

Perception of Horticultural Students towards Awareness and Preference of Self-Employment Avenues

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ABSTRACT

This study was conducted during October-November 2016 by purposively selecting B Sc Horticulture Students from two colleges namely College of Horticulture, Hiriyur, University of Agricultural and Horticultural Sciences, Shimoga and College of Horticulture, Kolar, University of Horticultural Sciences, Bagalkot. A total of 112 students from these colleges constituted the sample for this study. The study focused on perception of students on awareness and preference of self-employment avenues in horticultural sector. It was evident from the results that most of the students are fully aware of 'nursery management', 'processing of fruits and vegetables', 'cut flower production / high-tech floriculture', 'landscape consultancy', 'ornamental plants propagation', 'indoor gardening', 'horticulture clinic, nursery, landscaping, floriculture' and 'vegetable production and marketing' for self-employment. Most of the respondents preferred (the areas of their choice of self-employment such as) 'nursery management', 'seed production and processing unit', 'processing of fruits and vegetables', 'cut flower production/high-tech floriculture', 'landscape consultancy', 'value addition centres', 'horticulture clinic- nursery, landscaping, floriculture' and 'vegetable production and marketing' as self-employment avenue. It is supported that the agricultural and horticultural colleges should focus and strengthen these areas through more and more hands on experience activities as well as field visits.

Key words: Nursery management; Processing of fruits; Vegetables; Cut flower production; High-tech floriculture;

Agriculture is the main source of livelihood for more than half of the population of India. Agriculture provides the bulk of wage goods required by non-agriculture sectors and also provides raw materials for the industrial sector. India is a largely an agrarian economy - with 52.1 per cent of the population estimated to be directly or indirectly employed in agriculture and allied sectors in 2009-10 (*Economic Survey 2010*). The joint efforts of Government of India, State Departments and the farming community have succeeded in achieving record production of 244.78 million tones of food grains during 2010-11. This record production has been succeeded due to transfer of advanced crop production technologies to farmers under various crop improvement schemes. Other causes behind record production include remunerative prices for various crops through enhanced

minimum support prices. Agriculture in India is of significance because of this as well as a history of food shortages and a growing population.

Horticulture sector is one of the major sectors contributing to the revenue for GDP in India. According to 1991 census there were 214.5 million youth between 15-35 years in India, of which 45.37 lakh educated youths are unemployed. The horticultural graduates are mostly employed in Government sector, private sector companies and banking sector. Now the time has come where the horticultural graduates passed out from the agricultural or horticultural universities have to look forward to other self-employment avenues or entrepreneurship activities. During the 4 years of degree program students have wide exposure to horticultural crops viz., tropical fruits, vegetable and commercial

crops, plantation crops, spices, temperate fruits, medicinal and aromatic crops and dry land horticultural crops and also processing and product development, landscaping, nursery management, production of seed/planting material, etc., which provide ample self-employment opportunities keeping these aspects in mind, the present study was planned with following objectives.

- To study the personal and socio-economic profile of the horticultural students.
- To understand the purpose of joining this degree programme.
- To know the awareness of students towards self-employment in horticulture sector.
- To know their preference among self-employment avenues.
- Reasons for taking up of self-employment in the years to come.
- To know the constraints perceived in taking up self-employment.

METHODOLOGY

The fifty-four students of third year of B. Sc. Horticulture from College of Horticulture, Hiriyyur, University of Agricultural and Horticultural Sciences, Shimoga and 58 students of B. Sc. Horticulture final year from College of Horticulture, Kolar, University of Horticultural Sciences, Bagalkot purposively selected for this study. They have visited NAARM during October and November 2016 as a part of their mandatory visit to various national agricultural institutions as an exposure cum educational visit. The students from these two colleges totaling 112 students constituted the sample size. A pre-tested and well-structured questionnaire was developed as a tool for data collection. The purpose of collecting data was explained to the respondents. The study focused on personal, socio-economical, demographic variables of respondents. Information collected on other components such as 'purpose to join this degree program', 'awareness towards self-employment avenues', 'preference of self-employment avenues', 'reasons for taking up of self-employment' and 'perceived constraints in taking up of self-employment'. Finally, the data was tabulated using simple statistical tools such as frequency and percentages and was interpreted.

RESULTS AND DISCUSSION

The personal and socio-economical characteristics

of the respondents such as gender, rural-urban background, occupation, landholding and annual income are presented in Table 1.

More than half (53.57%) of the respondents were female and the remaining 46.43 per cent were males. The shift in the trend is observed with respect to gender in agricultural education. More number of girl students is entering into agricultural education which is a significant improvement in the recent past. The majority (65.18%) belonged to rural background while the remaining 34.82 per cent of the respondents had urban background. The students from rural area expected to enroll more as compare to their counterparts from urban. The rural students had farming background and their average landholding was 5.51 acres. The average acreage under horticultural crops is 3.06 acres. The parents of more than half (56.25%) of the respondents' are involved in farming activities and agriculture is their major occupation. Regarding occupation of their mothers, it was observed that majority (83.04%) were house wives and they assist in agricultural activities. Majority (70%) of the respondents' had income upto Rs.1.00 lakh, followed by 2.10– 3.00 lakh for 10.71 percentage of the respondents. It was also found that the average annual income is Rs.31871. It indicates that the respondents had small land holdings as one of their major income source.

It was revealed (Table 2) that majority (37.50%) of the respondents joined this program to gain more knowledge in horticulture sector followed by 21.43 per cent of the respondents who desired to get government jobs while 15.18 per cent expressed that they joined this degree program to serve farming community. Only 13.39 per cent of the respondents joined this program to start their own horticulture based enterprise. While 9.82 per cent of the respondents said that they joined this program as they had farming background and may like to improve their own farm, rest 2.68 per cent of the respondents joined this program as they had interest to enter into research. Therefore, it can be inferred that more than half (50.89%) of the respondents interested either to gain more knowledge in horticulture or to start their own enterprise. These findings are partially in tune with the findings of *Govinda et al (2012)*. The respondents who joined this degree program had clear purpose and goal and their decision to join was considered as boon.

Table 1. Personal and socio-economic profile of the respondents (N=112)

Profile	Categories	No.	%
Gender	Male	52	46.43
	Female	60	53.57
Background	Rural	73	65.18
	Urban	39	34.82
Occupation	<i>Mother</i>		
	House wife	93	83.04
	Farmer	13	11.61
	Govt. Service	6	5.36
	<i>Father</i>		
	Farmer	63	56.25
	Business	10	8.93
	Govt. Service	35	31.25
	Daily paid worker	4	3.57
	Total land holding	Landless	49
1-5 acres		40	35.71
6-10 acres		16	14.29
>than 10 acres		7	6.25
<i>Average land holding is 5.51 acres</i>			
<i>Area under horticulture crops</i>			
	No area under Horticulture	56	50.00
	up to 3 acres	39	34.82
	4-6 acres	11	9.82
	> than 6 acres	6	5.36
<i>Average area under horticulture 3.06 acres</i>			
Annual income	Upto 1.00 lakh	78	69.64
	1.1 lakh - 2.00 lakh	11	9.82
	2.1 lakh -3.00 lakh	12	10.71
	3.1 lakh - 4.00 lakh	7	6.25
	>than 4 lakh	4	3.57
<i>Average annual income Rs.31, 871</i>			

Table 2. Purpose to join this programme (N=112)

Purpose to join this course	No.	%
To get government job	24	21.43
To serve the farming community	17	15.18
To gain more knowledge in horticulture sector	42	37.50
Farming background or to improve my own farm	11	9.82
To start my own enterprise related to horticulture	15	13.39
To enter into research	3	2.68

The students of B.Sc. (Hort.) are well equipped with the knowledge on various advanced technologies of horticulture crops cultivation, various climatic conditions. Their awareness level on various self-employment avenues has been indicated in Table 3.

For analyzing the awareness of self-employment (Table 3), respondents were asked to give their opinion on 21 areas of self-employment. Students expressed the awareness on each area in terms of fully aware, partly aware and not aware. Majority (71.43%) of the respondents were fully aware of “Nursery management” as one of the self-employment avenues. Equal percentage (53.57) of respondents were aware of “Cut flower production / high-tech floriculture” and “Horticulture clinic, nursery, landscaping, floriculture” as the self-employment avenues in horticulture sector. In case of “Vegetable production and marketing”, “Agri tourism”, “Ornamental plants propagation”, “Indoor gardening”, “Seed production and processing units”, “Mushroom cultivation” and “Retail marketing outlets for processed agri-products”, 52.68, 49.11, 48.21, 46.43, 42.86, 40.18 and 39.29 percentage of respondents respectively were fully aware of these enterprises as self-employment avenues.

Around 41.07 to 59.82 percentage of respondents were not aware of the avenues such as “Production, processing and marketing of medicinal and aromatic plants”, “Micro-propagation including plant tissue culture labs and hardening units”, “Information technology kiosks”, “Mushroom cultivation”, “Cool chain including cold storage units”, “Retail marketing outlets for processed agri-products” and “Crop protection services: pest surveillance, diagnostic and control services”. Therefore, it is necessary for the agricultural / horticultural universities to include the field visits and hands on training in various agricultural / horticultural production and processing units or enterprises in their curriculum. It would help the students to get motivated towards the self-employment avenues.

The results also indicated that 21.43 percent to 30.36 percentage of the respondents partially aware of the self-employment avenues such as “Post-harvest management centres for sorting, grading, storage, standardization and packaging (30.36%)”, “Vegetable production and marketing (25%)”, “Cool chain including cold storage units (25%)”, “Value addition centres (24.11%)”, “Soil and water quality cum inputs testing laboratories (24.11%)”, “Seed production and processing units (23.21%)”, “Crop protection services: pest surveillance, diagnostic and control services (22.32%)”, “Horticulture clinic, nursery, landscaping, floriculture (22.32%)” and “Extension consultancy services

Table 3: Awareness towards Self-employment avenues (N=112)

Self-employment avenues	Awareness level					
	Fully		Partially		Not aware	
	F	%	F	%	F	%
Nursery management	80	71.43	15	13.39	17	15.18
Seed production and processing units	48	42.86	26	23.21	38	33.93
Processing of fruits and vegetables	71	63.39	18	16.07	23	20.54
Micro-propagation including plant tissue culture labs and hardening units	33	29.46	19	16.96	60	53.57
Cut flower production / high-tech floriculture	60	53.57	20	17.86	32	28.57
Landscape consultancy	58	51.79	17	15.18	37	33.04
Production, processing and marketing of medicinal and aromatic plants	32	28.57	13	11.61	67	59.82
Mushroom cultivation	45	40.18	12	10.71	55	49.11
Ornamental plants propagation	54	48.21	18	16.07	40	35.71
Indoor gardening	52	46.43	22	19.64	38	33.93
Agri tourism	55	49.11	19	16.96	38	33.93
Information technology kiosks	40	35.71	16	14.29	56	50.00
Crop protection services: pest surveillance, diagnostic and control services etc.	41	36.61	25	22.32	46	41.07
Soil and water quality cum inputs testing laboratories	39	34.82	27	24.11	46	41.07
Extension consultancy services	39	34.82	24	21.43	49	43.75
Value addition centres	41	36.61	27	24.11	44	39.29
Cool chain including cold storage units	32	28.57	28	25.00	52	46.43
Post-harvest management-sorting, grading, storage, standardization and packaging	38	33.93	34	30.36	40	35.71
Horticulture clinic, nursery, landscaping, floriculture	60	53.57	25	22.32	27	24.11
Vegetable production and marketing	59	52.68	28	25.00	25	22.32
Retail marketing outlets for processed agri-products	44	39.29	22	19.64	46	41.07

(21.43%)". All these areas of self-employment avenues need to be focused by the agricultural / horticultural colleges as a part of their curriculum so that the students may get attracted to these potential employment areas and would come forward to start their own enterprise in these areas.

The students were asked to assign the rank based on their preference to at least for 10 areas of self-employment avenues and results are presented in Table 4.

'Nursery management' was ranked by 23.21, 16.07, 12.50 and 10.71 percentage of the respondents as first to fourth rank respectively. 'Seed production and processing unit' was ranked by 12.50 and 16.07 percentage of respondents as second and fifth rank, respectively. 'Processing of fruits and vegetables' was assigned second, third and fourth ranks by 12.50, 14.29 and 8.93 percentage of respondents as their preferred area of self-employment avenues. Regarding 'cut flower production / high-tech floriculture', 10.71 and 12.50 per cent of students preferred as their fourth and fifth choice for self-employment. 'Landscape consultancy' emerged as first and fourth choices for equal percentage (10.71)

of respondents. 'Mushroom' cultivation was the fifth choice for self-employment to 14.29 per cent of the respondents. The 'indoor gardening' was the second choice for 10.71 percentage of the respondents, while 'Value addition centres' was the third choice for Self-employment Avenue to 14.29 per cent of the respondents. 'Horticulture clinic- nursery, landscaping, floriculture' was the first (8.93%) and fifth (12.50%) choice to the respondents as their self-employment avenue. The self-employment avenue 'vegetable production and marketing' emerged as first, second, fourth and fifth choice for 7.14, 14.29, 8.93 and 7.14 percentage of respondents respectively.

Therefore, it can be inferred that the avenues such as 'nursery management', 'seed production and processing unit', 'processing of fruits and vegetables' 'cut flower production/high-tech floriculture', 'landscape consultancy', 'value addition centres', 'horticulture clinic- nursery, landscaping, floriculture' and 'vegetable production and marketing' were the most preferred areas for self-employment.

The students expressed the reasons to take up self-

Table 4. Preference of Self-employment avenues (N=112)

Self-employment avenues		Ranks									
		I	II	III	IV	V	VI	VII	VIII	IX	X
Nursery management	No.	26	18	14	12	2	10	8	10	4	NR
	%	23.21	16.07	12.50	10.71	1.79	8.93	7.14	8.93	3.57	—
Seed production and processing units	No.	4	14	2	6	18	4	2	8	10	2
	%	3.57	12.50	1.79	5.36	16.07	3.57	1.79	7.14	8.93	1.79
Processing of fruits and vegetables	No.	18	10	16	10	8	10	10	6	4	8
	%	3.57	12.50	14.29	8.93	7.14	8.93	8.93	5.36	3.57	7.14
Micro-propagation including plant tissue culture labs	No.	NR	2	2	10	4	2	6	8	NR	12
	%	—	1.79	1.79	8.93	3.57	1.79	5.36	7.14	—	10.71
Cut flower production / high-tech floriculture	No.	4	4	8	12	14	6	6	16	8	12
	%	3.57	3.57	7.14	10.71	12.50	5.36	5.36	14.29	7.14	10.71
Landscape consultancy	No.	12	NR	8	12	10	12	8	6	6	NR
	%	10.71	—	7.14	10.71	8.93	10.71	7.14	5.36	5.36	—
Production, processing & marketing of plants (medicinal & aromatic)	No.	4	2	2	6	8	6	NR	4	4	8
	%	3.57	1.79	1.79	5.36	7.14	5.36	—	3.57	3.57	7.14
Mushroom cultivation	No.	4	2	2	6	16	6	4	10	2	8
	%	1.79	1.79	1.79	5.36	14.29	5.36	3.57	8.93	1.79	7.14
Ornamental plants propagation	No.	4	6	8	8	4	8	18	6	14	12
	%	3.57	5.36	7.14	7.14	3.57	7.14	16.07	5.36	12.50	10.71
Indoor gardening	No.	6	12	6	6	2	10	6	4	8	16
	%	5.36	10.71	5.36	5.36	1.79	8.93	5.36	3.57	7.14	14.29
Agri tourism	No.	2	2	2	NR	6	2	NR	7	10	10
	%	1.79	1.79	1.79	—	5.36	1.79	—	6.25	8.93	8.93
Information technology KIOSKS	No.	2	4	2	2	NR	4	6	NR	2	4
	%	1.79	3.57	1.79	1.79	—	3.57	5.36	—	1.79	3.57
Crop protection services-pest surveillance, diagnostic & control services etc.	No.	2	10	4	NR	4	10	6	4	8	4
	%	1.79	8.93	3.57	—	3.57	8.93	5.36	3.57	7.14	7.14
Soil and water testing lab.	No.	2	2	NR	2	4	6	4	8	8	8
	%	1.79	1.79	—	1.79	3.57	5.36	3.57	7.14	7.14	7.14
Extension consultancy	No.	2	2	6	4	4	6	2	10	6	10
	%	1.79	1.79	5.36	3.57	3.57	5.36	1.79	8.93	5.36	8.93
Value addition centres	No.	4	6	16	NR	2	6	10	10	22	8
	%	3.57	5.36	14.29	—	1.79	5.36	8.93	8.93	19.64	7.14
Cool chain including cold storage units	No.	NR	3	1	NR	NR	NR	5	1	5	6
	%	—	2.68	0.89	—	—	—	4.46	0.89	4.46	5.36
Post-harvest centres-sorting, grading, storage, packaging & standardization	No.	4	8	4	8	4	8	8	10	6	14
	%	3.57	7.14	3.57	7.14	3.57	7.14	7.14	8.93	5.36	12.50
Horticulture clinic- nursery, landscaping, floriculture	No.	10	6	8	8	14	4	6	10	6	10
	%	8.93	5.36	7.14	7.14	12.50	3.57	5.36	8.93	5.36	8.93
Vegetable production and marketing	No.	8	16	4	10	8	10	10	6	8	8
	%	7.14	14.29	3.57	8.93	7.14	8.93	8.93	5.36	7.14	7.14
Retail marketing outlets for processed agri-products	No.	2	NR	2	6	6	2	4	4	8	8
	%	1.79	—	1.79	5.36	5.36	1.79	3.57	3.57	7.14	7.14

NR=Not responded

Table 5. Reasons for taking up of self-employment avenues in the years to come (N=112)

Reasons	No.	%
Passion for doing something on own	54	48.21
Satisfaction of serving farmers while sustaining own business	43	38.39
Good prospects in the market	8	7.14
Favourable policy support	3	2.68
Not interesting in taking up job (government or private)	4	3.57

employment avenues in the years to come after completion of their degree. They were come up with the following broad reasons which are presented in Table 5.

It revealed (Table 5) that around half (48.21%) of the respondents have “passion for doing something on their own” followed by 38.39 per cent of the respondents who have “Satisfaction of serving farmers while sustaining of their own business”. The other reasons quoted by the respondents include “Good prospects in the market (7.14%)”, “Not interested in taking up job (3.57%)” and “Favourable policy support (2.68%)”. Therefore, it can be concluded that the students have passion for doing something on their own. It is a good sign for the horticulture sector to boost the GDP.

The students were asked to mention the constraints they perceived for taking up self-employment and the results are presented in Table 6.

Lack of financial support (35.71%) and lack of market support (23.21%) were the major constraints perceived by the majority of the students. The other constraints perceived by the respondents are “lack of input supply (16.07%)”, “inadequate technical

Table 6. Perceived constraints in taking up of self-employment avenues in the years to come (N=112)

Constraints	No.	%
Lack of financial support	40	35.71
Lack of market support	26	23.21
Lack of input supply	18	16.07
Lack of storage facilities	11	9.82
Inadequate technical knowledge	12	10.71
Small landholding	3	2.68
Lack of cold storage facilities	2	1.79

knowledge (10.71%), “lack of storage facilities (9.82%)”. Very few respondents (i.e. 2.68 per cent and 1.79 percentages) perceived small landholdings and lack of cold storage facilities as constraints. These findings are inconformity with the findings of *Rexlin and Seetharaman (1997)* and *Arularasan (1992)* who found that the financial, marketing, and technological constraints for vocational settlement.

CONCLUSION

The study concluded that most of the respondents are fully aware of ‘nursery management’, ‘processing of fruits and vegetables’, ‘cut flower production / high-tech floriculture’, ‘landscape consultancy’, ‘ornamental plants propagation’, ‘indoor gardening’, ‘horticulture clinic, nursery, landscaping, floriculture’ and ‘vegetable production and marketing’ as self-employment avenues.

Majority of the respondents preferred nursery management, landscape consultancy, horticulture clinic-nursery, landscaping and floriculture as their first choice for taking up as self-employment and to establish enterprises.

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