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Research Article

Factors affecting adoption of dryland farming technologies

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SUMMARY : Present study entitled factors affecting adoption of dryland farming technologies was conducted with the objectives of to study the extent of adoption of dryland farming technologies and to study the relationship of personal, socioeconomic and psychological characteristics of farmers with adoption of dryland farming technologies. The adoption level of farmers with respect to dryland farming technologies was positively and significantly influenced by education, annual income, size of land holding, cosmopoliteness, risk orientation, sources of information used and knowledge. There was negative and significant association between age and adoption. Size of family showed non-significant relationship with adoption.

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BACKGROUND AND OBJECTIVES

Dryland agriculture is the rule in Maharashtra (Patil, 2002). Solapur district comes under the scarcity zone. Due to adverse climatic conditions and lack of irrigation facilities the production and productivity of agriculture is low. Mahatma Phule Krishi Vidyapeeth, Rahuri and Zonal Agriculture Research Station, Solapur are playing major role in evolving various major dryland farming technologies. But the adoption of these technologies is not sufficient. Hence, to understand the factors affecting adoption of dryland farming technologies study was conducted with following objectives.

–To study the extent of adoption of dryland farming technologies by the dryland farmers.
–To study the relationship of personal, socio-economic and psychological characteristics of the farmers with their level of adoption of the dryland farming technologies.

Keeping in view the above objectives, it was hypothesized that extent of adoption of dryland farming technologies of farmers is influenced by the personal, socio-economic and socio-psychological characteristics of the dryland farmers.

RESOURCES AND METHODS

The study was conducted in Madha and Mohol taluka of Solapur district of Maharashtra state. From these talukas 10 villages were selected randomly and from that 120 farmers were selected randomly for study. The data were collected, analyzed, presented and discussed by using statistical tools.

OBSERVATIONS AND ANALYSIS

The experimental findings obtained from the present study have been discussed in following heads:

Extent of adoption :

Table 1 demonstrates that 56.67 per cent of the dryland farmers had medium level of adoption. It is followed by 27.50 per cent had low and 15.83 per cent had high level of adoption. It can be said that the level of adoption of the dryland farming technologies of the respondents was about medium level.This result is in line of the finding of Patil (2002), Wankhede (2004), Kushreshtha *et al.* (2010), Benal *et al.* (2010).

Table1 : Extent of adoption of dryland farming technologies by the dryland farmers (n=120)

Sr. No.	Adoption	Respondents	
		Number	Per cent
1.	Low (up to 22)	33	27.50
2.	Medium (23 to 37)	68	56.67
3.	High (38 and above)	19	15.83
	Total	120	100.00

Relationship of personal, socio-economic and psychological characteristics of the farmers with the adoption of dryland farming technologies :

One of the objectives of the present investigation was to study the relationship between attributes of dryland farmer (independent variables *viz.*, age, education, size of family, annual income, size of land holding, cosmopoliteness, risk orientation, sources of information) with dependent variable (adoption of dryland farming technologies). To ascertain their relationship co-efficient of correlation (R) was worked out. The value of co-efficient of correlation is given in Table 2.

Table 2 : Correlation of independent variables with adoption

Sr.No.	Characteristics	Co-efficient of correlation
1.	Age	-0.553**
2.	Education	0.772**
3.	Size of family	0.167^{NS}
4.	Annual income	0.735**
5.	Size of land holding	0.365**
6.	Cosmopoliteness	0.640**
7.	Risk orientation	0.802**
8.	Sources of information	0.716**
9.	Knowledge	0.911**

* and ** Indicate significance of value at P=0.05 and 0.01, respectively
NS = Non-significant

Age and adoption :

It can be seen that there was a negative and statistically significant (r =-0.553) correlation between age of the respondent and adoption (Table 2). Thus, it was concluded that as age of the individual increased the level of adoption of dryland farming technologies decreased. This might be due to old respondents' reluctance to accept innovations and middle aged and younger respondents are more prone to change and are ready to take risk in adoption of innovation. The finding is conformity with that of Wankhede (2004).

Education and adoption :

It was observed that there was a positive and statistically significant correlation (r = 0.772) between education of the respondents and adoption of dryland farming technologies. This indicates that higher education makes the farmers to change and accept the new ideas more quickly. They have favorable attitude towards science and technology, which favorably affects adoption of dryland farming technologies. Similar findings were recorded by Patil (2002) and Wankhede (2004).

Size of family and adoption :

The relationship between size of family and adoption of dryland farming technologies was positive and statistically non significant (r = 0.167). Thus, it was found that size of family had no relationship with adoption. This might be due to some technologies have positive relation while some have negative relationship with adoption. Similar result was found by Shrivastava *et al.* (2002) and Bhadodiya *et al.* (2011).

Annual income and adoption :

The relationship between the annual income and adoption of dryland farming technologies by the respondents was positive and statistically significant (r = 0.735). Annual income determines the economic status of the farmers. They could afford to spend money on purchase of inputs as required for the recommended practices. This indicates that higher the annual income, higher will be the adoption of dryland farming technologies. This finding is in line with the findings of Wankhede (2004).

Size of land holding and adoption :

There was a positive and statistically significant correlation (r = 0.365) between size of land holding and adoption of dryland farming technologies. Farmer with larger size of land holding and sound economic position, they are likely to take higher size, accept new ideas earlier and adopt recommended technology on their farm. Therefore, it can be stated that farmers with large size of land holding had higher level of adoption of dryland farming technologies. Similar findings were recorded by Patil (2002) and Kulshreshtha *et al.* (2010).

Cosmopoliteness and adoption :

There was a positive and significant correlation between cosmopoliteness and adoption of dryland farming technologies (r = 0.640). It is obvious that cosmopoliteness develops wider outlook of respondent leading to higher contact with outside world, thus getting more knowledge, which may enable them to adopt the recommended dryland technologies to a higher extent. Thus it can be concluded that more the cosmopliteness more is the adoption of dryland farming technologies. This finding is in conformity with those of Patil (2002) and Bhadodiya *et al.* (2011).

Risk orientation and adoption :

It was noticed that, there was a positive and statistically

significant correlation (r = 0.802) between risk orientation and adoption of dryland farming technologies. Farmer with high risk orientation accepts new ideas earlier. They have foresight and rational thinking. These facts may stimulate them to adopt improved technology. Thus, it indicates that higher the risk orientation, higher the adoption of dryland farming technologies. Similar findings were recorded by Patil (2002) and Chinchmatpure (2007).

Sources of information and adoption :

There was a positive and statistically significant correlation (r = 0.716) between sources of information and adoption of dryland farming technologies. It reveals that with an increased use of sources of information by the respondent, there was increase in their adoption level. Higher exposure and contacts with various sources of information enriches the knowledge of the farmers and also offer solutions to their problems. This ultimately results into higher adoption by them. This finding is similar with those of Wankhede (2004), Chinchmatpure (2007), Benal *et al.* (2010), Bhadodiya *et al.* (2011).

Knowledge and adoption :

Relationship between the knowledge of the respondents about dryland farming technologies and adoption was found to be the positive and highly significant (r = 0.911). Farmers having high knowledge of improved farming technologies are generally in early adoption and venturesome. The same might be tone with dryland farmers as indicated by results. Similar findings were reported by Patil (2002) and Wankhede (2004).

Conclusion :

Majority of the respondents (56.67 %) had medium level of adoption. The adoption level of farmers with respect to dryland farming technologies was positively and significantly influenced by education, annual income, size of land holding, cosmopoliteness, risk orientation, sources of information used and knowledge. There was negative and significant association between age and adoption. Size of family showed non-significant relationship with adoption of dryland farming technologies.

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REFERENCES

Benal Deepak, Patel, M.M., Jain, M.P. and Singh, V.B. (2010). Adoption of dryland technology. *Indian J. Dryland Agric. Res. & Dev.*, **25**(1): 111-116.

Bhadodiya, S.K., Daipuria, O.P., Jaulkar, A.M. and Raghuwanshi, J.S. (2011). A study of factors affecting adoption behaviour of farmers about improved mustard production technology. *Bhartiya Krishi Anusandhan Patrika*, **26** (3-4): 95-99.