FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

FEED THE FUTURE INNOVATION LAB FOR LIVESTOCK SYSTEMS
EQUIP—STRENGTHENING SMALLHOLDER LIVESTOCK SYSTEMS FOR THE FUTURE
Component 2 of Feed subproject

Increasing Yield, Quality and Preservation of Fodder with Location-Specific Improved Forages for Different Agroecologies

Research locations:
- Ethiopia
- Burkina Faso

Implementing Partners:
- Ethiopia Institute of Agricultural Research (EIAR)
- Institute for the Environment and Agricultural Research (INERA), Burkina Faso
- University of Florida

Duration: 2017-2022

Donor: Bill & Melinda Gates Foundation

Limited quality and quantity of feed are major constraints to the livestock sector in developing countries. Introduction of high yielding and improved forage plants has been a commonly applied strategy for alleviating the feed problem. In Ethiopia, despite decades of research and development interventions, the adoption of improved forages has been very low because of complex biophysical and socioeconomic constraints.

In Burkina Faso, migration in search of grazing land, rather than forage production, has been the traditional response to feed shortages. In both countries, subsistence-oriented farming systems have severely limited the attraction of forage crops. This project, therefore, intends to generate and provide compelling evidence about how the use of cultivated forages can improve livestock productivity.

Research Objectives and Activities

- Evaluation of productivity and quality of forages in particular agroecologies and farming systems, to determine the extent to which they can increase animal productivity and farm income
- On-farm livestock feeding trials with selected best bet forage species to demonstrate their potential for increasing livestock productivity and thus encourage their adoption by smallholder farmers
- Examination of the most effective and profitable strategies to improve the preservation and quality of forages and crop residues for dry season feeding

To achieve these objectives, a series of on-station and on-farm evaluations of selected/improved forage species will be undertaken. Seeds of best-bet cultivated forages will be produced on station and the forages will be tested in on-farm experiments. Small ruminant fattening using preserved forages will be undertaken to observe the impact of preserved forage types on body weight gain of small ruminants and milk yield of dairy cows and farmers' willingness to pay for preserved forages.

Anticipated Results and Deliverables

- Assessment and validation of the productivity, nutritional quality, profitability, potential to improve livestock productivity and the socio-cultural acceptability of best-bet cultivated forages
- Strategies for improving forage seed production and productivity
- Factors that impact seed yield, quality, and potential for commercialization, to generate knowledge for productive, resilient, and market-oriented in-country seed systems

Contacts: Dr. Mulubrhan Balehegn, mu.gebremikael@ufl.edu; Dr. Nouhoun Zampaligre, nounhoun@gmail.com; Dr. Muluneh Minta, mulumenta@gmail.com

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