

Impact of Modern Rice Varieties on Farmer's Household Income and Food Self-Sufficiency in Nepal

-A case study of Chitwan district-

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Rice area in Nepal is 1.55 million ha with an average productivity 2.5t/ha, which is much less as compared to potential yield of the newly developed modern varieties (MOAC, 2005). For the past few decades, the slow growth in production of food grains has gradually eroded food security. High population growth rate and low productivity are the main reasons for food deficit in the country. Existing domestic food grains production is insufficient to feed the growing population. Therefore, increase in rice production, is an important issue in Nepal as it is the staple food and the major source of income of the country.

In order to increase the productivity, modern rice varieties (MV) have been expected to be a powerful method to improve the national food self-sufficiency level. More than 40 MV have been released in Nepal during the past 30 years together with the related production technologies. However, limited spread of MV and their low productivity continue to remain as major constraints to increasing the rice production. Newly released MV and its production technologies could not be transferred to all the farmers. Most of the rice farmers are still continuing their traditional rice varieties (TV) and old farming methods which has impeded the improvement of rice production. Nepal has not yet embraced green revolution technologies, related to irrigation, appropriate use of chemical fertilizers, pesticides and extension service. Lack of farmer's education and training knowledge know-how is another important aspect for adoption of MV. Considering these facts, the purpose of the research is to examine the impact of MV on farmers' household income and therefore food security in Nepal. This research is based on a household survey of 200 rice farmers through a case study in the Chitwan District.

Survey results clearly showed that the impact of MV especially 'Rampur Mansuli, Radha-12 and Khumal' played a significant role in boosting rice production which consequently increases farmers' household income and food self-sufficiency level in Nepal. The results conclude that MV can be developed under consideration of irrigation facilities, extension service and Farmers Field School (FFS) program with appropriate chemical fertilizer use. Therefore, this study recommends that in order to augment agriculture production and income maximization among farmers, MV should be expanded and strengthened into eastern and western remote area where most of the households annually experienced food deficit from their own production, by improving the production conditions mentioned here.