would require not only an assured, adequate and year-round supply of the right kind of fodder, but would also have to confine their animals, and build appropriate networks. In turn, each of these factors would require a combination of technology-related and institutional interventions to be carried out by relevant individuals and/or organisations.

Photo: SAPPLP

Commission looked at raising goat-rearing from its largely subsistence status to a semi-commercial level (see box on this page). What came out of these joint endeavours was that if interactions between the wide range of organisations that have knowledge relating to fodder and livestock were strengthened, this would lead to the institutional and policy changes necessary to improving the way information is created, distributed, shared and used.

Providing pauses for reflection

The networks that were put in place all included representatives from public, private and civil-society organisations, and the livestock-keepers themselves. Joint action plans had different entry point activities such as seeding forests with fodder strains (see box on previous page) and organising animal vaccination camps. Periodic reviews, followed by mentoring and reflection on the network processes by all members proved to be important components of the project. Studies were carried out to find out how best to link the research to the policy-makers and the organisations involved, and a Fodder Innovation Policy Working Group was created at national level in both countries to facilitate this. These Working Groups comprised senior government representatives from the departments of animal husbandry, dairy and rural development; heads of NGOs; managing directors of co-operative milk unions, and scientists from agriculture and fodder research organisations.

The way forward The FIP contends that building networks and putting institutional arrangements in place to enable innovation is a better way of addressing the fodder shortage problem along with the conventional technology transfer approach. A socio-economic baseline survey was conducted at the beginning of the project; the repeat survey to assess impact is yet to be carried out.

While it’s too early to say if the innovation approach goes far enough to solving the problem, the project has shown those involved how to build and nurture networking processes that benefit livestock-dependent farmers. It also showed that the constraint is not limited to the availability of fodder, but it has to be put into context with other issues at the level of crop-livestock value chains, like markets or access to services.

Learning laboratories As an action-research project, the Fodder Innovation Project was successful in setting up networks and turning

them into effective learning laboratories, but further improvements can still be made. Innovation platforms could be created around crop-livestock value chains and strategies put in place to ensure that innovations are pro-women and pro-poor. The lessons must be sustained and expanded before they have currency in policy debates, but the fact that an apex organisation like India's National Dairy Development Board agreed to host the Fodder Innovation Policy Working Group is encouraging. The shift in perspective from a technology-driven to an innovation-focused approach is well underway, but we need to gather more evidence before policy-makers take it on board wholeheartedly. ▮

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* The Justice Development and Peace Center (JDPC), Ibadan, Nigeria. Sasakawa Global 2000 (SG2000), Kano, Nigeria. Rajiv Gandhi College of Veterinary Sciences (Ragacovas), Puducherry, India. The Watershed Organisation Trust (WOTR), Ahmednagar, Maharashtra, India. The Foundation for Ecological Security (FES), Bhilwara, Rajasthan, India.

A more systematic rearing of goats requires a year-round supply of fodder. Photo: Jonathan Davies

The Fodder Innovation Project – the story so far

The innovation-focused approach of the Fodder Innovation Project led to some very interesting results. These are some of the outcomes:

- In India, village diary co-operatives that had gone out of business were revived when surplus milk became available. Some farmers collaborated with these co-operatives for fodder supply and payment recovery.
- New and unusual partnerships emerged in both India and Nigeria. In Ikire, Nigeria, representatives of the Goat Sellers Association gave tips on feeding and rearing to goat farmers. The Justice Development and Peace Commission collaborated with the Nigerian Veterinary Research Institute to provide training to local service-providers and vaccination services to goat farmers.
- Community-based organisations took the initiative of organising health camps in collaboration with the government to extend vaccination coverage.
- A demand emerged for research into improved goat breeds suitable for Southern Nigeria – an example of farmers helping to set research agenda.
- Closer and more efficient networks were set up in Rogo, Nigeria.
- In India, new fodder production initiatives emerged, bringing together governmental departments and academics.
- New responsibilities were shouldered at the level of policy-making, from organising trainings to liaising and co-ordinating on many fodder-related issues.
- India's Foundation for Ecological Security was so impressed with the project results that it extended the use of networking and the creation of multi-stakeholder platforms to all its other programmes.
- On learning of the project, India's Planning Commission invited a representative to take part in national livestock planning discussions.