

## Paper 3: Preliminary Findings of IMT Impact Assessment Study

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### FARMERS' SURVEY

To capture the farmers' perspectives and perceptions regarding management transfer, surveys were held in two recently transferred branches of the Nepal West Gandak Irrigation System (NWGIS) and in four tube wells in Bhairahwa Lumbini Groundwater Project (BLGP). Table 3.1 shows the details of the selected samples where farmers' surveys were conducted.

**Table 3.1 Details of Farmers' Surveys**

	Name	System	IMT	Sample	Status
1	Palhi Minor	NWGIS	Yes	75	Complete
2	Manjharua Minor	NWGIS	Yes	90	50 %
3	TW 13	BLGWP	Yes	50	Complete
4	TW 48	BLGWP	Yes	50	80 %
5	TW 5	BLGWP	No	50	Complete
6	TW 58	BLGWP	No	50	80 %

In total some 365 beneficiaries were interviewed. The objectives of the survey were:

- to analyze the changes in the cost of irrigation to farmers, and
- to assess farmers' perception of management transfer concerning aspects like: operation, maintenance, conflict management and functioning of the WUA.

The survey work has been completed but the data processing is still ongoing. One tube well has been transferred whereas the other is yet to be transferred. Comparative inferences were drawn on Parsawal tube well (No. 5) without IMT and Paschim Pahuni (No. 13) with IMT.

In the study attempts were made to assess changes in the following regards:

- Cost of irrigation to farmers

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- Farmers' perception of IMT concerning aspects like: operation, maintenance, conflict management and functioning of WUA
- Changes in agricultural production

## PRELIMINARY RESULTS

Some preliminary results based on surveys held in the area where two tube wells are located are presented below.

1. *In the area with the transferred tube well, farmers are paying considerably more for their irrigation water than that in the non-transferred tube well area* (See Table 3.2). This is because the government stopped paying for the pump maintenance and operator salary after transfer, so the farmers evidently see the benefit in paying for these services.

**Table 3.2 Costs to Farmers**

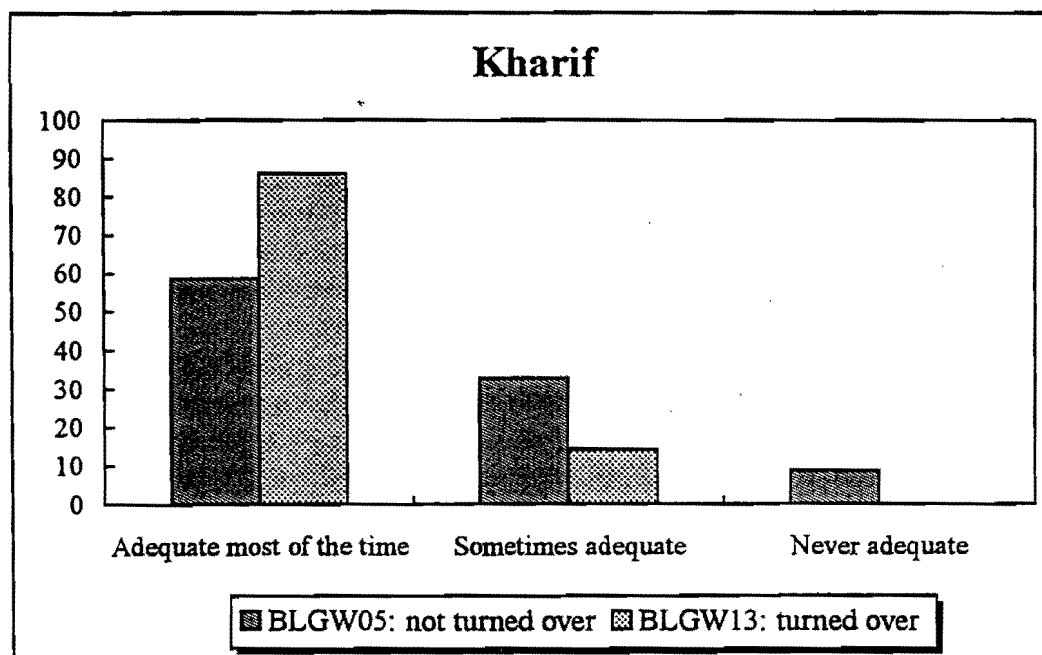
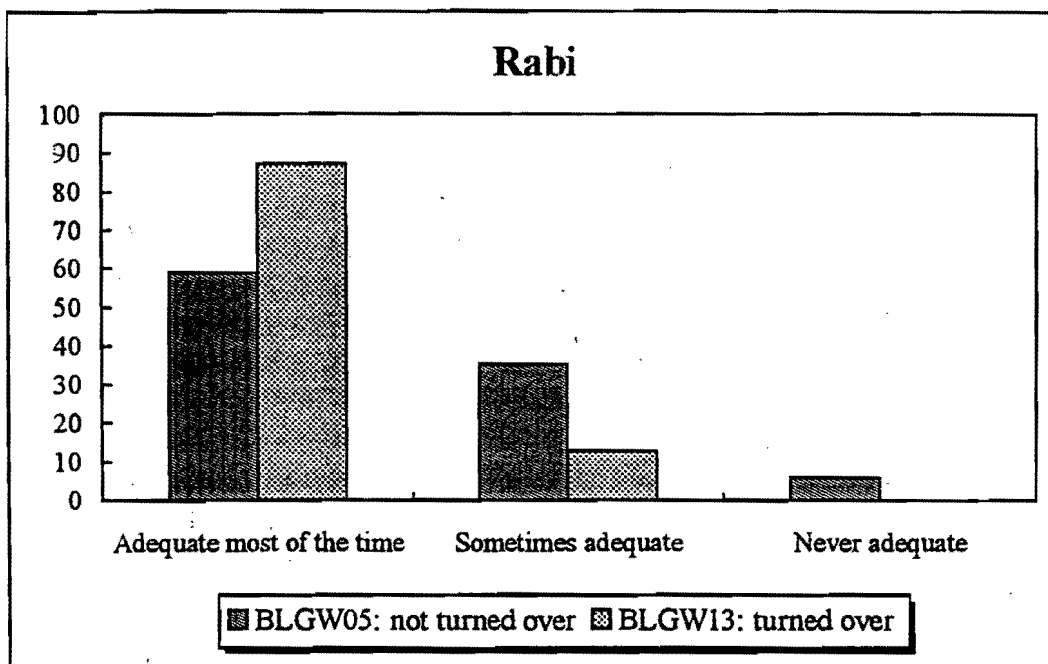
Cost Component	Unit	No. 5 without IMT	No. 13 with IMT	Difference
Demand Charge	NRs./ha	383	603	220
Pumping Charge	NRs./ha	988	1977	989
Labor Contribution	Man days/ha	6.4	3.7	- 2.7

On the basis of the above analysis the following conclusions can be made:

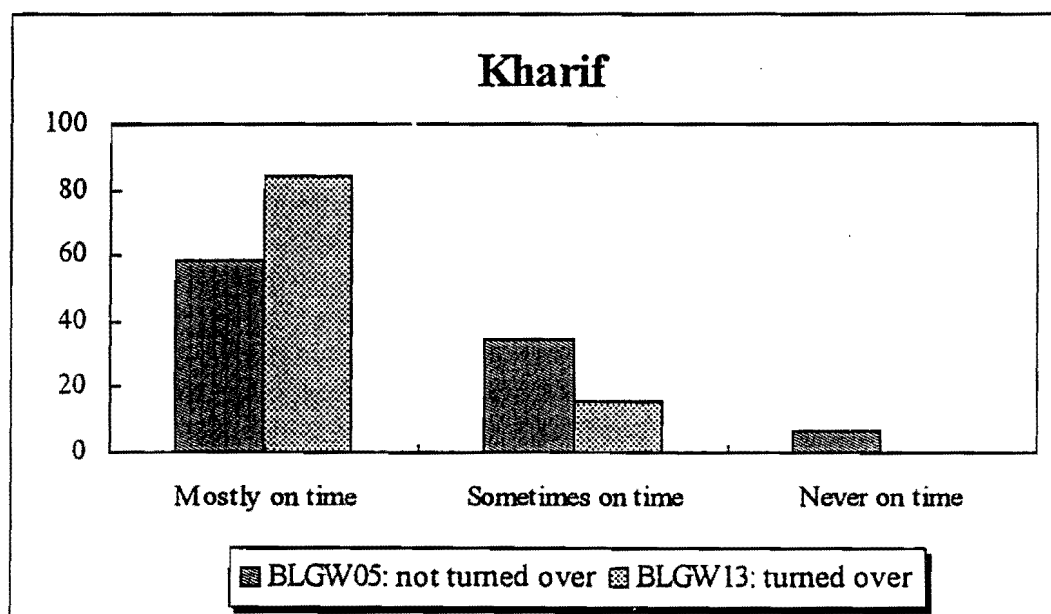
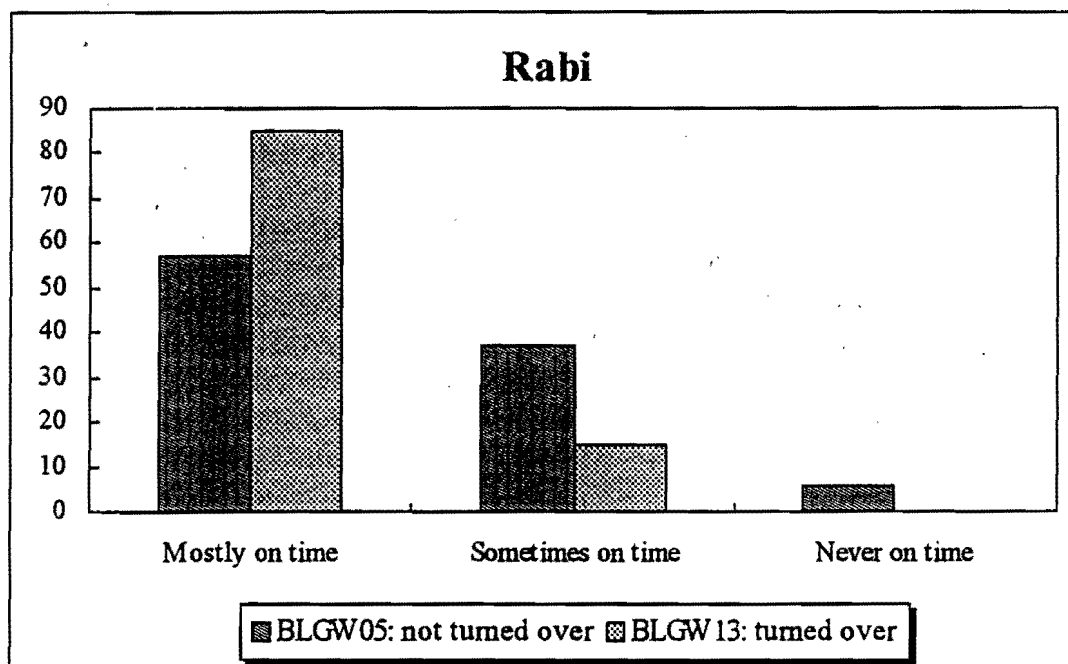
- Demand charges: maintenance and fixed electricity costs  
- NRs. 220/ha higher for turned over tube wells.
  - Pumping charge: electricity plus operator  
- NRs. 988/ha higher for turned over system.
  - Labor contribution for canal maintenance.  
- 2.7 man days/ha lower for turned over tube wells.
2. According to farmers' perception, agricultural production hardly increased after transfer. Since the cost of irrigation water went up, this means that their net income declined but cost to government went down. This aspect needs further analysis.
  3. According to the farmers' perception, the irrigation service (adequacy, timeliness, fairness of water distributed, and difficulty of arranging water) was better in transferred tube well.

The following are some of the results presented in the graphical form.

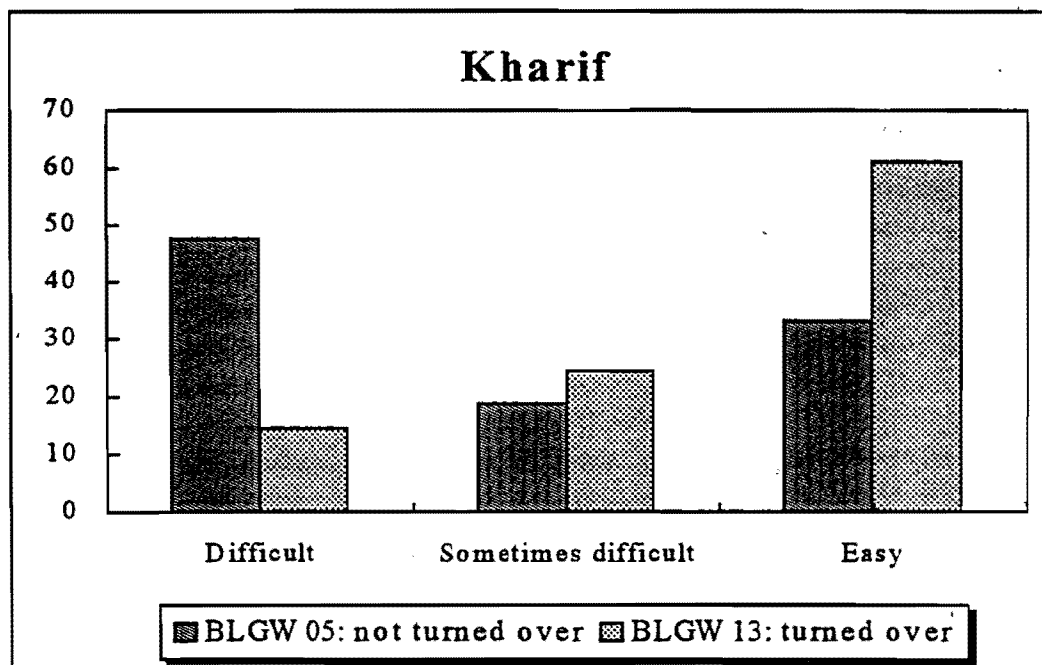
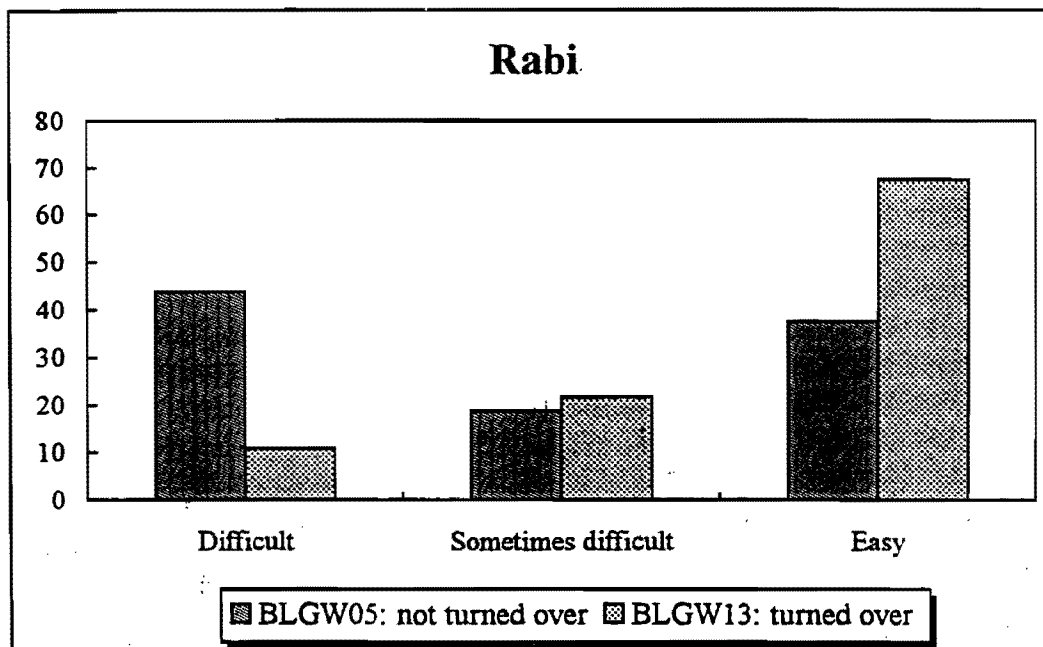
**Graph 3.1: Farmers' Perception Concerning Adequacy of Irrigation**



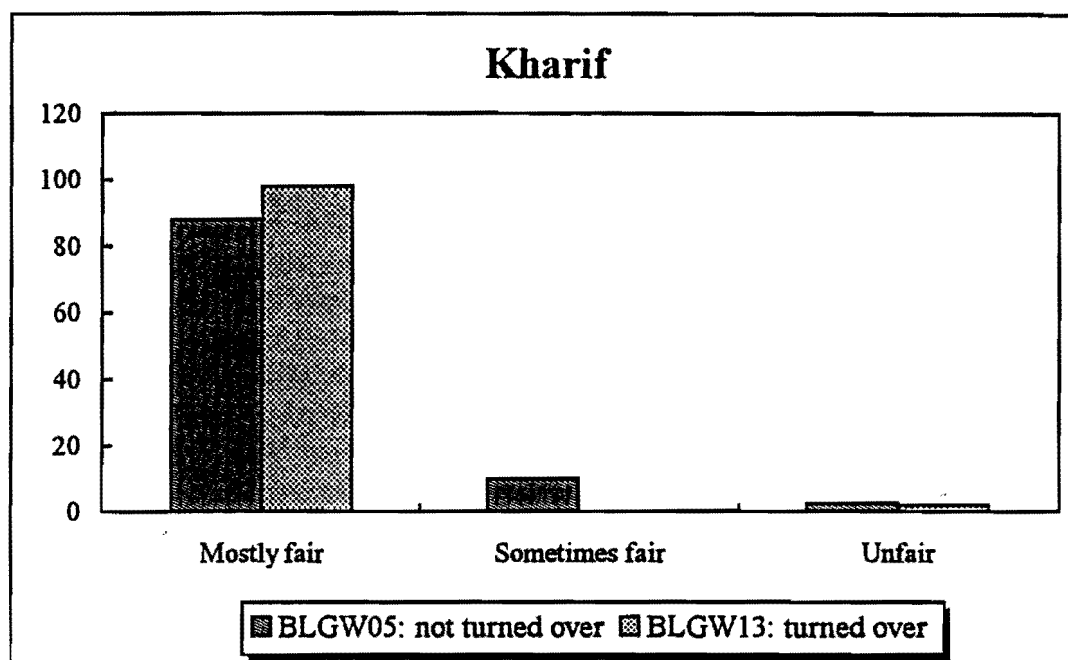
**Graph 3.2 Farmers' Perception Concerning Timeliness of Water Supply**



**Graph 3.3: Farmers' Perception Concerning Difficulty of Arranging Water**

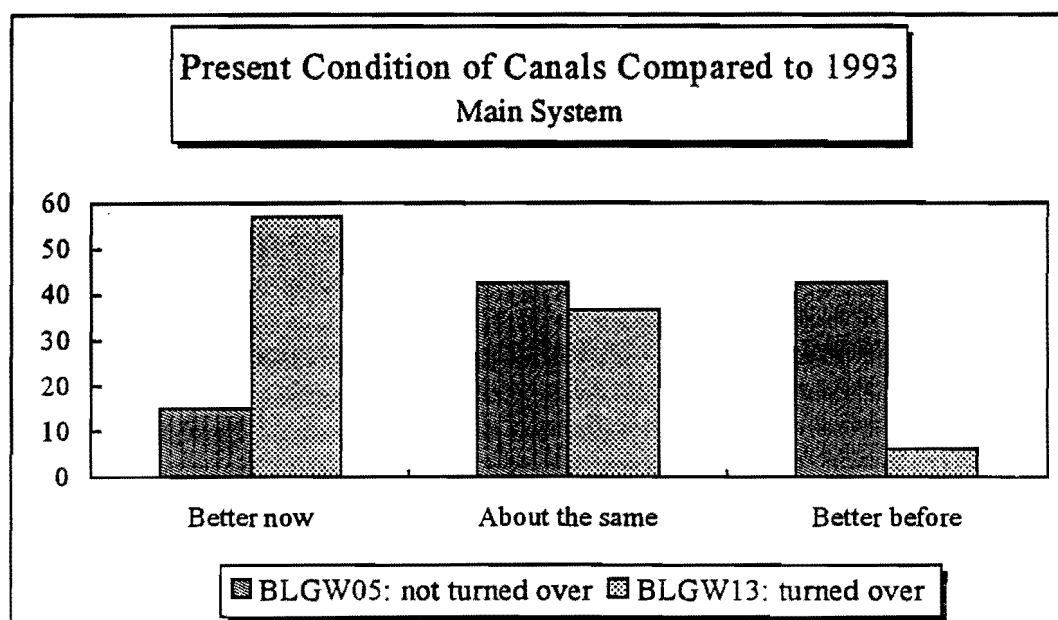


**Graph 3.4: Farmers' Perception Concerning Fairness of Water Distribution**

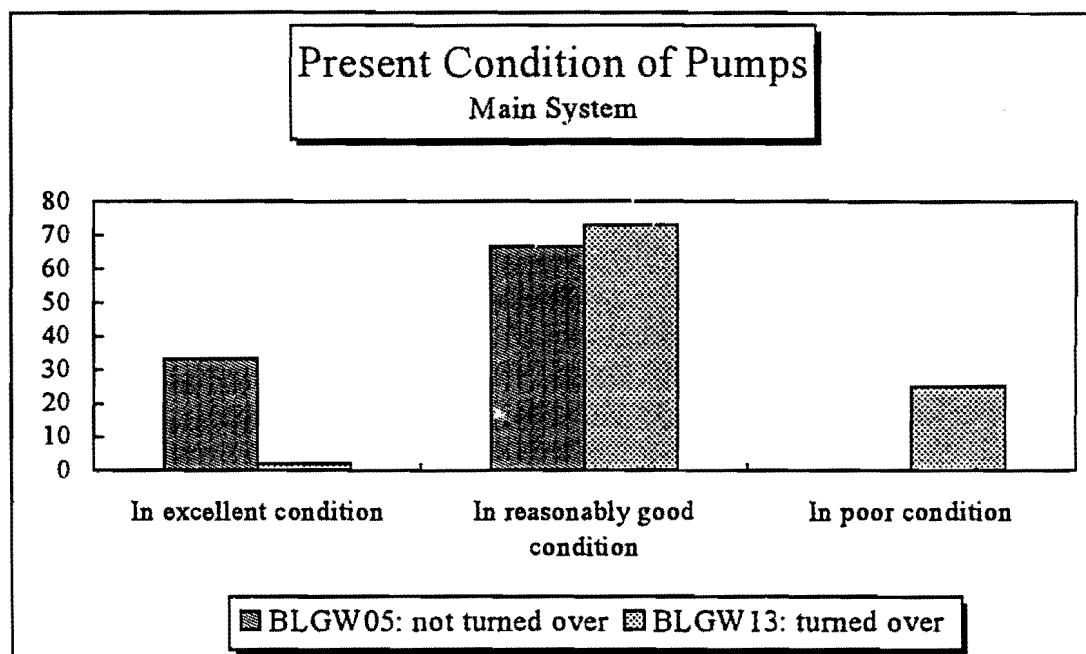


1. The condition of the pump was considered better in the non-transferred tube well where the irrigation agency is still responsible for pump maintenance, than in the transferred tube well where the WUA maintains the pump (Please see below).

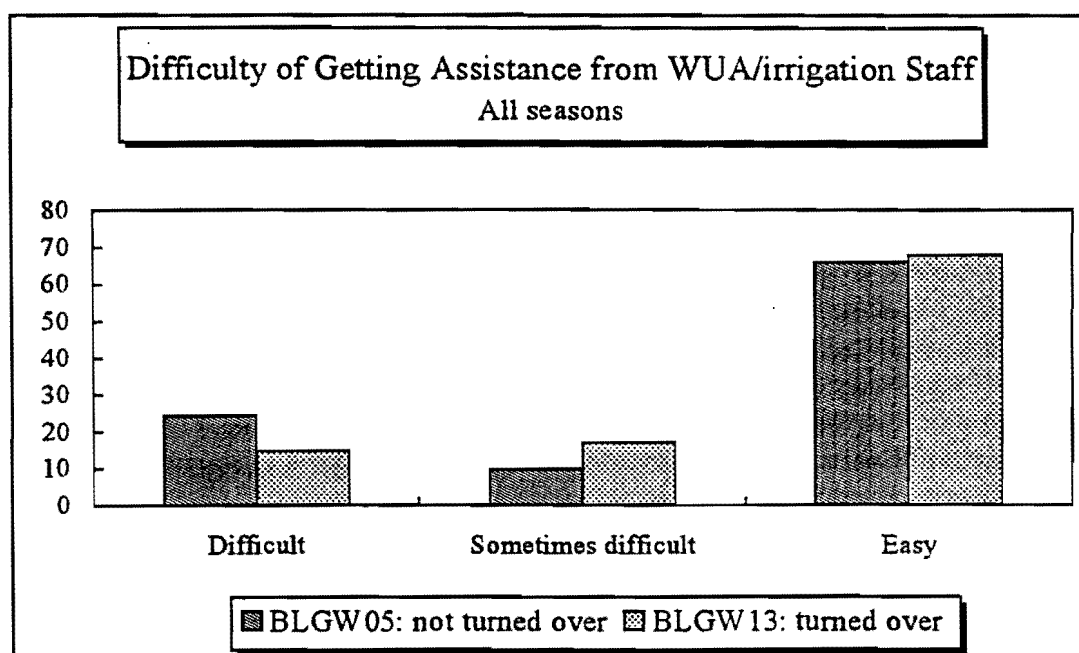
**Graph 3.5: Farmers' Perception Concerning Canal Maintenance**



**Graph 3.6 Farmers' Perception about Condition of Pumps**



**Graph 3.7: Farmers' Perception towards WUA/Irrigation Staff**



## **ASSESSED CHANGES DUE TO IMT**

On the basis of the above study the following changed has been observed due to IMT:

- Cost of irrigation to farmers is higher in turned over tube well
- Farmers' perception concerning aspects like irrigation service, operation, maintenance and WUA was found to be more positive in turned over tube wells.
- No change in agriculture production was observed due to IMT.