SUSADICA doctoral programme researchers testing data collection instruments in Central Asia

13 September 2019 - During summer 2019, researchers of the SUSADICA doctoral programme conducted visits to various exemplary field sites in Central Asia to collect insights on complexities of farmers' production and resource management decisions.

Each year, the PhD students of the structured doctoral programme on Sustainable agricultural development in Central Asia (SUSADICA) spend six months at the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIIAME) and partner organizations in Central Asia to contribute to academic life in the host organization, attend module courses offered to PhD students in Uzbekistan, and organize their empirical work in selected field sites. In July and August 2019 under institutional support from the TIIAME, IAMO researchers Suray Charyyeva, Zafar Kurbanov, Abdusame Tadjiev, Dr. Golib Sanaev and Dr. Nodir Djanibekov made field visits to several sites in irrigated areas of Kazakhstan and Uzbekistan to test and adapt experimental and qualitative data collection instruments through face-to-face interviews and focus group discussions with farmers and representatives from local administration. These in-field discussions provided preliminary insights to the issues encompassing farm and non-farm employment choices, income diversification strategies, as well as farmers' decisions to adopt new technologies such as drip irrigation, conservation agriculture, and cotton harvesters. The discussions with farmers in South Kazakhstan showed that cotton-growing farmers engage in additional off-farm activities such as managing rural shops, restaurants, hotels and kindergarten. Furthermore, through the initiatives towards crop diversification in irrigated areas, the Kazakh farmers pointed that their exports of high value crops to neighboring markets have been expanding. Yet, labor shortage in those areas was mentioned among the major constraints to successful diversification and expansion of agricultural production.

Compared to Kazakhstan, the state intervention in the decision-making of cotton and wheat farmers in Uzbekistan was indicated as the major barrier for diversifying production and income sources. An allocation of substantial agricultural land to cotton and wheat under the state procurement system, as discussed also in IAMO's Policy Brief 36, limits wider use of soil improving crop rotations. In addition to farmers' financial constraint, the land tenure insecurity disincentivizes investments into land and new technologies. Among the interviewed farmers, the freedom to choose crops and the security of land tenure were indicated as decisive conditions for continuing farm business. According to the interviews, income and rural employment increased in districts where agricultural production was diversified away from cotton.

Another contrasting observation in visited sites of Uzbekistan and Kazakhstan was the level of mechanization of cotton harvesting. The interviewed Kazakh farmers believed that the availability of cotton harvesters is essential for successful cotton farming. In fact, farmers and rural entrepreneurs in South Kazakhstan own a substantial share of harvesters which they also rent out to other cotton growers as a successful business model. Acknowledging the shortages of rural labor during the harvest period, Kazakh farmers expressed interest in purchasing additional cotton-harvesting machines. The discussions with farmers in Uzbekistan showed an opposite story. The majority of farmers were not ready to privately own cotton combines. In Uzbekistan, where a small share of cotton harvest is mechanized, state and parastatal Machine Tractor Parks (MTP) supply cotton combine services to farmers. Another contrast to Kazakh cotton growers is that the interviewed farmers in Uzbekistan expressed concerns about the poor quality of cotton picked by MTP-owned harvesters.

These preliminary observations made during the exploratory field trips will be further studied in a detailed way using different methodologies. The farmers' contrasting responses, however, encourage a comparative investigation of social, economic, behavioral and institutional determinants of their decisions

on resource management, technology adoption, production and income diversification. After new insights and feedback from farmers, the PhD researchers will work with their supervisors in Germany on the finalization of the data collection instruments before the field research starts in 2020.

SUSADICA doctoral programme

Agricultural development in Central Asia requires a systemic approach that accounts for the various implications of agriculture resource use for economic, social, and environmental sustainability. To provide an academic environment that links cutting edge research to graduate education at international standards, IAMO cooperates with Justus Liebig University Gießen, and the Martin Luther University Halle-Wittenberg in the establishment of the structured doctoral programme on Sustainable agricultural development in Central Asia (SUSADICA). The consortium of German partner organizations aims at creating a challenging and collaborative PhD research environment to be managed jointly with the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIIAME) and international partners. The programme should serve as a model for higher standards of doctoral education, international networking and academic output for other agricultural universities throughout Central Asia.

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