Evaluation of farmers' contentment with climate resilient agricultural technologies in Telangana, India

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National Innovations on Climate Resilient Agriculture (NICRA) is a flagship project of the Indian Council of Agricultural Research (ICAR) to mitigate climate change in vulnerable districts of India. The present study assessed farmers' satisfaction with climate-resilient agricultural technologies following their adoption in two vulnerable districts of Telangana, India, identified under the NICRA project. Results showed that most farmers in the Suryapet and Khammam (62.67% and 90.00%) districts of Telangana state expressed high satisfaction with these technologies. Additionally, a significant proportion had a highly favourable perception of the technology promoters (71.33% and 82.00%), high perceived expectations (52.67% and 74.00%), high perceived quality (58.00% and 86.00%), and a high perceived value (68.00% and 84.00%) associated with climate-resilient agricultural technologies. Importantly, the vast majority of the farmers in both districts expressed their intent to use these technologies when the need arises. Path analysis revealed that variables like perceived image, perceived expectation, perceived quality and perceived value had a significant direct impact on satisfaction, while there was no indirect effect on behavioural intention.

Keywords: Climate change, NICRA, path analysis, resilience, technologies.

husbandry, as well as a rise in greenhouse gas emissions have a detrimental impact on agriculture[5–7]. One of the greatest challenges of the 21st century is the continued threat that climate change poses to the world's food security systems[8]. The global population will have to deal with the effects of climate change because it is commonly acknowledged that the potential to slow down the rate of change by keeping temperature increases under the 2°C threshold is now restricted[9]. Global food security, agricultural production, and rural lives have all been severely hampered by climate change[10]. Farmers are at risk from various climate change-related factors, including the potential destruction of crops by drought, floods and new pest and disease outbreaks[11]. As a result, weather fluctuation affects yields, which affects welfare[12–14]. Climate change has brought about significant consequences, such as diminishing the diversity and abundance of natural ecosystems, causing soil erosion, and increased flooding. The fluctuating rainfall patterns have adversely impacted land preparation and food production, decreasing agricultural yields[15]. In response to these difficulties, the agricultural research community and farmers have created various agricultural methods that may increase the adaptability of farming systems to climate change[16]. The main responses to climate aberration are mitigation and adaptation. Hulme[17] defined mitigation as measures taken to prevent, reduce or slow