CRP: Dryland Systems (DS)

Center: ICARDA

Flagship: South Asia

Action site: Chakwal (Pakistan)

Activity title: Identification, demonstration and validation of promising technologies and diversification options for enhanced productivity & livelihood security.

Sub activity: Introduction of Cactus (*Opuntia ficus-indica*) as a multi-purpose crop under intensive production system

Activity leader: Mounir Louhaichi

Key national partner: NARC

Objective: Increase resilience and improve use of marginal lands of agropastoral production systems while enhancing capacity development of farmers and extension agents through training, field days, etc.

Target audience: Agro pastoralists

Farmer Field Day on Cactus at Latifal

Farmer's day at CRP-DS 1.1 site of Latifal, District, Chakwal, Pakistan was organized on Friday, 29th May, 2015. Dr. Sarfraz Ahmad, Project Director of Research for Agricultural Development Program (RADP), Government of Pakistan was the chief guest. More than 70 farmers/ herders including female farmers, representatives of Agriculture Department, Livestock Department and Extension Agents were present at the occasion. Mr. Hassnain Shah Agriculture economist

from Social Sciences Research Institute, NARC was also participated in farmer days for the assessment and feedback on technology validation.

Fig 1: Scientists of ICARDA and NARC are sharing their experience of cactus as a crop in Pakistan.

Dr. Imtiaz Ahmad Qamar, Director, Rangeland Research Institute, NARC highlighted the importance of cactus as fruit, animal feed, to control water erosion and carbon sequestration. He gave a detailed outline of the activities being carried out by ICARDA and exhorted the farmers to participate actively in the planting and, planation of spineless cactus on their land. Our initial Resrach in Pakistan has proven the adoptability of cactus as a crop and animal feed in Chakwal region. ICARDA's increasing efforts in CRP-DS 1.1 to promote spineless cactus has convinced the farmers to grow spineless cactus for rehabilitation of their rangelands and produce feed for animal in winter months. It is too early to explain cactus benefits but my rangeland colleagues and I believe that cactus has great potential as a crop in the dry areas of Chakwal

Fig 2: Participation of Latifall women in the field day for cactus in Chakwal, Pakistan

Furthermore, Dr. Muhammad Islam explained that the cactus adopters worldwide have typically been large-scale commercial farmers who seek enhanced and sustainable profits and, as a consequence, there must be ways to cut its production costs. So how can their positive experience could be applied on smallholders and be used for proper targeting and extension of cactus plantation in Pakistan? In this regard, future research with farmers should explore opportunities to ensure that cactus come across smallholder farmers' needs. In conclusion, I believe that the introduction of new crop in some area as usual is not an option but it must become the demand from the farmer side to alleviate labor bottlenecks, improve the crop and livestock productivity, control erosion and improve water- and nutrient-use efficiency. Still in introduction of cactus, challenges exist, but research – and FAO/ICARDA worldwide experience in particular – should not simply document challenges but also provide us the solutions.

The chief guest Dr Sarfraz Ahmad conveyed the message of the Chairman PARC and assured his full support to the farmers and asked the farmers to get full advantage from ICARDA research initiatives in the dry area of Chakwal for the improvement of their food security and livelihood.

Fig 3: Demonstration of cactus as animal feed in Chakwal, Pakistan

Later on scientists and farmers had a round of spineless cactus planation on the farmer's field. The farmers showed great enthusiasm to see the field and took keen interest in cactus plantation. Lastly, Dr. Abdul Razzaq conducted an experiment of feeding spineless cactus to small ruminants. They were astonished to see goats eating spineless cactus with a great taste and the farmers again demanded cactus pads to plant on their field.

Authors/Collaborators:

Dr. Mounir Louhaichi. Senior Rangeland Scientist at the International Center of Agricultural Research in the Dry Areas in Amman, Jordan. M.Louhaichi@cgiar.org

Dr. Islam Muhammad. Small Ruminant Production Scientist. International Center for Agricultural Research in Dry Areas in Islamabad, Pakistan. mu.islam@cgiar.org

Dr Imtiaz Qamar. NARC. Director Rangeland Research Institute at the National Agricultural Research Centre (NARC), Islamabad, Pakistan. iaqamar@hotmail.com

Dr. Kathryn Clifton is a Post-Doctoral Fellow in Landscape Ecology at the International Center of Agricultural Research in the Dry Areas in Amman, Jordan. K.Clifton@cgiar.org