

Technical Efficiency of Mechanised Rice Production in West Godavari district of Andhra Pradesh

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ABSTRACT

Technical efficiency of mechanised rice production in West Godavari district of Andhra Pradesh was estimated using stochastic frontier production function. The primary data was collected and the respondents are proportionally divided in to 63 fully mechanised rice producers and 59 partially mechanised rice producers and make final sample size 122 respondents. The data pertains to the agricultural year 2017. Stochastic frontier production was used to estimate the technical efficiency of fully and partially mechanised rice farms. The output, human labour, machinery power, seed, manures, fertilizers and plant protection chemicals were taken in energy terms for estimating the technical efficiency. The results revealed that in fully mechanised farms, the elasticities of technical efficiency for machine power energy and fertiliser energy showed positive and significant effect on energy output. The mean technical efficiency was 92.30 per cent suggesting that the farmer's energy output can be increased by 7.7 per cent through improved resource allocation. In partially mechanised farms, the elasticities of technical efficiency for machine power energy showed positive and significant effect on energy output. The mean technical efficiency index was 80.25 per cent suggesting that the farmer's energy output can be increased by 19.75 per cent through improved resource allocation.

Keywords: *Fully mechanised, Partially mechanised, Rice farms, Stochastic frontier production function, Technical efficiency .*