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Amla growing farmers in Tamil Nadu: A social determinant analysis

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Abstract

The regional setup in Tamil Nadu in houses various plantations such as Amla, Tamarind and other fruits crop. In order to analysis the sustainability and viability of the Amla plantations a study was conducted in the Amla growing district of Tamil Nadu. The establishment and management of the plantations mainly rely on the social status of the people. There social determinates pave way towards the wealth of the plantation. Hence the study was designed as an export facto research design. Amla widely grown in various agroforestry systems by the farmers for profitable income and other benefits. Purposive sampling method was adopted for the selection of the district with the criteria of maximum area under cultivation of Amla. The study was conducted in Tirunelveli, Dindugaland Tirupur district of Tamil Nadu. In each district thirty farmers were selected, the total sample was 90. The required information was collected through personal interview method, with the help of comprehensive pre tested interview schedule. Percentage analysis was done for making sample comparisons. Social determinates were analysed in the selected district. The basic social variants such as age, educational status, family composition, farming experience in amla cultivation and land holding were the major attributes discussed for the study. These attributes play a major role in managing various technologies among the farmers.

Keywords: Amla growing farmers, social determinant

Introduction

Among various trees, Amla is widely grown in various agroforestry systems by farmers for profitable income and other benefits. Tree components overwhelmingly produce consumable or saleable products on a regular or seasonal basis. Thus, within fruit-tree-based agroforestry systems, the importance of competitive resource losses to crops is likely to be diminished because the tree component produces a valuable good in exchange for its competitive with the crop over a similar time scale.

High return per unit area under upland conditions is the ultimate result of fruit based agroforestry system. Aonla or Indian gooseberry (*Emblica officinalis*) has hardy nature, suitable to various wastelands, high productivity per unit area (15-20 t/ha), nutritive and therapeutic value. Hence, it has become an important fruit. Aonla has sparse foliage which allows 87.5 per cent area for intercropping during the initial 10 years. In order to analyse the social status of the Amla growing farmers the following study was conducted.

Objectives

Objective of the study was to analyse the Social status of the Amla growing farmers through social determinants.

Materials and Methods

Amla (*Phyllanthus emblica*) Family: Euphorbiaceae

Amla commonly known as the Indian gooseberry is a small to medium sized deciduous tree, 8-18 meters height with thin light grey bark exfoliating in small thin irregular flakes. Amla fruits are very rich in vitamin C having an ascorbic acid content varying from 0.9 to 1.3 per cent. This is the second highest among all the cultivated fruits. This fruit is highly valued among indigenous medicines. It is acrid, cooling, refrigerant, diuretic and laxative. Dried fruits are useful in hemorrhages, diarrhea, dysentery, anemia, jaundice, dyspepsia and cough. Tripala and chyavanprash are well known indigenous medicines in Ayurvedic system using amla fruits.

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Amla is used in a wide range of applications including processing, fast foods, cosmetics and extraction of alkaloids and antioxidants for use in pharmaceutical industry.

It is found throughout India, the seacoast districts and on hill slopes up to 200 meters, also cultivated in plains. It is hardy, prolific bearers suitable for cultivation in all types of soils with good drainage facility. In India, Amla is cultivated in Uttar Pradesh, Gujarat, Maharashtra, Karnataka and Tamil Nadu. The area under Amla cultivation in Tamil Nadu has increased to 3190 ha during 2013-14 with production of 57420 MT and first in productivity (18 MT) in the country. The agro climatic conditions in the south ensure that the produce is available during 10 months of the year against 3-5 months in the north, which till recently was considered the major amla growing region. Traditionally, forest pickings represented the major source of Amla for industrial requirements. In Tamil Nadu, major Amla cultivating areas are Salem, Nagarcoil, Dindigul and Villupuram. The farm gate prices range between Rs. 18 to Rs. 25 and can go down to Rs. 10. Economically viable and bigger fruits can be got from the third year of planting. Each tree will yield about 25kg of fruits a year. When the trees are five years old, the yield per tree will gradually rise to 50 kg a year. From the 8th year onwards, the average output per tree will be about 100 kg a year. The cost of raising an Amla plantation works out to Rs. 1.25 lakh per hectare. The returns from the third year of planting, at an average price of Rs. 10/kg of fruits, will be about Rs. 2.5 lakhs. There are over 30 value added products of Amla available for consumers. The most popular cultivable

varieties of Amla are Banarasi, NA 7, Krishna, Kanchan, Chakaiya and BSR 1.

Use and Benefits of Amla

The fruits are sour. Astringent, bitter, acrid, sweet, cooling, anodyne, ophthalmic, carminative, digestive, stomachic, laxative, alterant, aphrodisiac, rejuvenative, diuretic, antipyretic and tonic. They are useful in vitiated conditions of tridosha, diabetes, cough, asthma, bronchitis, cephalalgia, ophthalmopathy, dyspepsia, colic, flatulence, hyperacidity, peptic ulcer, erysipelas, skin diseases, leprosy, haematogenesis, inflammations, anemia, emaciation, hepatopathy, jaundice, strangury, diarrhea, dysentery, hemorrhages, leucorrhoea, menorrhagia, cardiac disorders, intermittent fevers and greyness of hairs.

Methodology

Purposive sampling method was adopted for selection of districts with the criteria of maximum area under cultivation of amla tree species. For amla Tirunelveli, Dindigul and Tiruppur districts together comprising 54 per cent of the state's area (season and crop report 2012-13) under Amla was selected. In each district thirty farmers cultivating amla species were identified with the criteria that farmers having varying age of plantation of these trees, so that the fruit yield, cost and returns data for the entire range of economic yielding period would be covered. The required information was collected through personal interview method with the help of comprehensive pre-tested interview schedule.

Location, weather and climate of the study area

Study area	Latitude	Longitude	Avg. rainfall	Avg. temp
Dindigul	10°3'N	77°15'E	717.0 mm	19.9-35.8 °C
Tirunelveli	8.73°N	77.7°E	752.0 mm	22.3-35.6 °C
Tiruppur	10°24'N	77°26'E	605.2 mm	18-35 °C

Soil type of the study area

Study area	Soil type
Dindigul	Red to dark red, deep, fine loamy, non calcareous, slightly acid to neutral soils
Tirunelveli	Very Gentle slope lands, Moderately well drained, brown soil very deep (> 100 cm), Sandy day loam, Moderately slow
Tiruppur	Dark brown, shallow, coarse loamy, calcareous mildly alkaline, well drained soils

Tools of analysis

Percentage analysis

For making simple comparisons, details on yield and cultivation aspects of selected tree species will be analyzed through simple percentage analysis.

Results and Discussions

The present study examines the social attributes of Amla growing farmers on the specified objectives, the data collected from sample respondents were analyzed. The results thus obtained are presented and discussed in the following titles:

Social attributes of the Amla growers

In the selected districts the social attributes of the amla growers was analysed. The basic social variants such as age, educational status, family composition, farming experience, farming experience in amla cultivation and land holding were the major attributes discussed for the topic. These attributes play a major role in deciding the awareness and adoption of various technologies among the farmers. The results are presented in percentage and discussed in Table 1.

Table 1: Social attributes of the Amla growers n=90

a. Age			
S. No	Age (in Years)	Number	Percentage (%)
1.	Below 35 (< 35) Young	4	4.44
2.	35 – 45 Middle	21	23.33
3.	Above 45(>45) Old	65	72.22
	Total	90	100
b. Educational status			
S. No	Particulars	Number	Percentage (%)
1.	Graduate/diploma	7	7.78
2.	Higher secondary	15	16.67
3.	High school	12	13.33
4.	Primary	29	32.20
5.	Illiterate	27	30.00
	Total	90	100
c. Family composition			
S. No	Particulars (nos)	Number	Percentage (%)
1.	Small (<7)	69	76.67
2.	Medium (7-11)	12	13.33
3.	Large (>11)	9	10.00
	Total	90	100
Mean : 6.5 SD:4.9			
d. Farming experience			
S. No	Particulars (years)	Number	Percentage (%)
1.	Low (<10)	40	44.44
2.	Medium (10-15)	24	26.67
3.	High (>15)	26	28.89
	Total	90	100
Mean : 37.5 SD:1.76			
e. Farming experience in Amla			
S. No	Particulars (years)	Number	Percentage (%)
1.	Low (<7)	33	36.67
2.	Medium (7-10)	46	51.11
3.	High (>10)	1	1.11
	Total	90	100
Mean : 7.5 SD:3.5			
f. Land holding			
S. No	Particulars (acres)	Number	Percentage (%)
1.	Small (<5)	65	72.22
2.	Marginal (05-10)	24	26.67
3.	Big (>10)	1	1.11
	Total	90	100

a. Age of the farmers

The result furnished in the Table 1 shows that 72.22 per cent of the heads of the sample households belonged to the age group of above 45 years, followed by 23 per cent in the middle age group of above 35-45 years. About 4.44 per cent of the heads of sample farm households were in the age group of less than 35 yearsie Young age group. Thus, majority of the heads of households were in the middle age and above 45 years group.

b. Educational Status of farmers

The literacy levels of heads of sample households are presented in Table 4.1.b. From the table it could be observed that the illiterates accounted for 30 per cent. The heads of the sample farm households having primary education and higher secondary education was found to be 32.2 and 16.6 per cent respectively. The highest percentage of heads of the households was found to be having high school education (32.2 per cent) and the lowest was found to be educated at collegiate (7.78 per cent) level.

c. Family Size of farmers

The mean of the data on family size could be seen from the Table 1 that among the amla producing sample farm

households 76.67 per cent belonged to small family size with less than seven persons, 13.33 per cent belonged to medium sized family with a family size of seven to eleven persons and 10.00 per cent of the farm households belonged to large family size with more than eleven persons.

d. Experiences in Farming

It could be inferred from the Table 1 that 28.89 per cent had the experience of more than 15 years in farming, followed by 26.67 per cent with experience of 10-15 years. Majority of the farmers (Nearly 44.44 per cent) of the farmers are having an experience of less than 10 years.

e. Experiences in Amla Farming

Nearly 51.11 per cent of the farmers have an experience of between 7-10 years in amla cultivation, followed by 36.67 per cent with experience of below 7 years and 1.11 per cent with the experience of above 10 years.

f. Land holding

Table1 conveys that around72.22 per cent of the farmers were small farmers with less than5 acres land holding, followed by 26.67 per cent were marginal farmers of 5-10 acres of land and 1.11 per cent were big farmers of above 10 acres of land.

Conclusion

The social analysis of the Amla growing farmers reveals that majority of them belong to Old age group with less experience. And most of the land holdings is small farming. Hence the farmers could be provided with technical training and the acceptance level would also be high. As the farmers are literate training also would be more effective for them.

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