CATEGORISATION OF HORTICULTURE IN HIMACHAL PRADESH

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ABSTRACT

Himachal Pradesh is the state in the north India. Himachal Pradesh was anciently known as Dev Bhumi (The Abode of Gods) and is abundance in natural beauty. The economy of the state is highly dependent on three sources: hydroelectric power, tourism and agriculture. The agricultural sector of the Himachal Pradesh has more than 45 percent contribution in its economy in terms of the state's domestic product. Himachal Pradesh agriculture provides employment to around 71 percent of the working population in the state. The entire population of the state more or less depends directly upon the agriculture of Himachal Pradesh. The major portion of the revenue earning in the state's economy is carried out by the cash crops in the Himachal Pradesh agriculture. Himachal Pradesh is the state having more than 50 percent income by the way of agriculture. Horticulture is one of the significant ingredients of agriculture. Horticulture is basically associated with a wide variety of crops such as fruits, vegetables, spices, plantation crops, floriculture, medicinal and aromatic plants, cashew etc. The study is based on Himachal Pradesh entitled, "Categorisation of Horticulture in Himachal Pradesh". The objectives of the paper are to know the different types of the horticulture and to categorise the horticulture in Himachal Pradesh based on demographic factors.

Keywords: Horticulture, Demography, Pomology, Olericulture, Floriculture, spices and condiments

INTRODUCTION

Horticulture means the art or practice of garden cultivation and management. Specialized cultivation of vegetables, fruits and flowers is called horticulture. In USA it is termed as 'truck farming' as the vegetables and fruits grown far away from the urban and industrial centres are supplied to the markets through the trucks and transport carriers. The horticulture sector which includes a wide variety of crops such as fruits, vegetables, spices, plantation crops, floriculture, medicinal and aromatic plants, cashew etc. is nowadays recognised as an important sector for potential diversification and value addition in agriculture. It has been recognised that growing horticulture crops is now an ideal option to improve livelihood security, enhance employment generation, attain income and food security, and increase income through value addition. Most of the work is done by hand labour. The market gardens are scientifically managed to achieve optimum yields and handsome returns. Horticultural crops, particularly fruits are now receiving increasing attention in view of its increasing commercial importance accentuated by quick transportation to vast internal market. India accounts for 10 per cent of world production and ranks first in the world in production of fruits and second in vegetables, accounting roughly 10 and 15 per cent, respectively, of total global production. of fruit crops, mango, banana, citrus, apple, guava, papaya, pineapple and grapes account for the bulk of fruit production. In dry land areas, ber and amla have become popular.

NEED OF THE STUDY

The study of populations, especially with reference to size and density, fertility, mortality, growth, age distribution, migration, and vital statistics and the integration of all these with social and economic conditions. It is defined as statistical data about the characteristics of a population, such as the age, gender and income of the people within the population. When the census assembles data about people's ages and genders, this is an example of assembling information about demographics. Analysis based on demographic factor is the key indicator in all the research. Demographic analysis is of

vital importance and very useful in decision making. The paper entitled, "Categorisation of Horticulture in Himachal Pradesh", is of the great importance to the government of Himachal Pradesh in decision making and policy formulation for the horticulturist. It will also proves beneficial to the research scholars for planning in review of literature.

OBJECTIVES OF THE STUDY

The objective of the study is to analyse the types of horticulture on the basis of demographic factor

SAMPLING, TOOLS AND TECHNIQUES

To achieve the objective of the study primary data from three districts namely Shimla, Kinnaur and Kullu have been collected. The sample size is 300 and sampling technique is purposive. The data collected through primary probe are then analysed with the help of cross tabulation using SPSS 20.

TYPES OF HORTICULTURE

Horticulture is an intensive subset of agriculture that deals with flowers, landscape plants, vegetables, and fruits. Horticulture is socially important because it improves how we use plants, for food and other human purposes, as well as repairing the environment and personal aesthetics. Horticulture consists of the following divisions:

i. Pomology: Study of fruit crops

ii. Olericulture: It is scientific study of vegetables.

iii. Floriculture: It is the art of growing, selling, designing and arranging flowers and foilage plants.

iv. Spices: Spices are those plants, the products of which are made use of as food adjuncts to add aroma and flavour e.g. pepper, cardamom, clove etc.

v. Condiments: Condiments are also plants, products of which are used as food adjuncts to add taste only e.g. coriander, cumin.

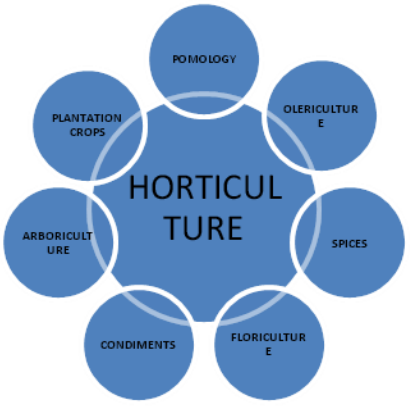

Figure Horticulture and its types

vi. Plantation crops: Which are grown in extensive scale?

vii. Arboriculture: Study and selection; planting, care and removal of individual trees, shrubs, vines and other perennial woody plants.

IMPORTANCE OF HORTICULTURE

The horticulture has gained importance in recent years as a significant component of agriculture in India. The new movement is given for the development of the horticulture, particularly for growing fruits and vegetables, which constitute important segment of Indian diet. *Horticulture* is *important* for the following considerations

Exotic fruits and vegetables production - Horticulture is now regarded as the largest subsector of agriculture producing high quality traditional and exotic fruits and vegetables. There are now many agricultural universities, research institutions and state departments of horticulture directly engaged in fundamental and applied research producing new strains with good varietal characteristics. Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya (Palampur), Dr. Yashwant Singh Parmar University of Horticulture and Forestry (Solan) and ICAR-Central Potato Research Institute,Shimla are the examples of research institution in Himachal Pradesh. They run constantly adjusted training programmes for enterprising farmers motivating them to adopt modern technology and develop their skills in producing and preparing quality produce.

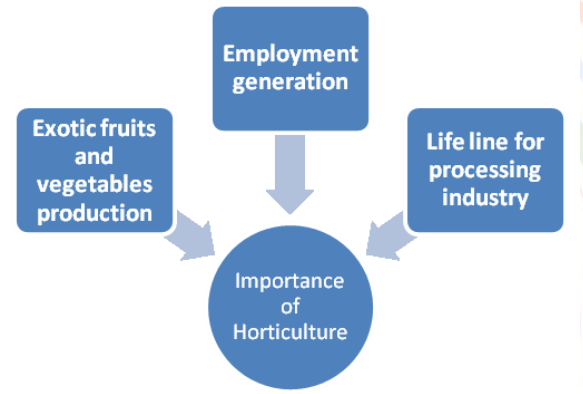

Figure : Importance of Horticulture

Employment generation - Employment opportunities provided by this sector to the farm population engaged in production, transportation, processing and marketing operations in addition to the entrepreneurs seeking self employment. Horticulture crops contribute to rational income of the growers. Ahmad and Rifat (2012)

Life line for processing industry - Horticultural crops plays an important role in commerce, particularly in export trade and processing industry. Adani, Patanjali and HPMC are some of the major groups who purchase the fruits from the farmers of Himachal Pradesh.

Summarizing the advantages of horticultural crops, it may be stated that, they supply better food, higher income, all the year round occupation, a diversified system of giving an aesthetic touch to life, stimulus to promote intelligence. Horticultural farming promotes the development of natural resources, yields higher returns from land, enhances the land values, creates a better purchasing power among the people and as a consequence adds to the general prosperity.

GENDER AND HORTICULTURE CATEGORY

Table 1.1 shows the relationship between gender and horticulture categories. It reveals that 76.2 percent male respondents are fruit growers followed by 3.9 percent are vegetable. Similarly in this category of distribution 18 percent are growing fruits and vegetables followed by medicinal plant by 1.9 percent. On the other hand majority of female respondents shows their keen interest in fruits growing with the support of 54.3 percent followed by vegetable growers by 21.3 percent.

Table 1.1 Gender and Horticulture Category

Gender	Types of Horticulture				Total
	Fruits	Vegetable	Fruits and Vegetables	Medicinal Plant	
Male	157	8	37	4	206
	76.2%	3.9%	18.0%	1.9%	100.0%
Female	51	20	23	0	94
	54.3%	21.3%	24.5%	0.0%	100.0%
Total	208	28	60	4	300
	69.3%	9.3%	20.0%	1.3%	100.0%

Chi square28.602, Pvalue .000, Contingency coefficient .295

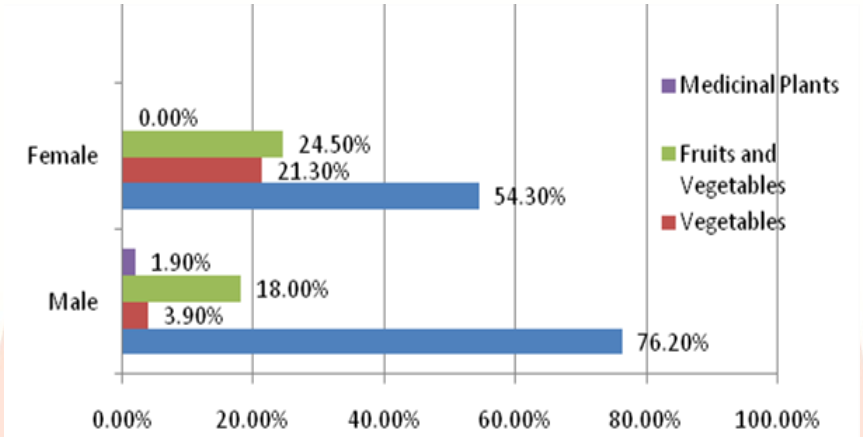

Figure : Gender and Horticulture Category

Similarly the percentage of fruits and vegetable growers is 24.5%. No female respondent grows medicinal plant. It is concluded from the table that majority of the respondents are fruit growers followed by fruits and vegetable. Table shows that the calculated value of chi square that is 28.602 is significant at 5 percent level of significance. The value of contingency coefficient is .295 shows that there is a relationship exist between the variable.

DISTRICT AND HORTICULTURE CATEGORY

Table 1.2 discloses the district wise categorisation and types of horticulture they are associated. Table shows that in Shimla district majority that is 70 percent are fruits growers followed by 9 percent are vegetable growers. 21 percent horticulturists are fruits and vegetable grower. No one in this district is interested in growing medicinal plants. In the subsequent category of Kinnaur district once again 70 percent are fruit growers and 21 percent are fruits and vegetables grower. The final and the last district again tell that majority that is 68 percent are interested in growing fruits and 20 percent shows their keen interest in fruits and vegetables.

Table 1.2 District and Horticulture Category

District	Types of Horticulture				Total
	Fruits	Vegetable	Fruits and Vegetables	Medicinal Plant	
Shimla	70	9	21	0	100
	70	9	21	0	100
Kinnaur	70	10	19	1	100
	70	10	19	1	100

Kullu	68	9	20	3	100
	68	9	20	3	100
Total	208	28	60	4	300
	69.3	9.3	20	1.3	100

Chi square 3.710, Pvalue .716, Contingency coefficient .111

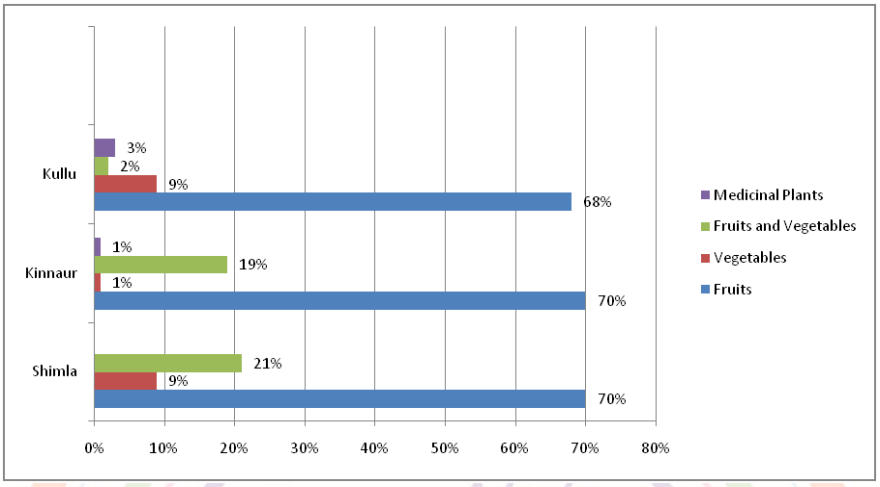

Figure : District and Horticulture Category

It is concluded from the table that the majority of the respondents are fruits grower. The chi square value is 3.710 which is insignificant at 5 percent level of significant. The contingency coefficient is .11 it means that relationship exist between variables.

AGE AND HORTICULTURE CATEGORY

Table 1.3 shows the relationship between age and types of horticulture. It is revealed from the table that in the first age group of below 30, majority that is 83.8 percent are fruits grower followed by vegetables grower by 10.8 percent. Only 2.7 percent in this age group grows fruits and vegetables and medicinal plant. Similarly in the age group of 31-40 years again majority that is 48.8 percent are fruits grower followed by 46.5 percent are vegetables growers and 2.3 percent are fruits and vegetables and medicinal growers. On the other hand 68 percent are fruits grower and 28.1 percent are fruits and vegetables growers in the age group of 41-50. Only 2.3 percent and 1.6 percent are vegetables and medicinal plant growers. Likewise in the age group of 51 and above majority again strike the fruits grower by the support of 75 percent followed by vegetable and fruits grower by 23.9 percent. Only 1.1 percent in the age group is vegetables grower.

Table 1.3 Age and Horticulture Category

Age	Types of Horticulture				Total
	Fruits	Vegetable	Fruits and Vegetables	Medicinal Plant	
Below 30	31	4	1	1	37
	83.8%	10.8%	2.7%	2.7%	100.0%
31-40	21	20	1	1	43
	48.8%	46.5%	2.3%	2.3%	100.0%
41-50	87	3	36	2	128
	68.0%	2.3%	28.1%	1.6%	100.0%
51 & Above	69	1	22	0	92
	75.0%	1.1%	23.9%	0.0%	100.0%
Total	208	28	60	4	300
	69.3%	9.3%	20.0%	1.3%	100.0%

Chi square 100.647, P value .000, Contingency coefficient.501

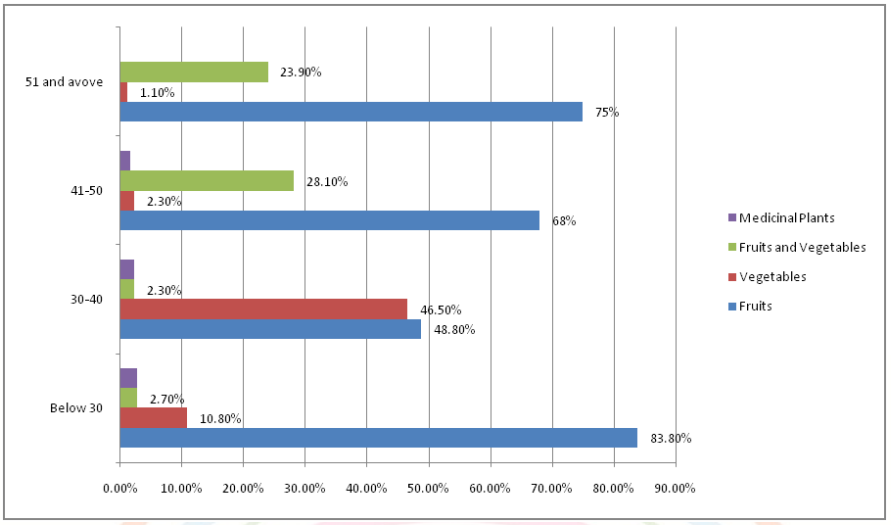

Figure : Age and Horticulture Category

In totality it can be summarised from the table that majority of respondents are fruits grower. Table shows that the calculated value of chi square that is 100.647 is significant at 5 percent level of significance. The value of contingency coefficient is .501 shows that there is a relationship exist between the variable.

EDUCATION AND HORTICULTURE CATEGORY

Table 1.4 presents the relationship between education and horticulture category. Table pointed that in illiterate category 90.9 percent are fruits grower followed by 3 percent are vegetables, fruits and vegetables and medicinal plants grower. One more time in the 10Th pass category 51.6 percent are fruits grower followed 43.5 percent are vegetable growers. Only 3.2 percent and 1.6 percent are vegetables and fruits and medicinal plants grower respectively. Similarly in the 12Th pass category majority again hit the fruits grower that is 67.9 percent. 30.3 percent are growing fruits and vegetables. Likewise 75 percent and 25 percents are fruits and vegetable and fruits grower respectively.

Table 1.4 Education and Horticulture Category

Education	Types of Horticulture				Total
	Fruits	Vegetable	Fruits and Vegetables	Medicinal Plant	
Illiterate	30	1	1	1	33
	90.9%	3.0%	3.0%	3.0%	100.0%
10Th	32	27	2	1	62
	51.6%	43.5%	3.2%	1.6%	100.0%
12Th	74	0	33	2	109
	67.9%	0.0%	30.3%	1.8%	100.0%
Graduation & Above	72	0	24	0	96
	75.0%	0.0%	25.0%	0.0%	100.0%
Total	208	28	60	4	300
	69.3%	9.3%	20.0%	1.3%	100.0%

Chi square 126.468, P value .000, Contingency coefficient .545

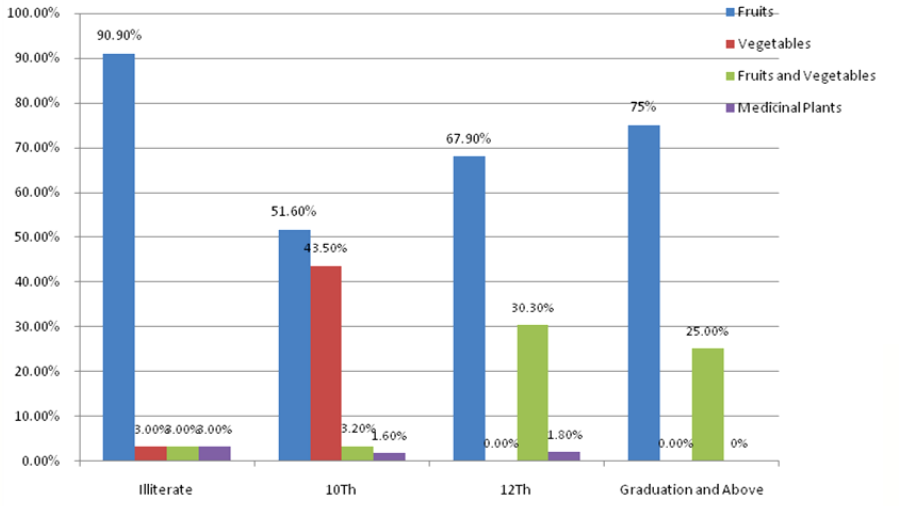

Figure : Education and Horticulture Category

Hence it can be summarised from the table that majority are fruits growers and respondents have a little interest in growing medicinal plants. Table shows that the calculated value of chi square that is 126.468 is significant at 5 percent level of significance. The value of contingency coefficient is .545 shows that there is a relationship exist between the variable.

INCOME AND HORTICULTURE CATEGORY

Table 1.5 shows the relationship between income and horticulture category. Table discloses below 5Lac, 97.3 percent are fruits grower followed 1.3 percent are equally vegetable and fruits and vegetables grower. Again the next group of 5-10Lac majority again goes with the fruits grower with the support of 66.7 percent followed 29 percent by vegetables grower. Only 2.2 percent are growing fruits and vegetable and medicinal plants. Likewise in the third income group of 10-15Lac 68.3 percents are fruits grower followed 30.7 percent are fruits and vegetables grower. Similarly for the first time in the study majority that is 83.9 percent in the income group above 15Lac respondents are growing fruits with the combination of vegetables followed by 12.9 percent by fruits growers.

Table 1.5 Income and Horticulture Category

Income	Types of Horticulture				Total
	Fruits	Vegetable	Fruits and Vegetables	Medicinal Plant	
Below 5 Lacs	73	1	1	0	75
	97.3%	1.3%	1.3%	0.0%	100.0%
5-10	62	27	2	2	93
	66.7%	29.0%	2.2%	2.2%	100.0%
10-15	69	0	31	1	101
	68.3%	0.0%	30.7%	1.0%	100.0%
15 & Above	4	0	26	1	31
	12.9%	0.0%	83.9%	3.2%	100.0%
Total	208	28	60	4	300
	69.3%	9.3%	20.0%	1.3%	100.0%

Chi square 178.234, P value .000, Contingency coefficient .610

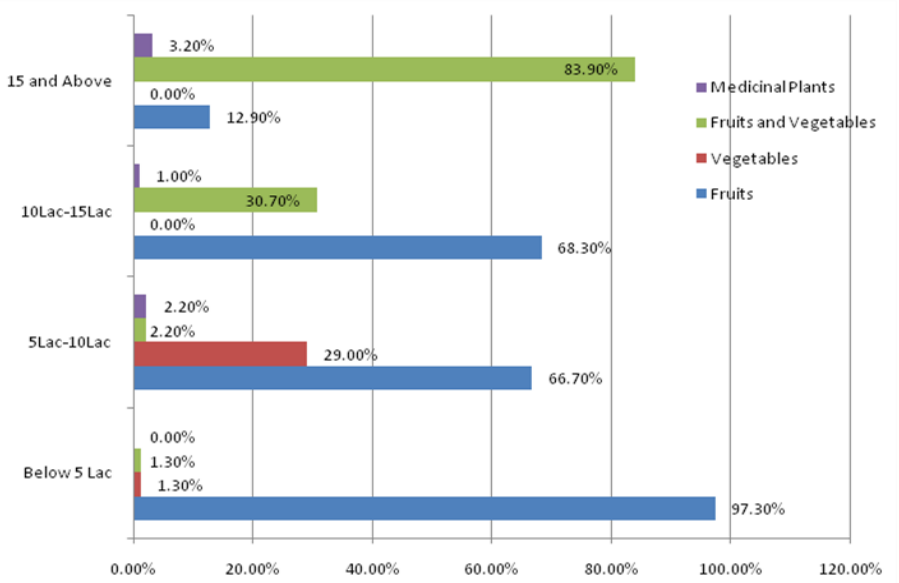

Figure : Income and Horticulture Category

It is summarised from the table that majority are fruits grower followed by fruits and vegetables grower. Table shows that the calculated value of chi square that is 178.234 is significant at 5 percent level of significance. The value of contingency coefficient is .610 shows that there is a relationship exist between the variable.

SUMMARY, CONCLUSION AND SUGGESTION

The study dealt with the demography wise classification of the respondents of the three districts Shimla, Kinnaur and Kullu. The following are the main conclusions of the study are -

Gender wise 76.2 percent male and 54.3 percent female respondents are fruits growers. It is summarised that gender wise majority of respondents are fruit growers.

Districts, age, education and income wise classification of the respondents again shows the same trend. 69.3 percent respondents are fruit growers.

Himachal Pradesh is also known as the 'Apple State of India' for its large-scale production of fruits and also because the country's first apples were cultivated here. Himachal Pradesh is the second largest producer of Apples after Jammu & Kashmir in the country and accounts for 30.9% of the total production of apples in the country. Farmers have engaged themselves highly in the fruit cultivation and it is also a great blessing to the economy of the state. The result of the paper also clears that majority of the respondents are fruit growers therefore it is suggested that the government should pay more attention towards the fruit growers related to different issues and concerns like subsidies, credit disbursement and marketing. Also to increase the interest of the horticulturist in other types of horticulture low-cost cargo, insurance and marketing facilities should be developed to assure horticulturist.

REFERENCES

Jagadish Prasad, Encyclopaedia of Agricultural Marketing, Vol.6, New Delhi, Mittal Publication, 2002
K.R. Kulkarni, Agricultural Marketing in India, Mumbai, Co-operation Books, 1964,
K. Uma Shankar Patnaik and K. Anubamozhi, Price Behaviour of Indian Agricultural Commodities, New Delhi, Discovery Publishing House, 1991
S.P. Gupta, Statistical Methods, Sultan Chand and Sons, New Delhi, 1990