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Impact of Grassland Transfer on Technical Efficiency of Livestock Production in Northern China

by Xiaolong Feng, Wanglin Ma, Mingyue Liu, and Huanguang Qiu

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Impact of grassland transfer on technical efficiency of livestock production in Northern China

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Abstract

This paper estimates the impact of grassland transfer on the technical efficiency of livestock production, using the cross-sectional data collected from herders in Northern China. The propensity score matching approach and selectivity-corrected stochastic production function are employed to address the selection bias issues. The empirical results show that, on average, the technical efficiency score of herders with grassland transfer is significantly higher than that of herders without grassland transfer, which are 0.57 and 0.41, respectively, after addressing both observed and unobserved selection biases. The livestock revenue is positively and significantly affected by forage grass use, machinery use, sheep size, family and hired labours use, and veterinary investment. Our findings highlight the importance of facilitating grassland transfer to increase livestock production efficiency and boost farm performance.

Keywords: Grassland transfer; Technical efficiency; Selection bias; Herders; China

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