

M-PHILL THESIS

IMPACT OF REMODELING OF OUTLETS ON INCOME OF LOWER  
REPARIAN OF 3-R DISTRIBUTARY



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By

WAQAR-UR-REHMAN

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## ABSTRACT

The Purpose of this study was to quantify canal water distribution and its impact on income of the farmers in selected watercourses of subsystem 6 of 3-R distributary before and after the remodeling of outlets in district Bahwalnagar. The subsystem 6 was divided into 3 reaches i.e. the head, middle and tail reaches, and three watercourses were selected in each reach. For each watercourse, 3 farmers were interviewed each at head, middle and tail ends..

The result showed that the water supply to the tail-end farmers was less than those at head and middle of the watercourses. The tail end farmers had to spend more money to pump groundwater and the net income of the farmers decreased with increase in distance from the outlets before and after remodeling of the outlets. The water supply to head, middle and tail end of subsystem 6 was less and the net income of farmers decreased along the subsystem 6 after the newly designed outlets. The net income of head, middle and tail reach farmers along the watercourses decreased 20 to 25 percent and yield of wheat reduced approximately 30-40% after remodeling of the outlets.

The electrical conductivity of groundwater was higher at tail of subsystem 6 i.e 1.85 dS/m. Normally the groundwater is fit for irrigation at the head of the watercourses but the salt contents increased along the lower reaches of the tertiary channels. The worst groundwater quality was observed at the tail of the subsystem 6.

From the results of this study, it was concluded that inequity of distribution of canal water at subsystem 6 is same as before installing the newly designed outlets and this inequity of canal water distribution has great impacts on income of the farmers.