

SLP Residues

Optimizing livelihood and environmental benefits from crop residues in smallholder crop-livestock systems in sub-Saharan Africa and South Asia



Background

Integrating crop with livestock production is one of the most promising ways to ensure food security on smallholder mixed farms. When livestock is integrated with crop production, it benefits the whole farm, improving its longer term sustainability and profitability. Farmers urgently need crops for both food and feed, but few previous research efforts have considered both requirements together.

Project goal

The aim of this project is to better understand the patterns and determinants of crop residue use in cereal based systems through four regional case studies in Africa and South Asia. The further goal is to identify technical, institutional and policy options to improve livelihoods without compromising long term system sustainability.

Teams in South Asia and Africa are tackling three main research questions:

- What determines the decisions about crop residue use (current crop management, agro-ecology, markets/institutions, resource endowments and dynamics)?
- What is the impact of those decisions on livelihood and system sustainability?
- What are the technology, institutional and policy options that would enhance livelihood and environmental benefits?

Key activities

In the first phase (2010-2011), the project collected data through village and household level surveys. In 2012, farmer feedback workshops and stakeholder workshops were organized to validate initial research outputs and to identify the major challenges and potential solution approaches.

Anticipated results

Project results are expected to:

- Improve system overall productivity through intensifying crop-livestock interactions.
- Improve and sustain the production of food-feed crops through better management of soil nutrients and water.
- Encourage research outputs that can be transferred across regions.
- Identify policy and institutional measures which support food-feed crop production and related natural resource management innovations.
- Build partners' capacity to scale out research results for widespread impact.

Implementation strategies and partnerships

This project is funded by the CGIAR Systemwide Livestock Programme (SLP). The case study on millet, sorghum and maize based systems in West Africa is led by the International Institute of Tropical Agriculture, the study on maize- and teff-based systems in Eastern Africa is led by ILRI, while maize- and sorghum-based systems in Southern Africa are led by the International Crops Research Institute for the Semi-Arid Tropics. The case study on wheat/rice/maize-based systems in South Asia is led by the International Maize and Wheat Improvement Center with considerable contributions by ILRI.



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