

Perspective of Smallholder Farmers on Smart Farming Gadgets in Pakistan

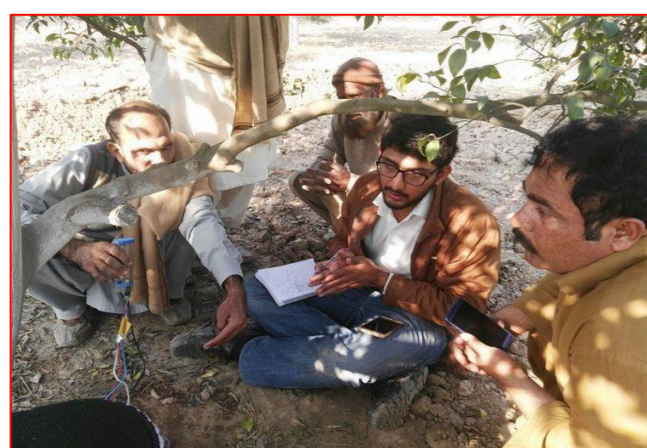
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Background

- Agriculture sector is technologically backward, in Pakistan.
- The sustainability depends upon promotion and adoption of new agricultural tools among farmers.
- Technology adoption is a complicated process because of production and technical factors.
- The increasing need and use of smart technology in the field of agriculture invites us to make an assessment of the behaviour of farming community about trusting on gadgets or protecting their own traditional knowledge.

Methodology

- Simple random sampling
- Sample Size **142** Farming Families
- Six districts of three provinces of Pakistan under a project related to enhancement of water management skills of farmers.
- Surveys and interviews were used to collect data from the smallholder farmers involved in project activities.
- The data was analysed in narrative and tabular form.



Respondents from Sindh



Respondents from Quetta



Respondents from Punjab

Gadgets Introduced in Project

Three Irrigation Tools have been introduced to farmers at the project site



Chameleon



Full Stop



Tensiometer

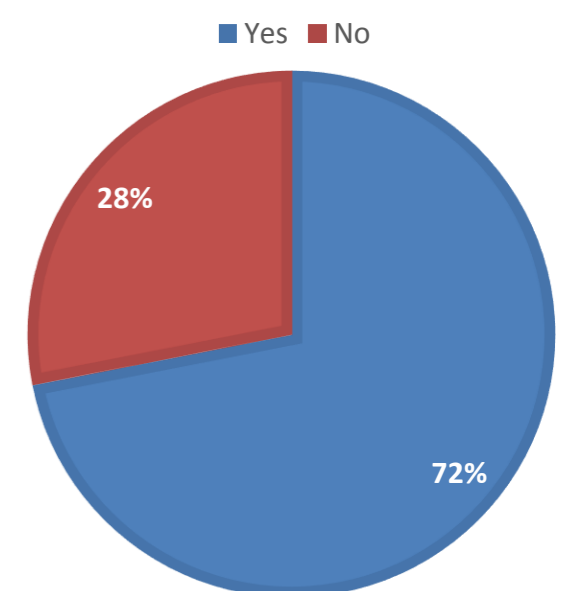
Problems Faced by Farmers

Farmers face many critical problems challenging their traditional irrigation skills;

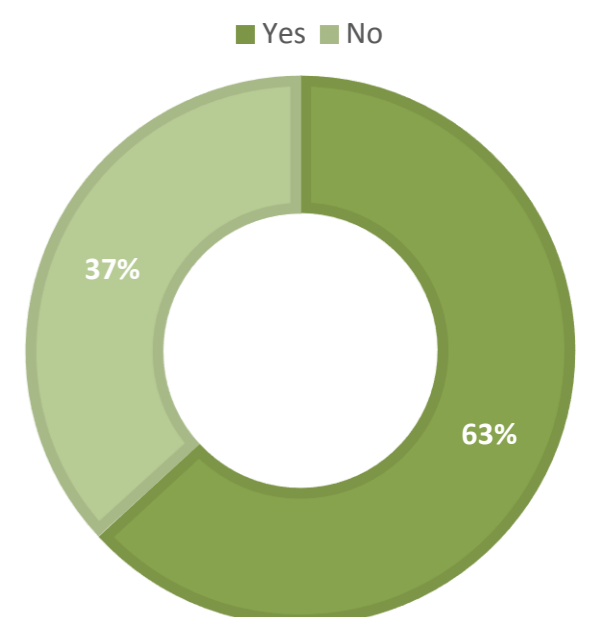
- Unlevelled fields and unaligned water courses
- Unreliable or abundant canal water
- Highly Saline Ground Water
- Lack of knowledge on chemical properties of soil Tensiometers, Chameleon Moisture Sensors and Full Stops as water nutrient tools were new to them. Farmers were provided information and training on their use. Farmers were provided opportunity to explore their benefits on their own.

Trends in Adopting Smart Farming Gadgets

One of the important question was about that will the use of **irrigation tools** in farms makes its maintenance easier. **27 %** believe that advanced irrigation tools make farming easy. **28%** who are non-adopters feel difficulty in using modern tools.



This shows the percentage of the farmers used irrigation tools provided to them. **63 %** took larger interest in using tools and getting benefits in terms of higher yield with less use of water and nutrients.



Suggestions by the Farmers

- Lack of awareness among farmers as primary area to improve
- Frequent meetings among farmers to exchange information
- An expert having information on all provided tools in every discussion group is highly advantageous
- They appreciated the farmer to farmer learning that is in process

Conclusion and Limitations

- It is positive to see the interest of young in modern farming technologies. The involvement of more youth will be the game changer.
- Age, high cost and lack of awareness are the main barriers
- The farm size is neglected for this study as it started to know the views of farmers to wards using modern irrigation tools.
- The conclusion could not be applied to all Pakistani Farming community because of smaller sample size.
- It could be taken as primary opinion and more research to be done for further conclusion.