

Postharvest feed handling and utilization innovation

Melkamu Bezabih, Aberra Adie, Kindu Mekonnen and Peter Thorne
International Livestock Research Institute (ILRI), Ethiopia

Introduction

Postharvest feed losses and poor utilization practices contribute to feed scarcity and poor livestock nutrition in the smallholder system. Simple and affordable technologies and skills can considerably minimize wastage of feeds during storage and optimize utilization of available feed resources.

Method/Approaches

- Training and awareness creation on feed conservation practices.
- Construction and demonstration of improved feed troughs and feed sheds.
- Training on feed formulation to optimize quality and efficiency.
- Data collection on the benefits of introduced technologies against traditional practices.
- Field days and exchange visits.
- Capacity building of local stakeholders to provide service for their communities.

Results/Achievements

- Feed wastage considerably reduced (>30%) due to the use of improved feed troughs and storage sheds (Figure 1).
- Quality deterioration of straw, stover and hay during storage avoided due to improved feed sheds.
- Minimal fungal contamination on stored feeds ensured reduced health risk on farmers who handle feeds and feeding.
- Labor demand for feeding reduced (up to 20%) due to feed troughs.
- Positive effect on women and youth due to reduced demand for labor.
- Analysis indicated the cost incurred on feed troughs can be recovered within 6 months while that of feed sheds with 2-3 years (Figure 2).
- The technologies enabled farmers to mix different feed ingredients on feed troughs and feed a better quality diet.
- Improved feed troughs contributed to an efficient cut-and-carry feeding system with cultivated forages and other collected feeds.
- Interest created among development partners to scale the technologies.
- A total of 147 feed troughs scaled in 2017 and 2018 through development partnerships.

Acknowledgement

We thank farmers, site coordinators and local partners in Africa RISING sites and ILRI for their contributions to this research. We also thank USAID for its financial support through the Feed the Future Initiative.

Key challenges and lessons

- The modest level of investment at household level and the skills required to construct are challenges for wider adoption of the technologies.
- Use of locally available materials and modifying the prototypes to suit individual farmers will be important for scaling.



Figure 1. Improved two sided feed trough for cattle (left) and feed shed demonstration

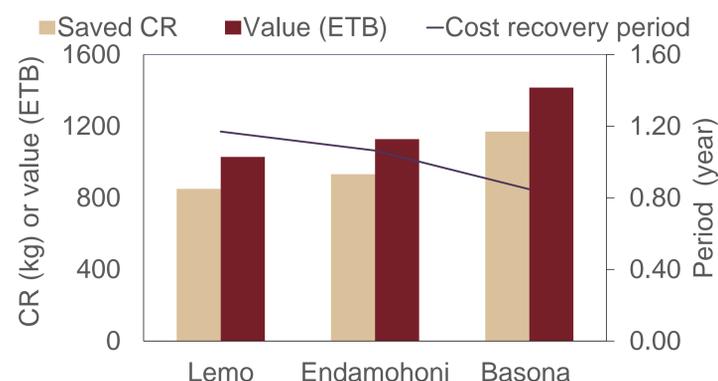


Figure 2. Quantity and value of crop residue (CR) saved due to improved feeding trough per year per average household.

Plan for 2019

- Train key resource persons in scaling woredas to facilitate and support the construction of improved feed troughs and sheds.
- Work with TAAT project and others partners to mobilize resources for scaling.
- In-depth analysis of positive effects/gains on the different SI domains.