

Research Article

## Technical efficiency of hybrid maize production in eastern terai of Nepal: A stochastic frontier approach

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Received: August 05; Accepted: November 25; Published: December 09.

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### ABSTRACT

Maize is the second most important crop after rice in terms of area and production in Nepal. This article analyzes the technical efficiency and its determinants of hybrid maize production in eastern Nepal. Using a randomly selected data from 98 farmers (41 from Morang and 57 from Sunsari) in eastern Nepal, the study employed a stochastic frontier production model to find the production elasticity coefficients of inputs, determinants of efficiency and technical efficiency of hybrid maize farmers. The results showed that maize production responds positively to increase in amount of urea, DAP and the area planted, where as it is negative to seed quantity. The study indicate that farmers are not technically efficient with a mean technical efficiency 79 %. Socioeconomic variable age had a negative and significant while the household size had a positive and significant related to maize output. The younger farmers were observed more technically efficient than older farmers. Larger the members in the household higher the maize production. It is recommended that farmers should increase their fertilizer dose and farm size while they should decrease their seed rate for efficient production.

**Keywords:** efficiency, hybrid, stochastic, maize

**Correct citation:** Adhikari, S. P., Timsina, K. P., Brown, P. R., Ghimire, Y. N., & Lamichhane, J.(2018). Technical efficiency of hybrid maize production in eastern terai of Nepal: A stochastic frontier approach. *Journal of Agriculture and Natural Resources*, 1(1), 189-196.

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