Feeding the soil AND feeding the cow – Conservation Agriculture in Kenya

Hycenth T.Ndah1,5, Götz Uckert2, Sara Kaweesa2, Lorenz Probst3, Peter Kuria3, Saidi Mkomwa3, Paulo Rodrigues4, Joana Sousa4, Gottlieb Basch4, Johannes Schuler2

Problem
The implementation of Conservation Agriculture (CA) in Sub-Saharan Africa is still lagging:

- Main obstacle: the priority given to using crop residues as livestock feed rather than mulching material.
- In this way the CA approach will not reach its full potential - particularly in countries with a limited biomass production due to climatic conditions.

Specific objectives
- To identify pathways for enabling an implementation of CA that is not in conflict with other goals of farmers’ livelihoods, esp. livestock farming
- To analyze socio-economic factors that determine the adoption of combined CA-livestock systems

Methods
A transformative learning approach with farmers and other stakeholders in Laikipia County (Kenya):

Conclusions
- Importance of an enabling environment provided by government programs which support long-term extension efforts combined with farmers’ willingness to jointly learn towards a more sustainable agriculture.
- On farms where both systems (CA and conventional) are practiced, women play an important role by experimenting with CA practices, thereby realizing promising results in terms of yield and drought resilience.
- Furthermore, our findings underline the need for a long-term monitoring of innovation processes which is often not possible within short-term research projects and promotion programs.

Results
- Challenges to CA adoption:
  - competition for fodder,
  - a lack of financial resources to get started with CA,
- There are knowledge gaps on:
  - proper application of CA equipment,
  - the fodder production and conservation options and, sustainable crop-livestock production systems.
- Farmers feel partly disconnected from existing governmental support.
- Solutions which enable feeding the soil “and” feeding the cow:
  - Some farmers have started to grow forages in order to reduce dependence on crop residues as a feeding source which had not been promoted during past extension projects.

Outlook
- Further research on trade-offs between CA and livestock is needed.
- To develop forage and livestock systems that fit into CA systems.
- To improve knowledge sharing at all levels from training of extension officers to training of farmers.

Project partners and affiliations:
1 ZALF, Leibniz Centre for Agricultural Landscape Research, Institute of Socioeconomics, Eberswalder Strasse 84, D-15374 Halle/Saale, Germany
2 BOKU-University of Natural Resources and Life Sciences, Centre for Development Research, Vienna, Austria
3 African Conservation Tillage Network (ACT), Kenya
4 Universidade de Évora, Instituto de Ciências Agrárias e Ambientais Mediterrânicas (UE/ICAAM), Évora, Portugal
5 University of Hohenheim, Institute of Social Sciences in Agriculture, Department of Rural Sociology, Stuttgart, Germany