CIMMYT NEWS

CIMMYT Maize hybrids ranked first and third in nation-wide trials in India

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Farmers and seed company personnel observing RCRMH-2 in an on-farm demonstration during the spring season in Gulbarga district of Karnataka, India. Photo: UAS, Raichur.

RAICHUR, India (CIMMYT) — Two hybrids from the International Maize and Wheat Improvement Center (CIMMYT) developed under the Heat Tolerant Maize for Asia (HTMA) project were ranked first and third among over 100 hybrids during the 2015 All-India Coordinated Maize Program (AICMP) trials. The trials took place during the summer-rainy season (commonly known as the "*Kharif*" season) – the

major maize growing season in South Asia – which covered about 70 percent of South Asia's total maize area.

AICMP, managed by the Institute of Maize Research in New Delhi, is one of the largest maize variety testing networks in South Asia. New maize hybrids from both the public and private sector are evaluated in over 30 locations across India's different ecologies.

The two hybrids RCRMH-1 and RCRMH-2 – were submitted by the University of Agriculture Sciences (UAS), Raichur, one of the key partners with CIMMYT in developing heat tolerant maize varieties in the region. The hybrids showed good performance by performing well across agro-ecologies, including stressed and un-stressed locations, competing well against both public and private sector varieties tested in the AICMP trials.

Harvest of RCRMH-2 in drought-stressed summer-rainy season at Ludhiana, India (photo by - CIMMYT)

CIMMYT seeks to develop maize varieties that are tolerant to a range of stresses that South Asia experiences. For example, heat resilience is necessary in a region which experiences temperatures of over 40^{0}C in the spring season, right when the crop needs to reproduce. The summer-rainy season in South Asia brings monsoon rains. However, in drought years (such as year 2015) the temperature may rise close to 40^{0}C, and therefore maize crops face combined drought and heat stress. The selection strategy used by HTMA focuses on developing broad temperature resilience rather than tolerance to heat stress by exposing the hybrids across temperature regimes during selection process, which explains the success of the two hybrids in the AICMP trials. The performance of

CIMMYT hybrids in these trials clearly indicate that the hybrids have wider adaptation to many stresses including areas with no stresses.

These two hybrids are among the first 18 hybrids licensed to CIMMYT partners for deployment and scale-out in stress-prone ecologies of South Asia.

University of Agricultural Sciences (UAS), Raichur, India is one of the collaborators in CIMMYT's Heat Tolerant Maize for Asia (HTMA) project. Funded by the United States Agency for International Development (USAID) under the Feed the Future (FTF) initiative HTMA is a public-private alliance that targets resource-poor maize farming communities in South Asia who face weather extremes and climate change effects.