



CLIMA Media Release

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INDIAN PEAS HELP DROUGHT EASE

Drought prone areas of WA's grainbelt could benefit from crossing of drought tolerant Indian chickpea varieties with Ascochyta resistant Australian varieties.

Indian and Australian scientists recently met in Kanpur, India to debrief on the Australian Centre for International Agriculture Research (ACIAR) project, 'Traits for yield improvement of chickpea in drought-prone environments of India and Australia'.

Centre for Legumes In Mediterranean Agriculture (CLIMA) Director, Professor Kadambot Siddique and Adjunct Professor Neil Turner of CSIRO joined research colleagues at the meeting to review the project's outcomes.

According to CSIRO-based CLIMA researcher, Jens Berger, who also attended the meeting, chickpea varieties grown in India are widely adapted and bred for short growing seasons similar to Australia.

"In India we demonstrated the dynamic role phenology plays in adaptation. Genotypes specifically adapted to the north can delay flowering at later flowering sites or higher latitudes and consequently increase yield potential under the relatively un-stressful conditions," Dr Berger said.

"In contrast, in stressful southern and central regions, adapted chickpeas can avoid drought damage and maintain acceptable yields by early flowering, podding and maturity.

"In Australia we demonstrated that early phenology and high harvest index is a productive strategy under most conditions and essential for chickpea productivity under terminal drought."

Drought resistant germplasm suited to WA's low rainfall areas, such as Merredin, were discovered by the research partners.

"The highest-ranking species under critical drought conditions and all conditions in WA trials was ICCV 10, while BG 362 and DZ 1011 also trialled successfully in dry conditions at Merredin," Dr Berger said.

CLIMA has recommended ICCV 10 to Australian chickpea breeders, who are now using it as a parent in crossing programs to produce widely adapted Ascochyta resistant chickpea varieties.

Caption: Indian and Australian scientists attending the final chickpea project meeting at Kanpur, India.

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