



Tropentag, September 16-18, 2015, Berlin, Germany

“Management of land use systems for enhanced food security:
conflicts, controversies and resolutions”

Farmers Innovations in Livestock Production Systems in Pernambuco, Brazil

RAPHAELA MARYA GERONIMA DA COSTA VON GEHLEN, CHRISTOPH REIBER, ANNE VALLE
ZÁRATE

University of Hohenheim, Inst. of Animal Production in the Tropics and Subtropics, Germany

Abstract

The Northeast of Brazil is considered the poorest region of the country. The semi-arid Itaparica region in Pernambuco is characterised by irregular precipitations and a long dry season with frequent droughts that lead to crop and livestock losses and livelihood insecurity. Farmer innovations have the potential to promote local development and to improve farm productivity. The objectives of this study were to assess innovations adopted by livestock farmers of the Itaparica region - to reveal their constraints, benefits and potential for further adoption as well as reasons for non-adoption. Semi-structured interviews were applied to 33 innovators and non-adopters in the region - selected based on their active participation in farmer groups. The following farmer innovations were selected: breeding strategies, cultivation of forages, hay and silage production, use of manure and fertirrigation (application of fertiliser into an irrigation system), pasture rotation and alternative methods to control worms. Results indicated that adopters observed mainly benefits such as the improvement of soil fertility due to manure use, increase of feed availability due to forage cultivation and conservation, enhancement of animal health due to use of plant remedies and higher financial returns due to genetic improvement of the herd. Constraints observed by adopters were high implementation costs of fertirrigation, silage production and genetic improvement, as well as risk of crop losses due to drought and high spoilage losses with silage. Non-adopters were limited to adopt the innovations mainly by the lack of knowledge and land, water shortage, poor financial conditions, and by their farm management systems. The use of raw manure for soil improvement, cultivation of forages, alternative methods to control worms and pasture rotation were considered to have the highest potential for further adoption due to their perceived low complexities, low risks, comparative advantages and replicability at small scale. Fertirrigation, breeding strategies and hay and silage making were found suitable for farmers of semi-intensive production systems. Future adoption is dependent on farmers' motivation and perception of usefulness, efficient extension services, and on resources availability. Effective participatory methods and approaches are recommended to increase awareness, demonstrate benefits and promote learning about promising innovations.

Keywords: Innovation, Itaparica region, livestock production, Pernambuco