Benefits & Challenges of Micro Irrigation under Pradhan Mantri Krishi Sinchayee Yojana - Per Drop More Crop in Madhya Pradesh

Hari Om Sharma

Director Agro-Economics Research Center for Madhya Pradesh & Chhattisgarh, Department of Agricultural Economics & Farm Management, JNKVV, Jabalpur, Madhya Pradesh
hosharma_jnkvv@rediffmail.com

The Ministry of Agriculture and Farmers Welfare, Government of India, has launched the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) to address India's key agricultural challenges in the 21st century i.e., to reduce poverty and ensure food security for the growing population in the face of climate change, scarce and limited water and land resources. This initiative proposes to provide irrigation to every farm in the country (*Har Khet Ko Pani*) and improve water use efficiency (Per Drop More Crop and Income). The Per Drop More Crop (PDMC) component of PMKSY mainly focuses on water use efficiency at farm level through Precision/Micro Irrigation (MI-Drip and Sprinkler Irrigation). In Madhya Pradesh area under micro irrigated under PMKSY was found to be 0.19 m ha with 0.14 m ha and 0.05 m ha under drip and sprinkler irrigated, respectively during the year 2015-20. Madhya Pradesh occupied 5.19 per cent area under micro irrigation, out of which 7.24 and 2.76 per cent area was found to be under drip and sprinkler, respectively in the Country. Looking to its tremendous importance of water for irrigation the present study has been formulated to analyze benefits receive by the farmers and identify challenges in adoption of PDMC technology in farmers' field. The study was purely based on primary data, which were collected from the adopter and non-adopter farmers of micro irrigation in the State. The primary data were collected from the sample respondents in agricultural year 2019-20. The study comprises of 120 farmers (96 adopters and 24 non-adopters) of Dhar (drip) and Sagar (sprinkler) districts of Madhya Pradesh. The study reveals that an average adopter was found to

invested Rs. 178645.83 and Rs. 31932.56 in installment of Drip and Sprinkler Micro irrigation system respectively with Rs. 6877.44 on annual maintenance in his farm for crop production. The majority of farmers reported that the yield of all the crops (soybean, cotton, chilli, ginger, wheat, chick pea other kharif crops, other rabi crop, perennial crop including lemon) was found to be increased after adoption of MI technology. They also reported that the production of all major crops was found to be increased by 33.91 per cent. After adoption of MI facilities, the beneficiaries start adopted improved variety of seeds, superior of plant protection chemicals, micro nutrients with fertigation etc. with more focus and intensive surveillance with higher interest in producing quality products. Further, assured irrigation during crop growth period encouraged adopter to invest in superior quality of input in cultivation of crops without hesitation. The majority of adopter of MI technology reported that lack of fencing, micro irrigation structure damaged by animal, land fragmentation, difficulties in obtaining government subsidy and support, poor marketing arrangement, poor quality of Micro irrigation equipment, high cost of well/ tube well, lack of government support, high need/cost of maintenance in Micro irrigation, lack of credit facilities and poor after sale services were major challenges in adoption of MI technology. Therefore, overall impact of PMKSY-PDMC is found to be positive in case of water conservation, yield, better quality of product, output prices, output market and less risk/uncertainty which able to change overall environment of the village. Hence, efforts should be made to promote MI in all the districts of the State with proper awareness of programme. Efforts should also be made to lower down the price of MI equipment's in order to reduce the subsidy in a gradual manner for the horizontal expansion of the technology on large scale, provision/ support for farm fencing, easier process for getting subsidy/Govt. assistance for latest and improved MI technology/ equipment's and better training for MI for the farmers is required for effectiveness of programme as majority of the beneficiaries strongly agreed to expand the use of MI in future course of action.