

Exploring technology adoption and production constraints in maize cultivation in Guntur district of Andhra Pradesh

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ABSTRACT

This study was conducted by the Extension Department of Regional Agricultural Research Station, Lam, Guntur, during 2023-2024, aimed to assess the adoption of recommended maize production technologies and identify key challenges faced by farmers. Using a multistage sampling design, 100 maize farmers from five mandals with the highest maize cultivation areas were selected. Data were collected through personal interviews and analysed by using frequency distributions and percentages. The study assessed the extent of adoption of various recommended practices, including soil types, sowing methods, seed treatment, weed management, water management, fertilizer management, pest and disease management, and harvesting. The results revealed that farmers fully adhered to recommended practices for recommended soils, sowing methods, spacing, water management, and harvesting. High adoption rates were also observed for sowing time (89%) and disease management (81%). However, significant non-adherence was noted in fertilizer management (88%), pest control (67%), and weed management (67%), where most farmers deviated from the recommended practices. Key reasons for non-adoption included misconceptions about fertilizer requirements, inadequate awareness of proper seed treatment, reliance on stubble burning for weed control, and the high cost of potassium fertilizers. Additionally, insufficient labour and knowledge of pest management techniques contributed to deviations from recommended practices. Major constraints faced by farmers included the incidence of pink stem borer (83%) and Fall Armyworm (71%), rising input costs, and price fluctuations. These findings highlight the need for targeted interventions to promote better awareness, adoption of integrated nutrient and pest management practices, and policy support to stabilize input costs and crop prices. Addressing these issues could improve the sustainability and profitability of maize cultivation in the region.

KeyWords: *Maize adoption, Production constraints and Reasons for non adoption.*