THESIS

ASSESSMENT OF WATER PRODUCTIVITY OF WHEAT IN DHARABI WATERSHED UNDER DIFFERENT IRRIGATION PRACTICES

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ABSTRACT

The study was conducted to compare the water productivity under improved and conventional irrigation under farmer practices for wheat crop. For this purpose rabi drill raingun irrigation was compared with raised bed irrigation and rabi drill flat irrigation. In order to study comparative effects of different sowing and irrigation techniques on wheat productivity, three plots of equal size (40m x 40m) under each irrigation treatment sown by the farmer were selected for the purpose of data collection during 2010-11 wheat sowing season at the farm.

The results revealed that 51.2 % and 33.5 % water is saved by rabi drill raingun and furrow bed irrigation respectively as compared to rabi drill flat irrigation. The crop yield of rabi drill raingun irrigation was 6.12% higher than rabi drill flat irrigation and the yield of furrow bed irrigation was 4.42% higher than the rabi drill flat irrigation. The water productivity of rabi drill raingun irrigation was 45.55% higher than rabi drill flat irrigation and the water productivity of furrow bed irrigation was 26.66% higher than rabi drill flat irrigation. Results indicated that rabi drill raingun irrigation has a lot of potential to increase water productivity of wheat crop in the rainfed areas.