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Soil health training in a project in Mozambique: a participative approach to education and outreach

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Tete province in Central Mozambique: the semi-arid district of Marara is prone to droughts and other shocks, for which the region's smallholder farmers are poorly prepared. Global climate phenomena like El Nino exacerbate the challenges. Information is chronically scarce, extension services are underequipped and lack support strategies. The region's predominant farming system integrates extensive goat and cattle farming with crop farming. As irrigation technologies are largely unavailable or prohibitive, most farmers have to rely on fain-fed agriculture. Input supply, e.g. of seeds, is far from assured.

In this challenging environment, our project seeks to increase the resilience and the profitability of existing crop-livestock systems by building farmers' capacities, and strengthening their networks with other actors to work towards more market-oriented agricultural production.

To achieve these goals, we work not only as a team of scientists and farmers, but also with partners from government, private sector and development organizations in an 'open' innovation platform (IP) approach. In this multi-stakeholder process, farmers identify challenges and opportunities together with extension services, researchers and other actors, e.g. representatives of the provincial government, and jointly develop strategies for desirable change in the local agricultural system.

In the present IP, one of the strategies was to build capacities for conversion to healthier farms. Increasing soil fertility and optimizing nutrient cycling were defined as central features of farm and soil health. We organized and implemented a Soil Health Training (SHT) in cooperation with the research institute of the Mozambican Ministry of Agriculture. True to the principles of the open IP, the SHT was open not only to the farmers, but also to local partners in the provincial government, extension services, and NGOs.

The training in Mozambique was preceded by a pre-planning phase in Austria/Zimbabwe to compile the most essential activities, to determine needed equipment and to fix the field stay's length. On site, we first collected the maximum information together with farmers on soil types, current practices, challenges in management, and farmers' interests (exploration phase). Next, we fine-tuned training contents to match local needs and chose fields to visit during the training. We implemented two rounds of SHT, and followed up with participants in a half-day feedback workshop. In parallel, we shot video interviews with farmers on soil health challenges of their field(s) and their mitigation strategies (during exploration). These will be processed into outreach farmer-to-farmer videos. During the training, we documented selected chapters of the theoretical part, field visits and participants' discussions on video to illustrate the making of our SHT. This video will be disseminated to promote innovative, participative ways of research and outreach

The field trip ended with an internal feedback session among project partners to plan (i) the production of tangible outputs ("case cards" for frequent or typical soil challenges in the region, videos), and (ii) joint further activities (more systematic soil analysis of the region, investigation into the farmers' traditional, crop suitability-based soil classification system and matching with genesis-based scientific classification, . . .). We now entered the post-field phase to finalize the products.