

Water is a Life

Farmer's Perception Regarding Effectiveness of Drip Irrigation System in Attock, Pakistan

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Introduction

Pakistan was a water abundant country (5300 m³/capita) during 1950s, which has turned into a water deficit country, with water availability of 1050 m³/capita in 2002. The irrigation system in the Indus Basin (Pakistan) is facing many operational problems which resulted in water losses during irrigation of crops. The aquifer is refreshed through natural precipitation, river flow and continued seepage from the canal system and application losses from the irrigated fields (Ahmed, 2003). Pakistan's total irrigated area by drip system is 30-40% which consist of rain-fed areas (Balochistan, KPK, Punjab and Sind) 60%, desert areas (Punjab, Sindh) 70-80%, coastal areas 70% and hill torrents are irrigated by drip irrigation only 20%. There are many methods developed for supplemental irrigation for crops and fruit trees. But drip irrigation system is one of the best (Khan and Israr, 2010).

Aims

Goal of work was to obtain information about the awareness of farmers regarding new techniques of irrigation system use in Pakistan as follows:
The efficiency of drip irrigation systems of different crops

- Cost effectiveness of drip irrigation systems for different crops
- The gaps in technical and social acceptability of these systems by respondents
- The obstacles faced by the respondents in usage of drip irrigation system

Materials and Methods

In the year 2015 the questionnaire data was processed from 120 farmers who came mainly from the Attock district (89.2%), region Punjab Subsequently, and their analysis was carried out using an appropriate statistical method Software (SPSS). Total land area of district Attock is 6,858 km² and have six tehsils in it named as: Attock, Jand, Fateh Jang, Hazro, Hassan Abdal and Pindi Ghaib. There are total 349 villages and seven towns in the Attock district.

Results

About 45.0% of farmers were old aged (>50 years old) as shown in Fig 1. About one-third of respondents (34.2%) had a bachelor's degree as shown in Fig 2. One-third (33.3%) reported sand and clay type of soil in their field as shown in Fig 3. Fair majority (69.2%) small farmers (< 12.5 acres) only 3.3% had large farm (>25 acres) size as shown in Fig 4. In Fig 5 you can observe that one third of respondents (38.3%) said their work ratio was reduced to 1: 3 while less than one-third (32.5%) of respondents said their work ratio had dropped to one quarter. Fig 6 illustrates more than half (56.1%) respondents were growing grapes while one-third to one-fourth (33.3 and 24.6%) were growing citrus and other fruits. Fig 7 illustartes that fertilizers are the most effective management practice used by the respondents (25.8%) by the help of drip irrigation system. Fig 8 shows that (60.5 and 74.8%) respondents reported that water and labour have been saved by installation and running drip irrigation systems.

Acknowledgment

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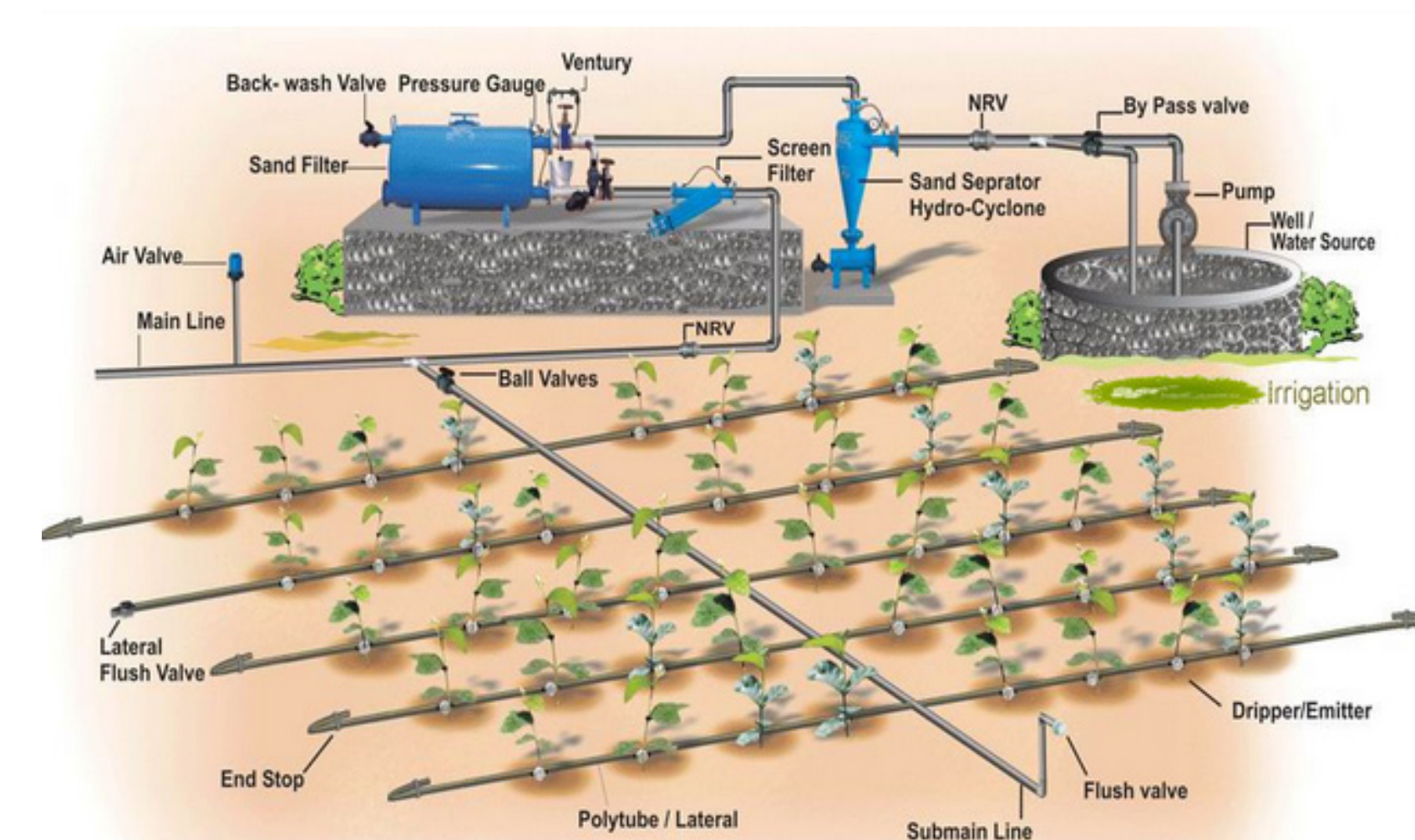
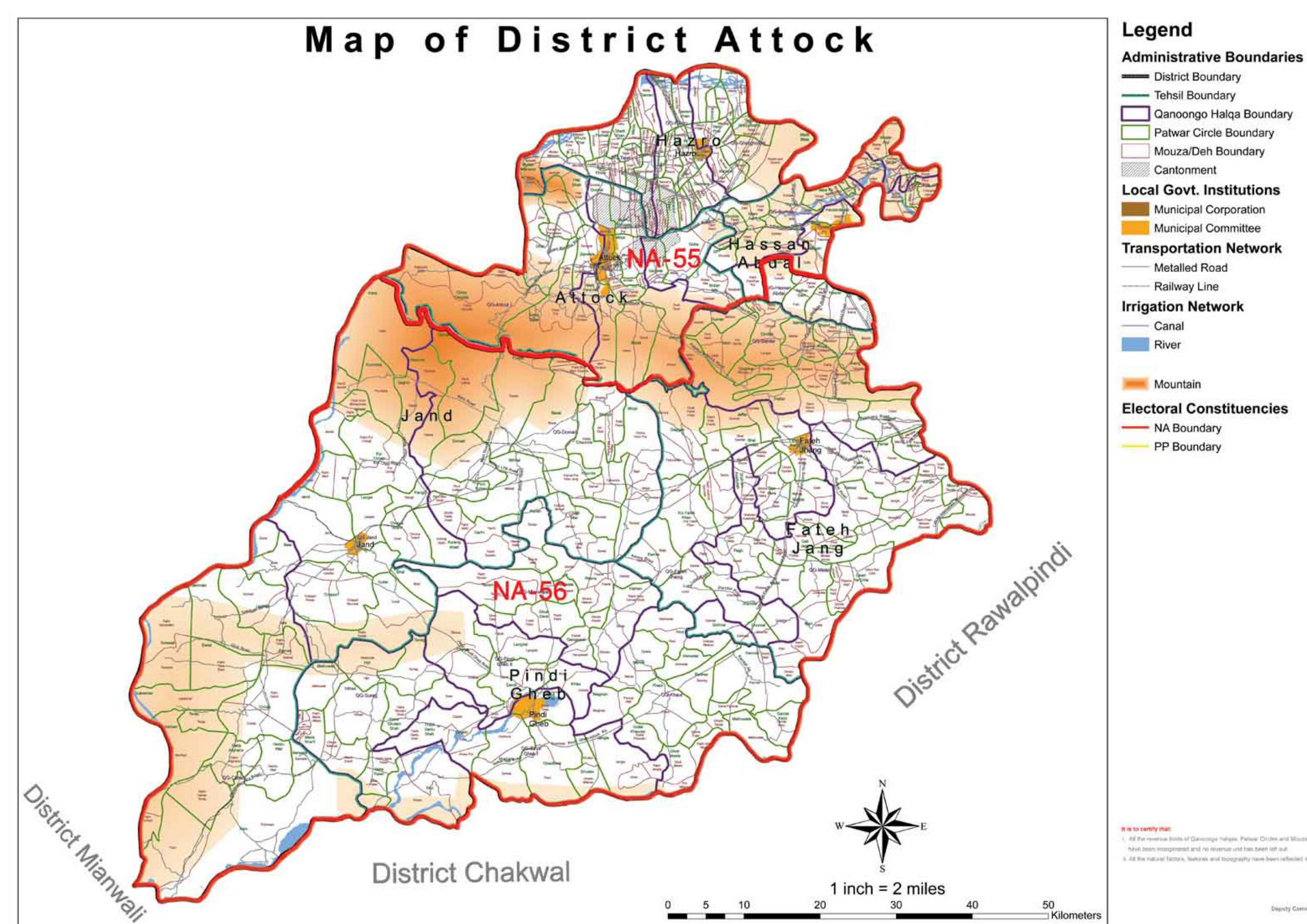


Fig. 1

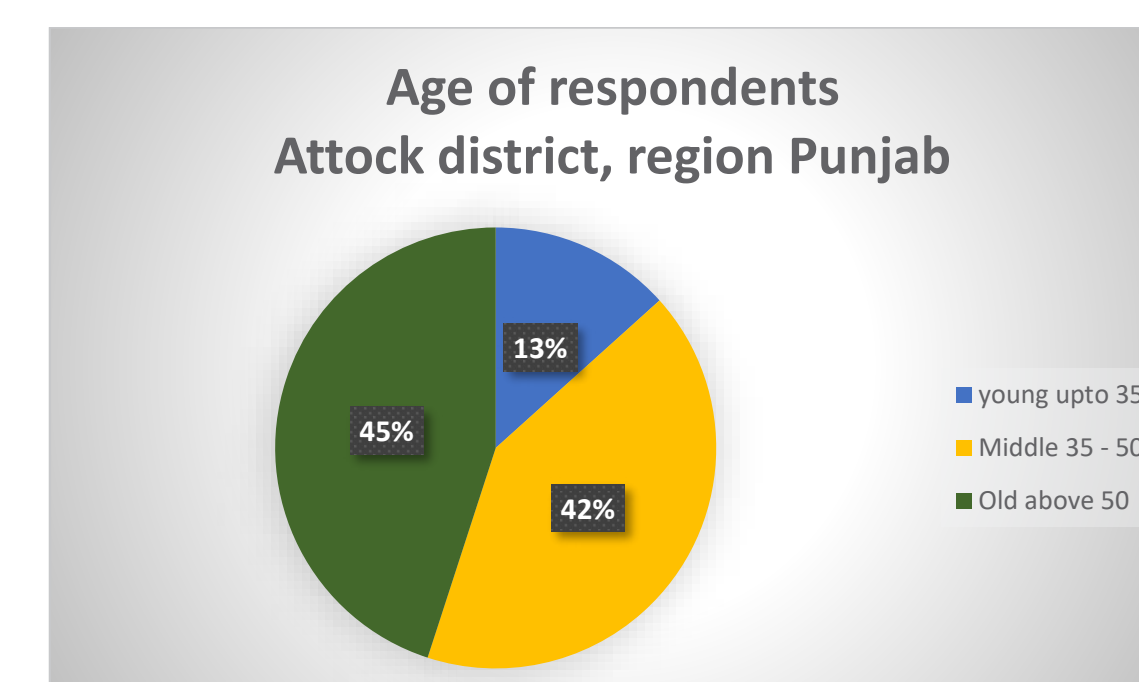


Fig. 5

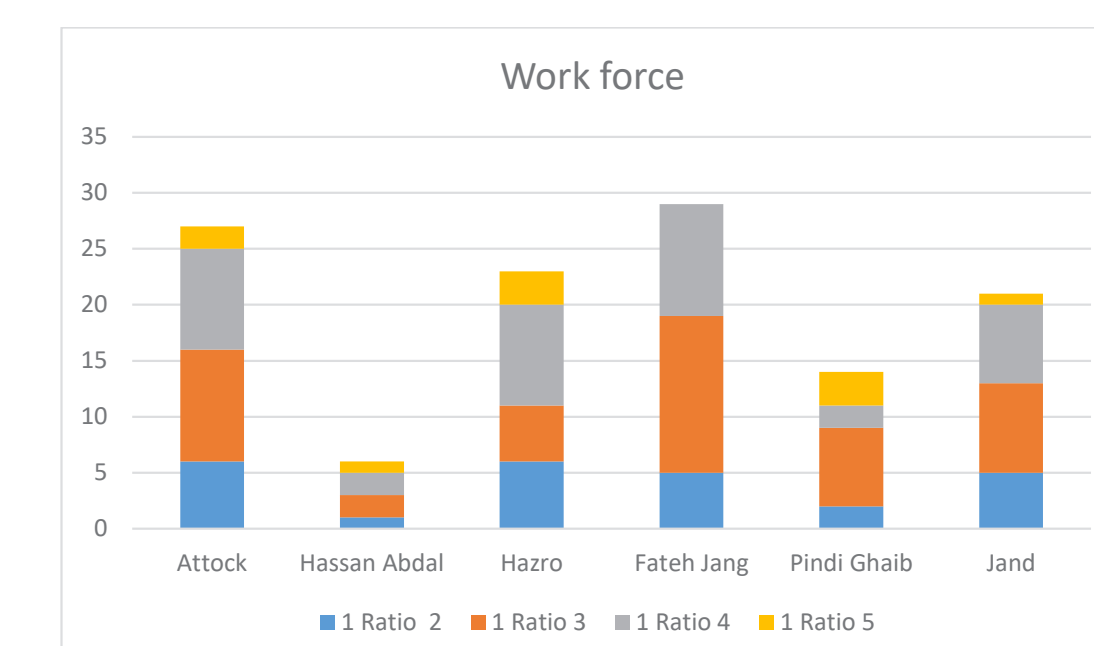


Fig. 2

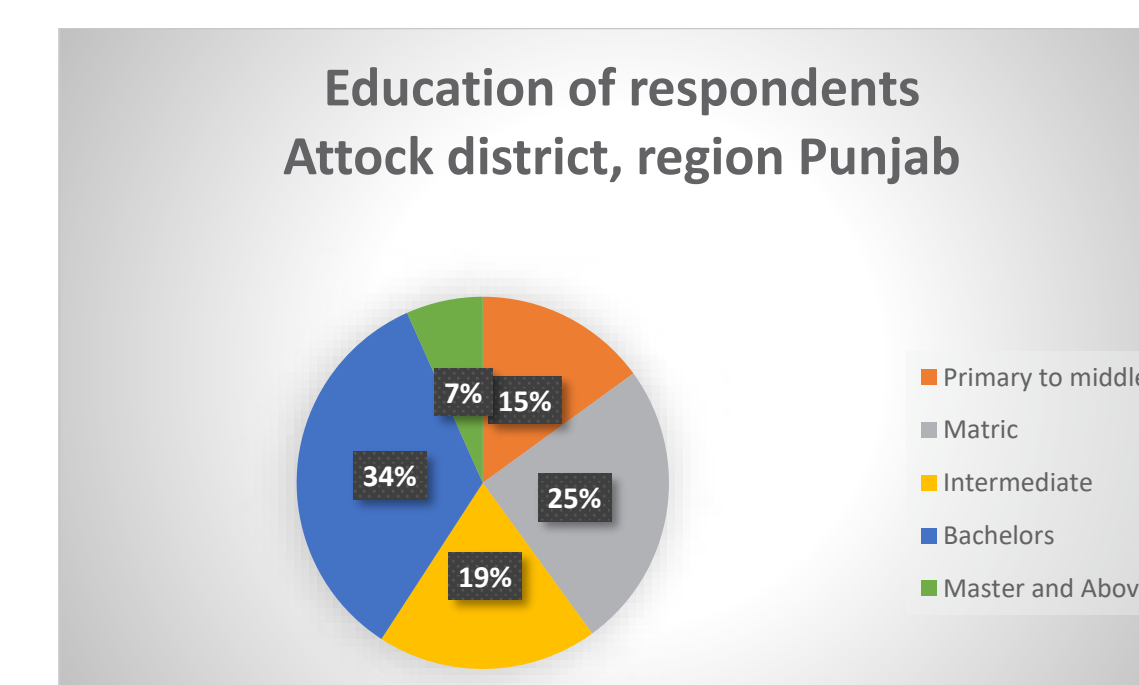


Fig. 6

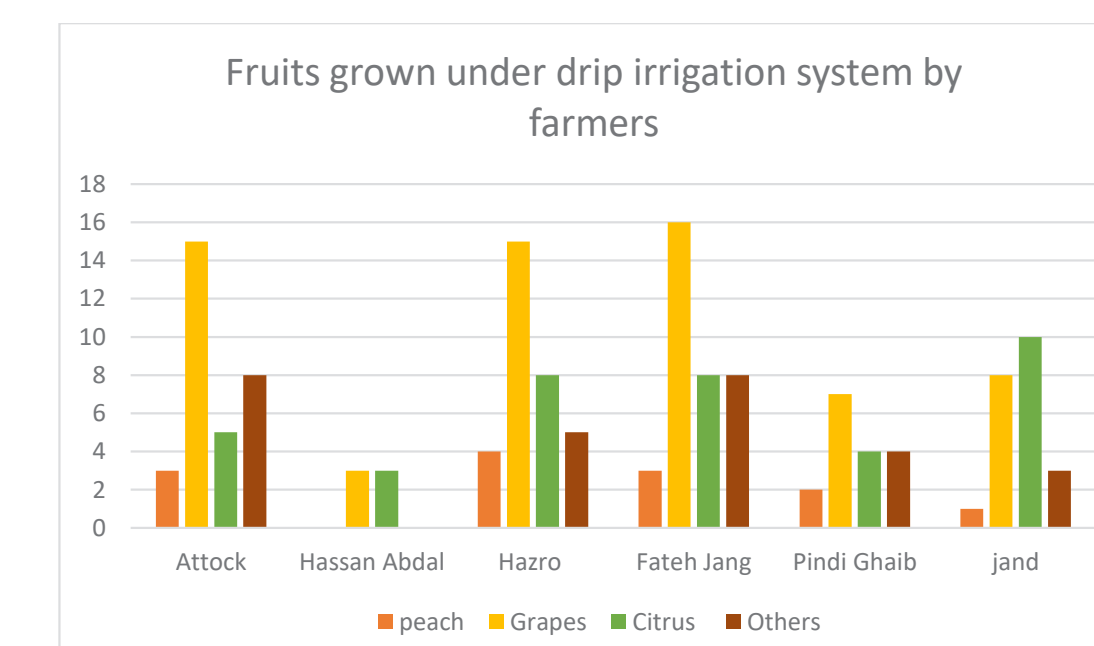


Fig. 3

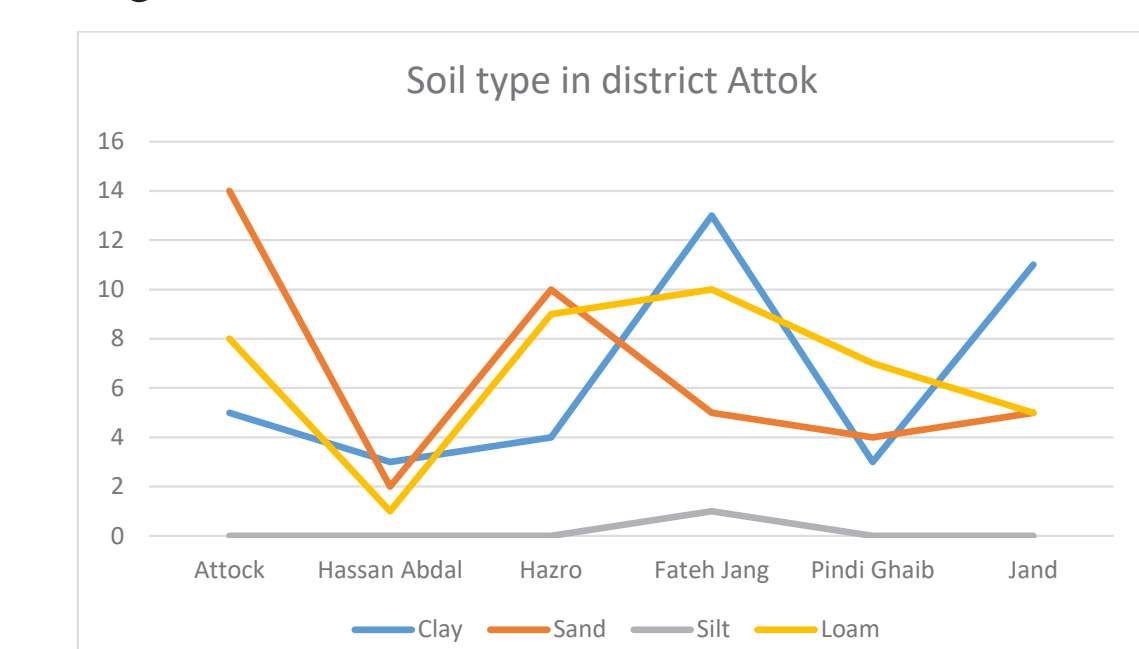


Fig. 7

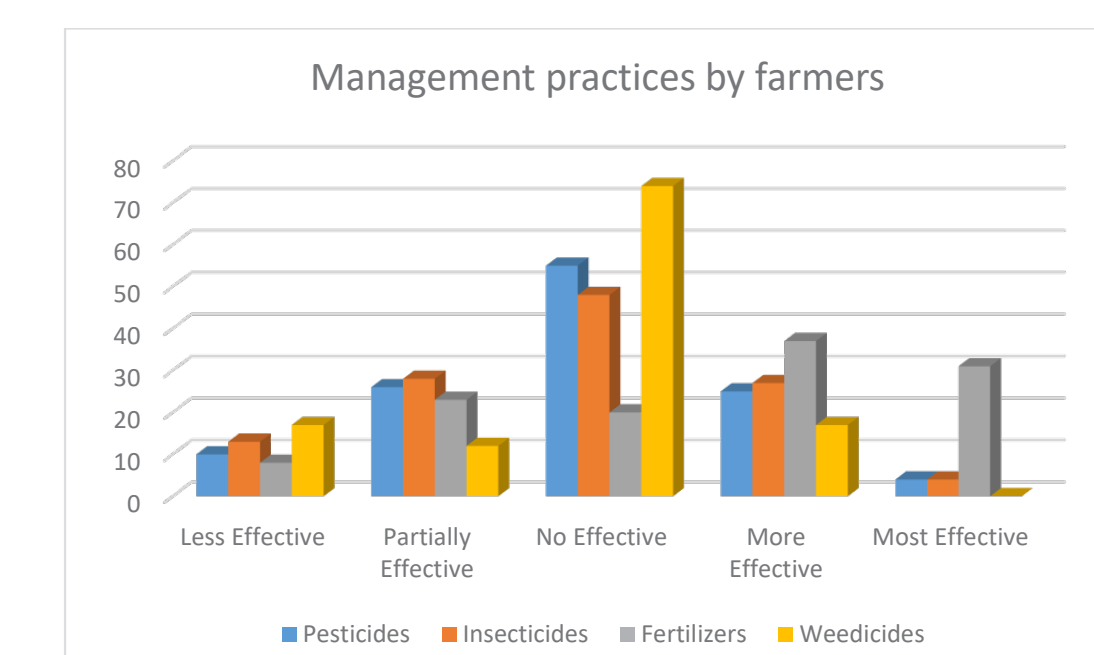


Fig. 4

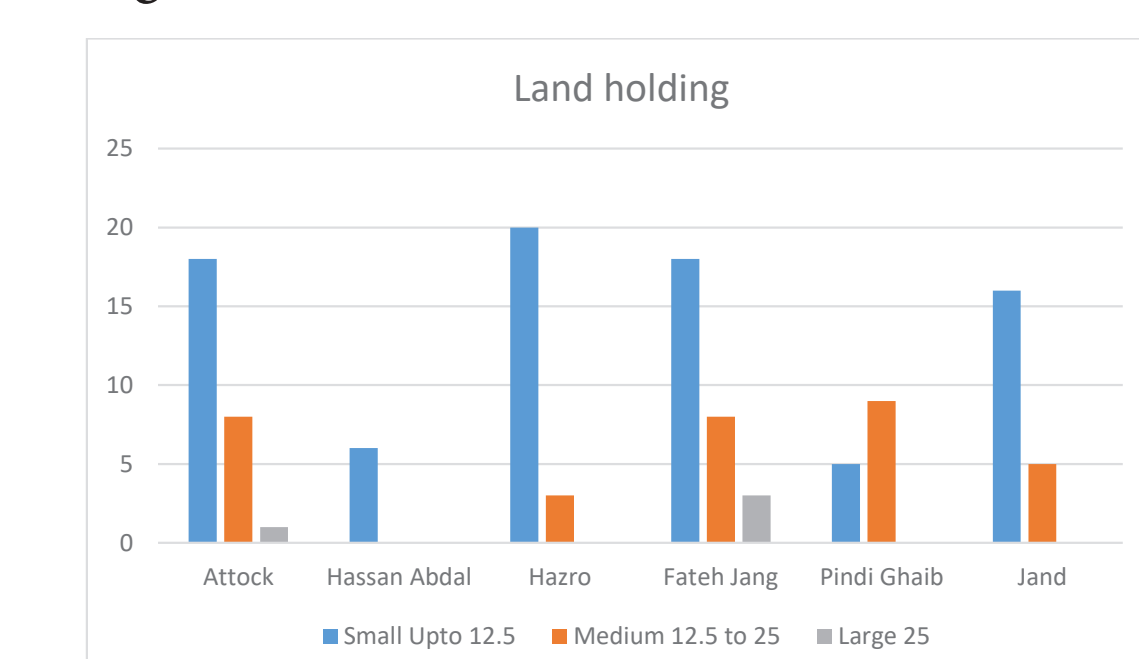
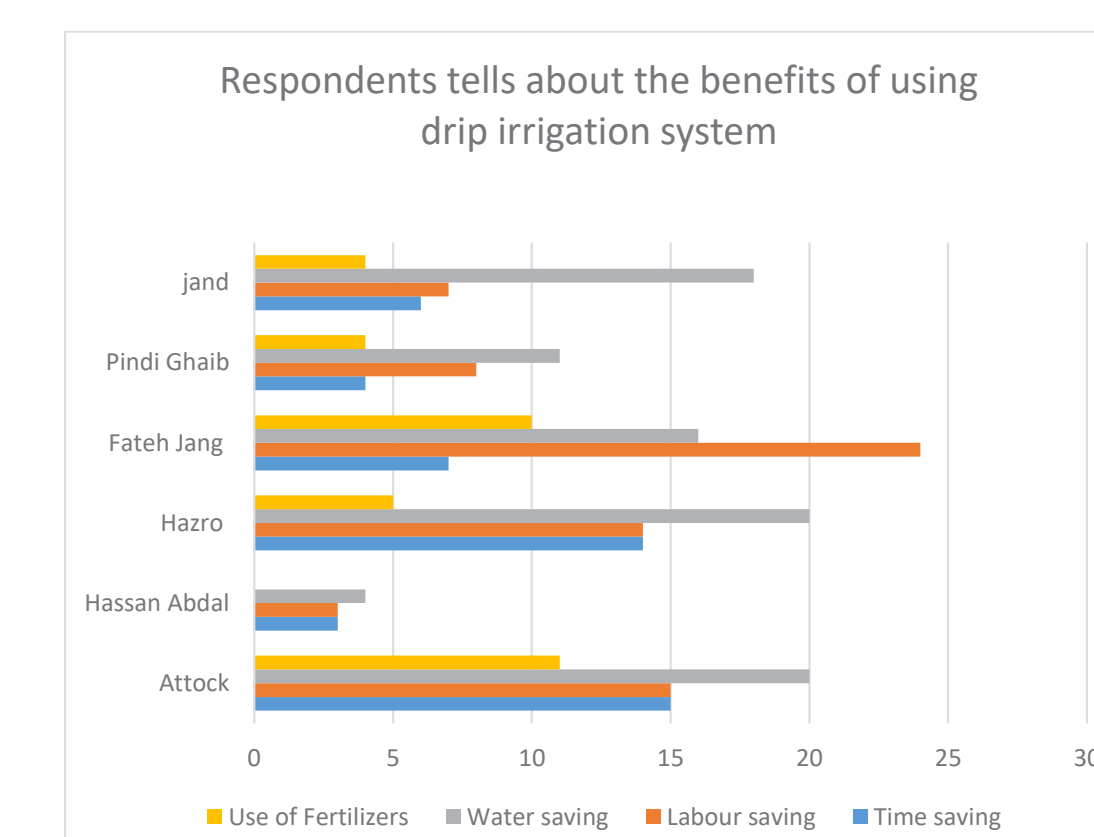


Fig. 8



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