India-Myanmar pigeon pea project gets a research boost

Pre-breeding scientists at International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) are exploring possible solutions to increase nutritional value in agriculture produce, sourced from wild species of cajanus.

A project funded by Global Crop Diversity Trust (GCDT), would evaluate promising pre-breeding lines in India and Myanmar, bringing them one step closer to cultivation, according to a release here on Thursday. “It’s critical to bring in beneficial traits that are not present in domesticated pigeon pea, and the pre-breeding work at ICRISAT holds great promise,” says Benjamin Kilian, plant genetic resources scientist from GCDT.

Nutrition security

“Our goal of increasing the livelihood and nutrition security of smallholder farmers moves forward, and pre-breeding has hastened the process of giving better crop varieties to farmers,” says Peter Carberry, director general of ICRISAT.

It has taken several years of research for scientists to evaluate wild pigeon pea species and identify those with promise of resistance/tolerance to biotic and abiotic stresses, including sterility mosaic disease, Fusarium wilt, pod borer and salinity. “Pigeon pea has a narrow genetic base. The varieties currently grown by farmers have little resilience to recurrent or new diseases and insect-pests,” says Shivali Sharma, principal investigator and theme leader (pre-breeding), ICRISAT. “We find that some wild species have adapted to several of these stresses. Leveraging these traits for cultivation can benefit livelihoods and increase the nutritional value in the crop.”

“This project will develop new material as well as take the available material to farmers, so that they can produce more and generate better income with the new climate-resilient pigeon pea varieties,” said Rajeev K. Varshney, research programme director (genetic gains) at ICRISAT.

Field-level activities in multiple agro-ecologies and socio-economic settings would be carried out by ICRISAT in collaboration with national and international partners – Professor Jayashankar Telangana State Agricultural University; Regional Agricultural Research Station, Palem; Regional Agricultural Research Station, Warangal; Acharya NG Ranga Agricultural University; Regional Agricultural Research Station, Tirupati; and Department of Agricultural Research (DAR), Yezin, Myanmar. Read more..