# SOME EDUCATIONAL AND ECONOMIC CHARACTERISTICS OF APPLE GROWERS IN QUETTA DISTRICT, PAKISTAN

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Some characteristics such as educational level, total land holding, orchard size and annual income of apple growers in Quetta district were explored. Types of apple varieties grown by them were also investigated through personal interview with 120 randomly selected apple growers. About half of them were small farmers (having farm size of less than 5 ha). Most of the apple growers had orchard area less than 4 ha. There were only 39% of the apple growers who reported that their annual income from all the sources was less than 50 thousand rupees. The most commonly grown apple varieties included Amri, Tor Klu, Shin Klu, Kashmiri and Mashhadi.

## INTRODUCTION

Quetta is one of the most important apple growing districts of Balochistan province. Out of 13,785 ha under apple with a total production of 110,730 tonnes in the province, only Quetta occupies 1,483 ha with a production of 17,300 tonnes (Govt. of Balochistan, 1989).

According to Quetta market rates and values of fruit in 1988-89, the apple was the second most valuable fruit. Of 409,668 million rupees value of all fruit, only apple earned 1,107.30 million rupees (Khan, 1992). Balochistan province receives most of its income from fruits while the maximum comes from apples.

Apple has a very high nutritive value and a highly favoured taste. It is nourished in the form of jams, marmalades, squashes, juices, etc. Percentage composition of edible apple is 84 water, 14.9 carbohydrates, 0.4 fat and 0.3 protein. In addition, it contains excessive amount of riboflavin, thiamine, vitamin A, ascorbic acid, phosphorus, calcium, sodium and iron. This nutritive fruit, if made a part of daily diet, will result in good human health because of a supply of essential vitamins and minerals to human body. Its higher production may arise the economic standard of Balochistan province in particular and Pakistan in general.

There is a provincial organization for Agricultural Extension work which is in direct contact with the apple growers and farmers with the mission to get agricultural innovations adopted by them. The main responsibilities of agricultural extension workers are to train farmers in production practices and to provide them with technical assistance in various production activities (Rowe and Guenthner, 1988). In order to get their job done the extension workers should not only know the technical aspects, rather they should also have an understanding of people and their problems (Prawl *et al.*, 1984). The present study was planned to help the extension workers understand the type of apple growers through a detailed analysis of their educational and economic characteristics.

## MATERIALS AND METHODS

The descriptive research methodology was used for this study. The apple growers of Quetta district were the universe of this study. This district consisted of 8 union councils (each union council consists of 3-6 villages). A multi-stage random sampling technique was used to draw a sample of 120 apple growers. Five union councils out of 8, 3 villages from each randomly selected union council and then 15 respondents from each randomly selected village were drawn on random basis.

The data were collected through personal interviews with the help of a pre-tested and validated research instrument. Field survey was conducted by Khan (1992).

## RESULTS AND DISCUSSION

The apple growers in Quetta district had a higher literacy rate (57%) than the national literacy rate (34%) (The World Bank, 1992). There were only 13% apple growers who had post-matric qualifications. The data concerning the educational level of apple growers in Quetta are given in Table 1.

**Table 1. Categories of respondents according to their educational level**

| Educational | Number | Percentage |
|---|---|---|
| Illiterate | 52 | 43.33 |
| Up to primary | 19 | 15.83 |
| Up to middle | 12 | 10.00 |
| Up to matric | 21 | 17.50 |
| Up to intermediate | 8 | 6.67 |
| Above intermediate | 8 | 6.67 |

The data concerning the land holding of the respondents revealed that about half of the apple growers were small farmers (having a farm size of less than 5 ha). There were only 8% of them who had land holding of about 20 ha. Regarding the orchard size of the respondents, it was concluded that about 46% of the respondents had their total orchard area not more than 2 ha. There were 22% of respondents who had 2 to 4 ha of orchard area, 12% had 6-8 ha and 10% had about 8 ha of orchard area. Majority of the growers had total annual income from various sources less than 0.1 million rupees. The data concerning the annual income of the respondents are presented in Table 2.

**Table 2. Annual income of respondents**

| Annual income (Rupees) | Number | Percentage |
|---|---|---|
| Up to 50 thousand | 46 | 38.33 |
| Up to 0.1 million | 33 | 27.50 |
| Up to 0.15 million | 16 | 13.33 |
| Up to 0.2 million | 14 | 11.67 |
| Above 0.2 million | 11 | 9.17 |

The data given in Table 2 indicated that more than two-third of the respondents had annual income equal to or less than 0.1 million rupees. The other one-third of them had their annual income above 0.1 million rupees. It means that the average apple grower was economically more sound than an average crop farmer of the country who remains just hand to mouth throughout the year.

There were many varieties of apple grown in the study area. Some of the varieties were more popular due to their higher market value, better taste, resistance to insects/pests and diseases. Some were less

Table 3. Areawise (ha) cultivation of different varieties of apple

| Variety | Not cultivated | | Up to 0.4 | | Up to 0.8 | | Up to 1.2 | | Up to 1.6 | | Above 1.6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Percentage | Number | Percentage | Number | Percentage | Number | Percentage | Number | Percentage | Number | Percentage |
| Amri | 33 | 27.50 | 47 | 39.17 | 21 | 17.50 | 9 | 7.50 | 3 | 2.50 | 7 | 5.93 |
| Tor Klu | 36 | 30.00 | 39 | 32.50 | 28 | 23.33 | 6 | 5.00 | 2 | 1.67 | 9 | 7.50 |
| Shin Klu | 59 | 49.17 | 36 | 30.00 | 16 | 13.34 | 1 | 0.83 | 1 | 0.83 | 7 | 5.83 |
| Kashmiri | 64 | 53.33 | 29 | 24.17 | 15 | 12.50 | 2 | 1.67 | 4 | 3.33 | 6 | 5.00 |
| Mashhadi | 44 | 36.67 | 41 | 34.17 | 24 | 20.00 | 4 | 3.33 | 3 | 2.50 | 4 | 3.33 |
| Qandhari | 85 | 70.83 | 17 | 14.17 | 10 | 8.33 | 5 | 4.17 | 2 | 1.67 | 1 | 0.83 |
| Kalat Special | 109 | 90.84 | 7 | 5.83 | 2 | 1.67 | - | - | 1 | 0.83 | 1 | 0.83 |
| Shakar | 112 | 93.33 | 6 | 5.00 | - | - | 2 | 1.67 | - | - | - | - |
| Nazuk Badan | 117 | 97.51 | 1 | 0.83 | 1 | 0.83 | - | - | 1 | 0.83 | - | - |
| Crab apple | 119 | 99.17 | 1 | 0.83 | - | - | - | - | - | - | - | - |

popular and rarely grown due to their susceptible nature to diseases and lower market prices (Cheema and Malhi, 1986). The data regarding the area of different varieties of apple growers in Quetta district are shown in Table 3.

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