Climate Sensitivity on Rainfed Agriculture In Central India: Threats and Opportunities

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Based on both primary and secondary data, this paper has assessed the impact of drought on the productivity of principal crops in rainfed situation along with the farmers' perceptions and the factors influencing adoption of the coping mechanism to mitigate impact of climate change in central India. The study has revealed that climate sensitivity of the rainfed agriculture has magnified, weakening the agricultural productivity over time. The rainfed farmers have been found adopting several coping mechanisms, viz. shifting cropping pattern, mix/intercropping, drought-tolerant crops, technological mitigation, integrated farming system, etc. Experience, farm income, education, and farm-size have been found the significant factors influencing adoption of coping mechanisms for the impact of climate change. The level of farmers' perception on the impact of climate change was good and they reported reduction in yield and farm income due to erractic rainfall and crop failure. The study has suggested efficient management of natural resources in the rainfed areas to overcome the effect of climate change. Also, the meteorological department must disseminate information about weather well in advance so that farmers may adopt suitable coping mechanisms to climate change impact on crop yield.

Key words: Climate change, impact, rainfed agriculture, coping mechanisms, Madhya Pradesh

Impact of National Food Security Mission (NFSM) on Adoption of Farm Mechanization in Madhya Pradesh

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The impact of National Food Security Mission (NFSM) has been studied on the use of farm mechanization in cultivation of wheat in Madhya Pradesh through a primary survey of 300 farmers — 150 each from the districts of Harda (highest production) am Balaghat (lowest production) — with data collection for the agricultural year 2013-14. The study has revealed that major sources of information about NFSM for the beneficiaries were Agriculture Department, TV/radio, farmers/friends and newspapers. The study has shown a positive impact of NFSM on wheat cultivation under study. In the NFSM, government provides subsidy for purchase of farm equipments to increase productivity of crop. An individual household receives 32 per cent (seed drill) to 87.5 per cent (Knap Sack Sprayers) subsidy in NFSM. The impact of their farm equipment has been found to be positive as on average household shared ₹ 500 (cono weeder) to ₹ 6955 (seed drill) per year as imputed value of their farm equipment. The area covered per household by these equipments was found to be maximum in case of rotavator. The use of farm-equipment has provided beneifts like saving of water, good plant growth, reduction in cost of cultivation, control of weeds, timely operations and solving the problem of labour shortage. All the NFSM households have reported that cono weeder is useful in case of labour shortage.

Key words: NFSM, wheat, farm mechanization, Madhya Pradesh