

Energy use pattern of rice production in western agro-climatic zone of Haryana

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■ **ABSTRACT** : Paddy covers approximately 40-45 per cent of the total area covered by cereal crops in India. Rice production needs to be augmented to meet the growing demand. Rice crop cultivated under watery condition either by storing canal water or pumping water or both, by utilizing a lot of electric/diesel energy especially when pumping is carried out. The amount of rice production is a direct function of energy inputs and outputs. The aim of this study was to examine the operation-wise and source-wise energy consumption pattern in rice crop production in western agro-climatic zone of Haryana. The data were collected through a questionnaire by face to face interviews. The amount of energy consumed in seedlings, land development, land preparation, transplanting, irrigation, weeding, fertilizer, harvesting and threshing and transportation were calculated for rice crop cultivation. The energy inputs in seed, human, diesel, electricity, machinery and fertilizer were taken into consideration to determine the source wise energy that was used in rice production. The average energy input of small farmers (SF), marginal farmers (MF) and large farmers (LF) was observed to be 28,238.83, 28,419.00 and 32,051.57 MJ/ha, respectively while output energy was 1,17,475, 1,22,915 and 1,24,900 MJ/ha respectively. Specific energy of large, medium and small category framers were 7.12, 6.48, and 6.44 MJ/ha, respectively. The result revealed that fertilizer, irrigation and electricity consumed the bulk of energy. The result also showed that energy ratio, energy productivity and net energy gain of all category farmers were lie between 3.89 to 4.26, 6.64 to 7.12 kg/MJ and 89236.17 to 94073.10 MJ/ha, respectively. Yield rice grain of large, medium and small category framers were 4500, 4450 and 4250 kg/ha, respectively.

■ **KEY WORDS** : Rice, Energy input, Energy output, Specific energy

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