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Message

Rainfed agriculture is practiced in diverse agro-ecologies in India. It contributes to about 40% of country's food basket and economy. Rainfed areas also support 60% of livestock and 40% of human population. Rainfed agroecosystem is challenged by climate change/variability, droughts, excess rainfall events, unabated land degradation, poor soil quality, low productivity, changing cropping pattern and a plethora of socioeconomic constraints. In rainfed agroecosystems, where species and communities must contend with severe temperatures and droughts, climate change, which is anticipated to manifest as increased frequency and intensity of extreme climate events, including droughts, is especially concerning. Growing population, water scarcity, poor soils further threaten drylands. The major challenge in rainfed agroecosystems is to sustain the livelihoods of majority of the small and marginal farmers.

Despite many biophysical and socioeconomic challenges, rainfed agriculture continues to play a very significant role in country's food grain production. The challenge lies in matching the agricultural land use and cropping patterns as per the resource endowments in rainfed agroecosystems to achieve sustainability, climate resilience and profitability. In the last 50 years, the All India Coordinated Research Project for Dryland Agriculture (AICRPDA) with its network centres located in diverse rainfed agro-ecologies and CRIDA system developed many agroecology-specific rainfed technologies in the thematic areas of rainwater/nutrient/cropping systems management, alternate land use/agroforestry systems and farm mechanization. Many of these technologies have been integrated into Package of Practices and district/state/national programmes. The information on these technologies is focused in this special issue of Indian Farming for further upscaling.

This special issue of Indian Farming is brought out on the occasion of International Conference on Reimagining Rainfed Agro-ecosystems: Challenges and Opportunities being organized by the ICAR-Central Research Institute for Dryland Agriculture (CRIDA) during 22–24, December, 2022 and importantly, to commemorate completion of 50 Years of All India Coordinated Research Project for Dryland Agriculture. On behalf of CRIDA, we hope the information in this issue would be of immense use to all the primary and secondary stakeholders, researchers and students. I thank and compliment the editors and authors for their valuable contribution.

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