

FARMERS' VIEWS AND PERCEPTIONS ABOUT AGROFORESTRY IN DISTRICT FAISALABAD

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Due to high pressure on forests because of increasing population and enhancing agricultural land, there is a need to increase the area under tree cover in Pakistan to meet the material needs of the growing population. Agroforestry is among the recommended strategies to increase tree cover on farmlands but the farmers are not taking initiatives in its adoption. This study intends to provide information regarding the farmer's views and perceptions about agroforestry in district Faisalabad. A sample of 125 respondents from five randomly selected rural union councils from tehsil Faisalabad were interviewed through a structured interview schedule in person and the data was analyzed by using suitable computer software (SPSS) to draw conclusions. It was concluded that the farmers perceive that the trees are best sources of fuel, wood and fodder for their livestock. Even then these are not increasing because they compete with agricultural crops. At the same time the income from trees is delayed, meager and irregular. This is due to lack of knowledge in marketing and tree crop compatibility/ suitability. The government should launch agroforestry programs to increase the farmers' knowledge for the adoption of such new practices.

Key words: Agroforestry, capacity building, farmlands, respondents

INTRODUCTION

Pakistan is facing timber shortage of about 29 million cubic meters (Government of Pakistan, 2005a) and our forests meet only 32% of fuel wood supply to meet national energy requirements (Government of Pakistan, 1992). The deforestation rate is also increasing at a rate of 2.5% annually (Government of Pakistan, 2005b), which was 41,000 ha (1.8%) annually from 1999-2000 (FAO, 2000). Due to an increase in population at a rate of 1.90% per annum, urban population will double in the next 20 years causing more and more forests to be cut to make way for humanity (Government of Pakistan, 2005c). Thus there is a need to increase the area under tree cover in Pakistan not only to meet the material needs of the growing population but also to enhance the environmental and ecological services being provided by the forests.

Agroforestry is the only and quick solution of all these problems that can bridge up the gap between demand and supply of wood and non-wood products. Agroforestry emerged in late 1970s as a modern, improved land-use system for the improvement in country's economy (Mercer and Miller, 1998). It implies integration of crop farming with tree planting on private farmlands with the concept that trees play a very productive and protective role in safeguarding the vital interests of agricultural lands and their produce (Joya and Khan, 1994; Sultani *et al*, 1994). The agriculture system is established on four pillars; land, labour, capital and solar light. No doubt, here in Pakistan, we have limited land and capital resources such as water but agricultural practices are mainly dependent on labour and solar light or energy. If we ensure an extensive use of these both sources, i.e., labour and solar energy, we can uplift our wood supply up to the mark. As Nair (1990) reported in his study that the solar energy and soil resources are not utilized in full extent when the agricultural crops are grown under monocultural system. But when we make a combination of crops and trees, not only the best use of these resources is ensured but it also increases the soil fertility through planting nitrogen fixing trees. Greater use can be made by planting agricultural crops along with trees.

A lot of research has been carried out of such farming practices but there is a dire need to disseminate the information regarding agroforestry to the farmers for their economic uplift and better utilization of available farming sources. The objective of this study was to get the information about the farmers' knowledge and their attitude to plant trees in combination with agricultural crops.

MATERIALS AND METHODS

The study was conducted in district Faisalabad, which consists of five tehsils. Tehsil Faisalabad was selected through purposive sampling technique. Out of total 58 rural union councils, five were selected through simple random sampling technique. From each selected union council, one village was selected randomly, and from each selected village, 25 farm families were selected at random. From each selected farm family, one farmer who was actively engaged in farming activities was taken, thereby, making a sample of 125 respondents. The information regarding their size of land holding, their perception about the future of farm trees on farmlands, the information they need to adopt agroforestry and the suggestions they gave to adopt agroforestry by them was obtained with the help of an interview schedule in person, which was analyzed by using computer software (SPSS) to draw conclusions and to recommend suggestions for the improvement in the adoption of agroforestry.

RESULTS AND DISCUSSION

Size of Land Holding

The land holding size was categorized in three groups i.e., less than 5 acres, 5 to 12 ½ acres and more than 12 ½ acres. The land, which the farmers own and manage, was asked.

The data given in Table-1 indicated that mostly the respondents (54.4%) were small farmers having land holding less than 5 acres. From remaining 45.6% respondents, 36.0% were having 5 to 12 ½ acres while 9.6% respondents own land holding more than 12 ½ acres. These results show that mostly the farmers in the study area have small land holdings; therefore they are reluctant in planting trees on their farmlands. They think that the trees compete with agricultural crops and reduce crop yield. The farmers are more interested to grow cereals/fodders for their domestic use and cash crops. Anjum (2003) also observed the similar results in Faisalabad.

Table 1. Distribution of respondents with regard to size of land holding

Size of Land Holding (in acres)	No.	%
Less than five	68	54.4
5 to 12 ½	45	36.0
12 ½ to 25 and above	12	9.6
Total	125	100.0

Farmers' Perceptions about Agroforestry

The data shown in Table-2 revealed that 30.4% respondents were willing to grow trees on their farmlands while 20.8% considered that the future of trees on farmlands is increasing and the people are becoming aware to plant trees on agricultural land. A majority of the respondents (57.6%) gave their opinion that trees should be planted to fulfill the needs and requirements of timber, fuel wood and fodder. The respondents (31.2%) were needed some help to grow trees.

Table 2. Distribution of the respondents with regard to their perceptions about future of trees on farmlands

Perceptions	No.	%
You like to have more trees on your farmlands	38	30.4
Future of trees on farmlands is increasing	26	20.8
Trees should be planted for timber, fuel wood and fodder requirements	72	57.6
You like to get some help to grow	39	31.2

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These results were encouraging, which showed that the farmers were realizing the importance of trees to meet their timber, fuel wood and fodder requirements for themselves and their livestock as well. Jamil (2003) also reported in his research study that a large majority of the farmers (91.1%) were willing to grow trees on their farmlands. The difference between our research results and Jamil's report is due to the involvement of government projects. The forestry department was running agroforestry project in district Attock due to which the farmers had the awareness and were willing to plant trees on their farmlands. There might be some sort of incentive; this is why he concluded that 68.9% respondents needed help for promoting agroforestry.

Information Needed by Farmers to Adopt Agroforestry

A major requirement of the farmers was the provision of information to potential participants in agroforestry. In particular the information is the base to adopt any new practice and impart it into an existing system. By giving the importance to the information issue, the respondents were asked about the information, which they need to promote agroforestry on their farmlands.

Table-3 showed that a large number of farmers (73.6%) needed the marketing availability of wood and non-wood products and 71.2% respondents were willing to get technical guidance on silvicultural operations for getting best quality of timber and minimize the competition between agricultural crops and trees for water and nutrients uptake. A majority of the respondents (57.6%) wanted to get information and technical assistance to rehabilitate their degraded lands by planting trees.

Table 3. Information needed by farmers to adopt agroforestry

Information	No.	%
Just general agroforestry information	63	50.4
Silviculture and management such as pruning, etc.	89	71.2
Financial or investment advice	39	31.2
Markets or marketing	92	73.6
Land rehabilitation issues	72	57.6
Integrating agroforestry into existing system	69	55.2

If such information is provided to the farmers through running capacity building programs, training and orientation workshops, the farmers can be urged to adopt agroforestry.

Suggestions for the Adoption of Agroforestry

All the respondents were asked for the suggestions to practice agroforestry on their farmlands. A collection of suggestions in this regard was necessary keeping in view their practical experience in this field.

Table-4 manifested that almost all the respondents (99.2%) suggested frequent visits of forest department staff. Out of 125 respondents, a majority of the respondents (81.6%) suggested to initiate some loan schemes or financial incentives for the promotion of agroforestry. A majority of the respondents (52.8%) of the farmers wanted to increase extension education activities and establishing forest nurseries that are easily accessible for them, while 24.8% of the farmers suggested for training to plant trees on their farmlands.

This data show that the farmers are facing the problems like technical assistance, marketing of wood and non-wood products and transportation facilities. If the forest department overcomes these necessary issues, the promotion of agroforestry can be done.

Table 4. Suggestions for speedy adoption of agroforestry

Suggestions	No.	%
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Increase extension education activities	66	52.8
Frequent visits of forest department Staff	124	99.2
Training of farmers to plant trees on farmlands	31	24.8
Provision of credit on easy terms to promote agroforestry	102	81.6
Better marketing facilities	82	56.6
Easily accessible nurseries	66	52.8

CONCLUSIONS

This study concludes that the farmers are keeping in view the practices of agroforestry but they have not sufficient resources and knowledge for its adoption. They lack coordination with forest department for technical assistance and guidance to grow trees on their farmlands. If any farmer has trees on his farmland, then he is facing the problems of marketing and transportation. The farmers perceive that the future of trees on farmlands is not increasing but these are best sources of fuel, wood and fodder for their livestock. The government departments and non-government organizations (NGOs) should seek agroforestry projects in rural areas not only to provide technical assistance and support but also financial assistance in terms of loan schemes, free provision of seedlings etc. To cater agroforest based wood and non-wood products, markets should be created near to tree cropping fields. However, a lot of research is still required regarding better marketing facilities for wood growers.

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