

ICARDA is seeking solutions to climate change adaptation in Central Asia. With erratic rainfalls and low agricultural productivity, Central Asian countries are highly vulnerable to the impacts of climate change. Disappearing glaciers, the shrinkage of Aral Sea, frequent droughts and severe dust storms are causing a serious threat to food and nutrition security of a 70-million people region, half of which reside in rural areas.

Despite the efforts of each country to adapt to climate change through adoption of resource-saving technologies and agricultural reforms over the past decades, climate change impacts have reached one of the highest vulnerability levels in all key development sectors in the region.

The strengthening of regional cooperation and partnership on climate change mitigation can be key in addressing the issues of environmental protection. This was the consensus of the experts, policymakers, and representatives of development organizations attending a high-level conference on climate change in Tashkent on 3-4 April 2019.

Organized by the Regional Environmental Center for Central Asia (CAREC) with support from the World Bank, the event attracted more than 400 delegates from 80 countries who discussed the effective ways of fostering regional dialogue, and knowledge and information exchange on climate change to help build a climate-resilient future.

The conference consisted of five plenary sessions on global climate policy and national commitments, climate change impacts and adaptation in global and regional context, climate services, climate technologies and practices as well as climate finance.

During the climate technologies and practices session, Dr. Ram Sharma, Regional Coordinator of ICARDA for Central Asia and the Caucasus, presented the collaborative work of ICARDA on climate-resilient technologies for improved land and water productivity in Central Asia.

According to Dr. Sharma, seven stripe rust epidemics have occurred in the region since 2009, causing a 30 percent yield reduction in Tajikistan and Uzbekistan. With national partners, ICARDA has developed climate resilient winter wheat varieties like Gozgon, Bunyodkor, Chimboy and Amudarya, with high resistance to yellow rust and drought.

Dr. Mesut Keser, ICARDA Country Manager in Turkey, presented ICARDA activities within the International Winter Wheat Improvement Program (IWWIP) on the development of new wheat varieties tolerant to biotic and abiotic stresses to improve food security under the changing climate in Central Asia. As part of joint program between the Government of Turkey, Ministry of Food, Agriculture and Livestock, International Maize and Wheat Improvement Center (CIMMYT) and ICARDA, IWWIP develops winter wheat germplasm for more than 45 countries. Up to date, it has released 22 winter wheat varieties for Central Asian countries.

Speaking of the climatic challenges for rain-fed crop production in Central Asia, Shukhrat Amanov, Research Assistant of ICARDA for crop improvement, stressed the benefits of legumes for low-input-low-yield conditions. Climate-resilient winter chickpea varieties, developed from ICARDA germplasm including, Malhotra, Khalima, Obod and Sino, have shown up to 50% higher yields and cold resistance to minus 15 degrees Celsius in rain-fed areas.

The cultivation of chickpea as a rotation crop improves soil fertility, by leaving up to 130 kg of nitrogen per hectare. Moreover, according to social survey conducted in frame of comparative study of chickpea production among farmers of rain-fed zones in southern Uzbekistan, the farmers saved USD 5 to 22 per hectare on the cost of nitrogen fertilizers by growing chickpea.

On the sidelines of the conference, ICARDA team co-hosted a side event on knowledge platforms and communication on climate change to discuss ways of information sharing between different

stakeholders in climate research and planning. The discussions included the needs for mobilizing scattered knowledge sources and reaching all users.

Since 1998, the Regional Program for Sustainable Agricultural Development in Central Asia and Caucasus led by ICARDA has been working with the national research systems to develop and promote new crop varieties resilient to drought, extreme heat, pests, and diseases, water-saving technologies and sustainable management of natural resources practices, helping rural communities thrive.

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