Farmers Innovations in Livestock Production Systems
in Pernambuco, Brazil

Study Program Agricultural Economics at the
University of Hohenheim

Institute of Animal Production in the Tropics and
Subtropics (480)

Written by: Raphaela Marya Gerônima Santos da Costa
Matriculation number: 566324
Supervisor: Dr. Christoph Reiber
1\textsuperscript{st} examiner: Prof. Dr. Anne Valle Zárate
2\textsuperscript{nd} examiner: Prof. Dr. sc. agr. Reiner Doluschitz
Deadline: November 3, 2014
8 Summary

The Northeast of Brazil is considered the poorest region of the country. The semi-arid of the Itaparica region in Pernambuco is characterized by irregular precipitations that lead to drought, crop and livestock losses and livelihood insecurity. Farmer innovations have the potential to promote local development, to improve farm productivity and food security. Based on that, the objectives of this study were to assess the promising innovations adopted by the livestock farmers of the Itaparica region, as well as to reveal their constraints, benefits, and potential to be further adopted. The study was carried out with semi-structured interviews, using qualitative and quantitative questions, which were analysed with the content analysis method. Five case studies involving innovations were selected: two were farmers who adopted innovative practices and three were livestock farmer groups. The selected innovative practices were: breeding strategies, cultivation of forages, hay and silage production, use of manure in the soil and in the fertirrigation system, pasture rotation and alternative methods to control worms. Members of the three farmer groups were interviewed to evaluate the potential of the selected farmer innovations. Results indicated that adopters observed mainly positive effects from the use of the innovations on livestock production and on farm management strategies. Among them were the improvement of soil fertility, feed reserve and increase of feed availability, animal’s improvement of health and body condition, and increase of financial returns. However, the 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. Promising innovations considered of higher potential to be wider adopted were the cultivation of forages, hay and silage production, distribution of raw manure in the soil, pasture rotation and alternative methods to control worms. However, their effectiveness and future adoption is dependent on farmer’s motivations, efficient extension services, and on resources availability. Effective participatory on farm experimentation methods to promote the promising innovations are recommended, as well as the provision of means to increase farm and livestock productivity, and labor effectiveness. These recommendations could help to overcome some of farmer’s challenges, to reduce non-adopters risk-averseness to try new methods, and to improve their adaption to changing of market and environmental circumstances.