TECHNICAL ADVISORY

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Enhancing livelihoods of poor livestock keepers through increased use of fodder in Syria

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A collaborative research initiative undertaken by:
the International Center for Agricultural Research in the Dry Areas (ICARDA),
the Extension Directorate and Animal Wealth Research Administration of the Syrian Ministry of Agriculture and Agrarian Reform (MAAR),
Aga Khan Rural Support Programme (AKRSP), and the
Teshreen University

Funded by the International Fund for Agricultural Development

Grant Number 853

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ABSTRACT

Introduction

Feed scarcity prevents small-scale sheep and goat keepers in Syria to take advantage of the growing market for livestock products to improve their livelihoods, build assets and get out of poverty. This is due to poor access to information, credit, appropriate technologies; lack of enabling policies and institutions; and weak extension system, input delivery services and fodder innovation capacity. An IFAD-funded project was implemented from 2007 to 2011 by ICARDA, community-based organizations (CBOs), and public and private sector partners to address the constraints.

The overall objective of the project was to enhance livelihoods of poor livestock keepers through increased use of fodder. Activities were implemented at three learning sites - El-Bab, (Aleppo province), Salamieh (Hama province) and Tal-Amri (Homs province). A network of partners led by ICARDA, including the Extension Directorate (ED) and Animal Wealth Resource Administration (AWRA) of the Syrian Ministry of Agriculture and Agrarian Reform (MAAR), Aga Khan Rural Support Programme (AKF), and farmers' groups run the activities at each site.

Innovation capacity of the networks was strengthened through training, and joint learning by cross-site visits and field days. Informal seed systems were promoted to increase quality forage seed supply and farmer-to-farmer seed exchange. Farmers, research and development partners were trained in fodder and forage seed production and management of small ruminants. Appropriate fodder/forage seed production and feeding packages for small-scale lamb fattening and milk production were disseminate to more than 500 households, resulting in increased household forage production, and outputs of milk and meat and incomes.

Conditions for uptake

Measures were taken to enhance uptake of some of the fodder/feeding options disseminated during the implementation of the project, including: empowering farmers through capacity building, promoting effective seed delivery systems, and site advisory committees who ensured that stakeholder concerns are incorporated into workplans. Attempts were also made to link producers to markets. Uptake of lamb fattening will depend on availability of low-cost or economic rations, since high feeding cost is the major constraint.

Also, enabling institutions and policies to ensure better access to credit and markets are essential.

Existing linkages with other IFAD initiatives:

The current IFAD 853 was linked with the following projects in Syria:

-North-Eastern Region Rural Development, Idleb Rural Development, and the Badia Rangeland Development.

Staff of the development projects participated in short-term courses on fodder and livestock production organized by the project. They were also invited to field days and annual workshops to facilitate joint learning and information exchange. A round-table discussion was held with directors of the development projects to agree on collaborative activities.

PROGRAMME IMPLEMENTATION

Beneficiaries and Outputs

Beneficiaries

Poor livestock farmers who keep sheep and goat for meat and milk, landless livestock keeper who will benefit from increased fodder supply, poor crop-livestock farmers who produce fodder/forage seed for their own use and/or for sale.

Main program components

Program interventions aimed to address constraints to fodder adoption identified through stakeholder consultations, namely: poor access to information, appropriate technologies; lack of enabling policies and institutions; and weak extension system, input delivery and innovation capacity.

The main components were: partner and learning site selections and creation of innovation platforms, dissemination of forage/forage seed production and feeding packages to reduce feeding cost for lamb fattening and dairying; strengthening fodder innovation capacity of partners, and empowering women.

El-Bab, Salameih and Tal-Amri were selected as pilot sites based on consultations and start-up workshops at the national, provincial, and community levels with farmers, CBOs, research and development partners, and decision-makers from relevant public and private sectors. Key members of the network were farmers, CBOs, staff of ED, ARWA, and ICARDA. AKF, the only NGO was active only at the Salamieh site. Local advisory committees were established to engage farmers, develop and implement work-plans, and monitor and evaluate activities. Fodder innovation platforms were set up at each site to promote dissemination of technologies.

Seed delivery systems were evaluated. On-farm demonstration to disseminate best practices for fodder/fodder seed production using cereals (barley, oat, and triticale) and legumes (common vetch, narbon vetch, and grasspea) for grain and straw production, and for spring grazing were implemented. Grasspea, common vetch, narbon vetch, and broken lentil and faba bean grains as protein supplements in rations for lamb fattening and milk production were compared.

Short-term training on fodder/forage seed and livestock production were organized for research and extension staff; while farmers were given hands-on training. Women were trained in milk processing.

Field days and cross-site visits were organized for farmers and decision-makers, research and development Staff to facilitate joint learning and knowledge sharing. Seven extension leaflets were developed and distributed to farmers. Results and lessons learnt from the project were disseminated through local news papers and television stations, workshops, and peer reviewed journals.

Participation of women was encouraged through women's field days, cross-site visits and training.

Impact

The project strengthened linkages, and built trust among staff ED, AWRA and AKF staff at Salameih. At El-Bab AWRA research staff became more active; a strong linkage was established between ED staff and farmers, and between farmers and traders. Staff of AWRA and ICARDA staff became active at Tal-Amri. In general, ICARDA assumed additional responsibility of coordinating stakeholder platforms. Women's groups were allowed to participate in project activities.

Innovative capacity was strengthened. Farmers acquired knowledge on fodder/livestock production through cross-site visits and field days. Farmer-to-farmer seed exchange is on the increase. More farmers are growing fodder to feed their animals as evidenced by the expanding area under fodder. Small-scale lamb fattening and dairy farmers are shifting from feeding barley grain and straw to feeding mixed and balanced rations as supplements.

Farmers in El-Bab reported 15-40% increased household fodder/fodder seed yields. Households are storing more fodder to sustain them during the winter and early spring period when they normally experienced shortage. At Tal-Amri and Salameih, farmers reported 20-40% increase in daily milk off-take per ewe from adoption of improved feeding packages. A range of 10-56% increase in net profit per lamb from improved feeding packages was reported.

Constraints faced during the implementation

The key constraint was lack of quality seed, for large-scale multi-locational on-farm demonstration, especially forage legume seeds.

Managing the delicate institutional and human relations among actors and institutions, to build effective innovation platforms was a big challenge.

Restrictions on mobility prevented women from the Tal-Amri to participate in field days and cross-site visits for joint-learning.

Other problems were ensuring provincial balance in the implementation of activities, and recruiting supporting staff with good background with forage and livestock research.

Sustainability, Acceptability and Accessibility

Consultations with potential partners in the public and private sectors, coupled with the star-up workshops at the national, provincial and community levels ensured sustainability and acceptability. Also, involving decision makers such as the directors of ED, AKF and AWRA; and site Advisory Committees which engaged with farmers and community-based organizations from the start of the project ensured sustainability and acceptability.

Presenting farmers with a 'basket-of-options' allowed them to select options that fit their social conditions and resources. This facilitated adoption and ensured sustainability. Disseminating improved varieties of adapted forages known to farmers was important for acceptability and sustained use of technologies. Farmers who produced feeds were linked with seed and feed traders.

Gender dimension

Women were encouraged to participate in the implementation of the project activities. Gender balance was ensured in training and capacity building activities. Training on milk processing was organized for women in collaboration with AKF at Salameih which was attended by women from El-Bab and Barkum villages. A Women's Field Day was organized at El-Bab which was attended by women from Salameih. The training and field days allowed cross-site visit allowed joint learning and knowledge exchange among women. Women research and extension staff participated in all the short-term training courses.

Women-headed households were encouraged to part-take in on-farm demonstrations of best practices for fodder production and lamb fattening.

To overcome restrictions of women's mobility, and to encourage them to participate, the project arranged transport and other logistics for male relatives. A female extension staff was assigned to coordinate all women related activities.

Outputs

Fodder innovation networks of different actors were established at El-Bab, Salameih and Tal-Amri. Their innovation capacity was strengthened through training and information exchange.

Linkages between ED, AKF, ICARDA and AWRA was strengthened. Capacity of about 200 research and extension staff and 1000 farmers including women for fodder/livestock production was improved. Seven extension leaflets were developed, and 1000 copies of each distributed to farmers. High-yielding barley, oats, triticale vetch and grasspea seed were distributed to about 500 households. Relevant database to provide adoption guidlines for forage/livestock production was established.

Dissemination pathways

Outputs and outcomes form the project were published in local news papers, and shown on local television. Cross-site visits were organized for farmers and relevant actors to learn from each other. Field days were organized to show new technologies. Results and experiences were shared during presentations at local and international workshops; and publication in peer reviewed journals.

Further research needs

-Quality of seeds from village-based seed systems.

--Feed/fodder markets assessment.

-Adoption and impact assessment.

-Policy and institutional options to reduce feed scarcity.

-Economic rations from on-farm feed resources.

-Forage systems to reduce early spring feed gap.

USEFUL INFORMATION

Useful links

ED Syria, Extension Directorate
AWRA Syria, Animal Wealth Research Administration
AKF Syria, Aga Khan Rural Support Program

Year of publication

2011

References

1. Larbi A, Hassan S, Ghufran K (2009) Feed legumes for dryland agriculture: Hay yield, quality and farmer preferences. Joint Annual Meeting of Soil Science Society of America, American Society of Agronomy, and Crop Science Society of America, Pittsburgh, Philadelphia,, 1-5, November 2009.
2. Larbi A, Hassan S, El-Omar K, Rihawi S, Jammal B, Hammadi R, Al-Hammadi H, Al-Saleh R A, Al-Eliwe M H, Abdullah M (2010) On-farm comparison of cereal and cereal-legume pastures for spring grazing in north west Syria. Paper presented at *The 50th Science Week International Conference on 'Agricultural productivity increases: Challenges and means of development' Ministry of Agriculture and Agrarian Reform, Al-Furat University, Del-Azzor, pp. 85-86.*

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Acknowledgements

IFAD
All project partners
Beneficiaries

Acronyms

AKF Aga Khan Rural Support Programme
ARWA Animal Wealth Research Administration
CBO community-based organization
ICARDA International Center for Agricultural Research in Dry Areas
IFAD International Fund for Agricultural Development

ANNEX

Project Brief: Enhancing livelihoods of poor livestock keepers through increasing use of fodder

Background

Livestock are an important pathway out of poverty for the rural poor. Worldwide, 50% of the world's poor own livestock and depend on them for their livelihoods. Livestock are living assets contributing to food security and are an important source of protein and minerals for nutritional security.

There is increasing demand for livestock products worldwide in the form of meat, milk and milk products such as cheese and butter. This presents poor livestock producers with significant opportunities to increase benefits from their livestock and raise income through livestock markets. Access to fodder and water are often identified as major constraints to livestock productivity. This inability to feed livestock adequately remains one of the most widespread global constraints in the livestock sector. Removing it would assist smallholder livestock producers to improve their livelihoods by taking advantage of market opportunities and building assets.

Past efforts to enhance smallholder livestock production have shown little evidence of widespread adoption of new technological innovations such as new fodder options or new ways of feeding livestock. This has been attributed to a range of factors including poor approaches to introducing technologies, inappropriate technologies and services relative to the needs of the poor, low sustainability of the changes introduced, inadequate local livestock-support organizations and weak linkages to markets. Recent experiences in Nigeria and India focusing on fodder issues have highlighted the importance of understanding and developing partnerships and processes and working in what is known as an "innovation systems framework" to achieve sustainable improvements in poverty reduction. In effect this involves focusing on putting knowledge to achieve desired social/economic outcomes. Such knowledge is held by different "actors" within the system; looking at how these actors interact, their working practices and the policy environment in which they operate can help to remove bottlenecks to development. Recent experiences in Southeast Asia with developing forage technologies with active participation of poor farmers and local extension services have shown that this approach results in high adoption rates at project sites and surrounding areas.

Furthermore, studies by International Agricultural Research Centres (IARCs) and their partners show that when fodder options are linked to markets for meat and milk and when they have direct effects on income generation, fodder options to support livestock production are competitive with other farm enterprises in terms of returns to land and labour. These successful experiences in fodder uptake and significant accumulation of knowledge on preferences for fodder plants, seed systems, fodder management and integration of fodder into feeding systems provide the technical platform for this project.

Project Goals

The current project seeks to engage with a wide range of stakeholders to strengthen the capacity of poor livestock keepers to:

- select and adopt fodder options
- access market opportunities to enable them to improve their livelihoods.

The project seeks to achieve these goals in ways that will ensure the sustainability of their farming systems. The programme is framed around four overall outputs and associated activities. The project seeks to establish:

- Mechanisms for strengthening and/or establishing consortia of players in the livestock/fodder arena to allow small-scale innovations to spread across systems.
- Options for getting research off the shelf and into practice including innovative communication strategies and strategies for making changes at farm level to sustainably improve fodder supply.

- Enhanced capacity of project partners to experiment with and use fodder technologies through effective communication, improved access to technical information and training and a better understanding of the role of diverse players and their interactions in successful fodder development.
- Generic lessons with wide applicability on innovation processes and systems, communication strategies and partnerships that provide a suitable environment for fodder innovations to spread across systems.

Geographical focus

The project is implemented in Ethiopia, Syria and Vietnam:

- Ethiopia. The project has activities in four pilot learning sites. We are working with the Improving Productivity and Market Success of Ethiopian Farmers (IPMS) project (a Canadian-funded Ethiopian Ministry of Agriculture and Rural Development project, implemented under ILRI's leadership in collaboration with national organizations and other CGIAR centres) in Atsbi, Alamata, Mieso and Ada'a.
- Syria: The project is being implemented at El-Bab, Salameih and Tel-Amri in Aleppo, Hama and Homs provinces respectively. It builds upon previous forage introduction by ICARDA and the Syrian Ministry of Agriculture and Agrarian Reform in El-Bab, and ICARDA and Aga Khan Development Foundation in Salameih.
- Vietnam. The project is working at two learning sites. These are located in Ea Kar district, Daklak and in Ky Anh district, Ha Tinh. In Daklak, the project builds on previous introduction of forages by CIAT and Tay Nguyen University. In Ha Tinh, the project works within the project area of IFAD Loan Project 'Programme for improving market participation of the poor (IMPP)' using the lessons on fodder innovations generated at the Daklak learning site.

Project partners in the implementation of the programme

The International Livestock Research Institute (ILRI) is the implementing agent on behalf of the System-wide Livestock Programme. SLP provide strategic guidance and provide links with a sister project on Fodder Innovations funded by the UK Department for International Development. The programme is funded by the International Fund for Agricultural Development (IFAD). ILRI coordinates the project in the three countries, and leads activities on the ground in Ethiopia in collaboration with the IPMS project which has an ongoing programme of fodder development research. In Syria activities are led by the International Centre for Agricultural Research in the Dry Areas (ICARDA) with co-operation from the Syrian Ministry of Agriculture and Agrarian Reform and the Aga Khan Foundation. In Vietnam activities are led by the International Centre for Tropical Agriculture (CIAT) with co-operation from the Vietnam National Institute of Animal Science, Tay Nguyen University, district and provincial Departments of Rural Development at the pilot learning sites and the IFAD IMPP project.

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