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Research Article

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Farmer's Knowledge Level towards Benefits of Value Addition in Horticulture and Vegetable Crops

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ABSTRACT

The present study was conducted in Haryana state and two districts Hisar from southwest and Sonipat from northeast were selected, purposively. From each district, three blocks were selected randomly. Further, three villages were selected from each block making a total of 18 villages. From each village, ten farmers were selected randomly, making a total sample of 180 farmers. Hence, one hundred eighty farmers were interviewed for the study. It was found that majority of the farmer 66.11 per cent had partial level but a few of them 31.11 per cent had full level and 2.77 per cent had no knowledge level of knowledge regarding full employment opportunities. It was observed that 80.55 per cent of the respondents possessed partial level of knowledge, 19.44 per cent had full level of knowledge about increase in farmer's income, not even a single respondent was found to have no knowledge level of knowledge of it. It was found that majority of the farmer 82.22 per cent had partial level but a few of them 12.77 per cent had full level and 5 per cent had no knowledge level of knowledge regarding Good techniques to preserve taste and nutritional value. It was observed that 70.00 per cent of the respondents possessed partial level of knowledge, 17.22 per cent had full level and 12.78 per cent had no knowledge level of knowledge about Variety in preparation and recipes make eating more interesting and healthy. To reach the results aggregates total was calculated for each statement separately and on the basis of calculated scores, mean scores and mean score percentage were obtained which were ranked according to their maximum to minimum mean score percentage for assessing the knowledge level of the farmers.

Keywords: *Knowledge, Farmer and Benefits.*

INTRODUCTION

Adding value is the process of changing or transforming a product from its original state to a more valuable as well as durable state. Many raw commodities have intrinsic value in their original state. For example, field corn grown, harvested and stored on a farm and then fed to livestock on that farm has value. Today fruits and vegetable farming as a diversified farming is important to generate employment round the year, supplement farm economy and to earn foreign exchange also by enhancing the export.

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As well as fruits play an important role in human nutrition offer diversity indirect, ecological sustainability and fight against hunger. They are sources of essential minerals, vitamins, dietary fibre, supply complex carbohydrates and proteins. They are good sources of calcium, phosphorus, iron, magnesium and contribute over 90 per cent of vitamin C. It is generally stated that the living standard of people can be judged by the production as well as consumption of fruits. Wakholi et al. (2015) found that many of these small-scale farmers employed relative simple and inexpensive techniques in handling their limited volumes of produce. Several factors could be addressed to reduce post-harvest losses, including weak policies, inferior infrastructure, and poor market strategies. However, the lack of basic knowledge (including demographic, scientific and economic knowledge) among the stakeholders (e.g., researchers, farmers, governments, non-government organizations and merchants) on how to develop, implement, use and sustain the recommended handling technologies was probably the most problematic. Awagu et al. (2014) obtained information on farmer's storage potential of fruits and vegetables such as stages and time of harvest, harvesting and processing methods, transportation, storage conditions, packaging and storage. The results revealed that bulks of farmers were made up of fairly young people. Most of the farming operations were done manually with tomato and onions produced majorly. Products were majorly sold immediately after harvest with poor processing, packaging, transporting and storage systems. Conclusively, the farmers lacked general knowledge in storage technology, properly due lack of farming experience, therefore, these could be responsible for the huge losses of fruits and vegetables in Kano state and the country at large.

MATERIALS AND METHODS

Locale of the Study: The present study was conducted in Haryana state and two districts Hisar from south West and Sonipat from north East were selected purposively. Further, three villages were selected from each block making a total of 18 villages. From each village, 10 farmers were selected randomly, making a total sample of one hundred eighteen farmers. Hence, 180 farmers were interviewed for the study. Three blocks from each district i.e. Hisar and Sonipat were selected, purposively. From Hisar, three blocks namely, Hisar I, Hisar II and Adampur, and from Sonipat, blocks Ganaur, Gohana and Murthal were selected, randomly. Thus, six blocks were selected for the study. Out of the six selected blocks, two villages from each block were selected randomly. Thus, a total number of 18 villages, namely, Dobhi, Dhiranwas and Ladwa from block Hisar I, Saharwa, Chiraud and Talwandi Rukka from block Hisar II and Kherampur, Kohli and Siswal from block Adampur, while Bain, Chirsmi and Mohamadpur Majra from Ganaur, Jagsi, Riwara and Baroda Thuthan from Gohana block and Makimpur, Dipalpur and Paldi from Murthal block were selected randomly also.

Collection of Data:- For assessing the knowledge, constraints, prospects, training need and perception impact data were collected by conducting personal interview with the respondent at their home/working center. The interview of every individual was taken separately so that the others did not influence the answers. In order to measure the knowledge level of farmers they were asked to reply as set of questions on selected of value addition in horticultural and vegetable crops. The scores so obtained were placed under three categories on the basis of knowledge they possessed i.e. 'full', 'partial' and 'no kntowledge' weightage given to these response categories was 3, 2 and 1 respectively. Aggregate total was calculated for each constraint separately and on the basis of calculated scores, mean scores and weighted mean score percentage were obtained which were ranked according to their maximum to minimum mean score percentage for assessing the seriousness of constraints. The maximum weighted mean score percentage so obtained was given the rank 1st

and the next subsequent one was given the rank 2nd and soon the descending order.

3.6 Analysis of Data

The information collected through the responses of the respondents, was suitably coded, tabulated and analyzed to draw meaningful inferences by using statistical tools such as frequency distribution, percentages, weighted mean scores, rank order, correlation and regression.

RESULT AND DISCUSSION

Farmer's knowledge regarding benefits of value addition

It was found that majority of the farmer 66.11 per cent had partial level but a few of them 31.11 per cent had full level and 2.77 per cent had no knowledge level of knowledge regarding full employment opportunities. It was observed that 80.55 per cent of the respondents possessed partial level of knowledge, 19.44 per cent had full level of knowledge about increase in farmer's income, not even a single respondent was found to have no knowledge level of knowledge of it. The study revealed that maximum number of farmers 80.55 per cent possessed partial level while only 19.44 per cent had full level of knowledge about of more availability of food, not even a single respondent was found to have no knowledge level of knowledge of it. In case of reduction in post harvest losses, only 77.22 per cent of the respondents had partial, 19.44 per cent had full and 3.33 per cent had no knowledge level of knowledge. It was revealed from the Table 1 that majority of the respondents 87.22 per cent had partial level whereas 12.77 per cent of the respondents had full level of knowledge about better nutrition, not even a single respondent was found to have no knowledge level of knowledge of it. Regarding provide health benefits, most of the respondents 56.66 per cent had partial level, 22.22 per cent had full level and only 21.11 per cent had no knowledge level of knowledge. It is also observed from the Table 1 that 87.22 per cent of the respondents had partial level of knowledge while (8.33 per cent) had no knowledge level and 4.44 per cent had full level of knowledge regarding long shelf life. It was found that majority of the respondents 82.22 per cent had partial level, 15 per cent had no knowledge level and only 2.77 per cent had full level of knowledge about fresh and safe food. Regarding availability of quality food to consumers, it was observed that 73.88 per cent of the respondents had partial level, 20 per cent had no knowledge and 6.11 per cent had full level of knowledge. As regard with ready-to-eat-form, it was observed that 77.22 per cent of the respondents had partial level, 19.44 per cent had no knowledge and 3.33 per cent had full level of knowledge.

Table 1: Farmer's knowledge regarding benefits of value addition (n=180)

S. No.	Statements	Knowledge Level (%)			Total weighted Score	Weighted mean Score
		Full	Partial	No knowledge		
1.	Full employment opportunities	56 (31.11)	119 (66.11)	5 (2.77)	411	2.28
2.	Increase in farmer's income	35 (19.44)	145 (80.55)	0 (0.00)	395	2.19
3.	More availability of food	35 (19.44)	145 (80.55)	0 (0.00)	395	2.19
4.	Reduction in post harvest losses	35 (19.44)	139 (77.22)	6 (3.33)	389	2.16
5.	Better nutrition	23 (12.77)	157 (87.22)	0 (0.00)	383	2.12
6.	Provide health benefits	40 (22.22)	102 (56.66)	38 (21.11)	362	2.01
7.	Long shelf life	8 (4.44)	157 (87.22)	15 (8.33)	353	1.96
8.	Fresh and safe food	5 (2.77)	148 (82.22)	27 (15)	338	1.87
9.	Availability of quality food to consumers	11 (6.11)	133 (73.88)	36 (20)	335	1.86

10.	Ready-to-eat-form	6 (3.33)	139 (77.22)	35 (19.44)	331	1.83
11.	Improvement in quality of life	16 (8.88)	71 (39.44)	93 (51.66)	283	1.57
12.	No chemical additives	6 (3.33)	87 (48.33)	87 (48.33)	279	1.55
13	Increase in export trade and foreign exchange	10 (5.55)	71 (39.44)	99 (55)	271	1.50
14.	Weight control	13 (7.22)	64 (35.55)	103 (57.22)	270	1.50
15.	Better environment	10 (5.55)	66 (36.66)	104 (57.77)	266	1.47
16.	Require minimal preparation	5 (2.77)	69 (38.33)	106 (58.88)	259	1.43

Figures in parentheses in column 3, 4 and 5 indicate percentages; column 6 indicates total weighted score and column 7 indicates weighted mean scores.

It was found that 51.66 per cent of the respondents had no knowledge level, 39.44 per cent had partial and 8.88 per cent had full level of knowledge regarding improvement in quality of life and no chemical additives, it was observed that 48.33 per cent of the respondents had partial and no knowledge level, and 3.33 per cent had full level of knowledge. Regarding increase in export trade and foreign exchange, it was observed that 55 per cent of the respondents had no knowledge level, 39.44 per cent had partial and 5.55 per cent had full level of knowledge. As regard with weight control, it was observed that 77.22 per cent of the respondents had partial level, 19.44 per cent had no knowledge and 3.33 per cent had full level of knowledge. It was found that 57.77 per cent of the respondents had no knowledge level, 36.66 per cent had partial and 5.55 per cent had full level of knowledge regarding better environment. It was observed that 58.88 per cent of the respondents had no knowledge, 38.33 per cent had partial and 2.77 per cent had full level of knowledge regarding require minimal preparation.

Value addition provides nutritive and healthy food products

It was found that majority of the farmer 82.22 per cent had partial level but a few of them 12.77 per cent had full level and 5 per cent had no knowledge level of knowledge regarding Good techniques to preserve taste and nutritional value. It was observed that 70.00 per cent of the respondents possessed partial level of knowledge, 17.22 per cent had full level and 12.78 per cent had no knowledge level of knowledge about Variety in preparation and recipes make eating more interesting and healthy.

The study revealed that majority of the farmers 48.33 per cent possessed partial level while, 47.22 per cent had no knowledge level and only 4.44 per cent of the respondents had full level of knowledge about No knowledge calorie products. In case of available no knowledge sugar content, only 51.64 per cent of the respondents had no knowledge, 43.89 per cent had partial and 4.44 per cent had full level of knowledge.

It was revealed from the Table 2 that majority of the respondents 55.00 per cent had no knowledge level whereas 39.44 per cent of the respondents had partial level and 5.56 per cent had full level of knowledge about decreasing risk of heart attack and stroke. Regarding less protein content/no knowledge energy, most of the respondents 59.44 per cent had no knowledge level, 36.11 per cent had partial level and only 4.44 per cent had full level of knowledge. It is also observed from Table 2 that 68.33 per cent of the respondents had no knowledge level of knowledge while 28.89 per cent had partial level and 2.77 per cent had full level of knowledge regarding no knowledge blood pressure. It was found that majority of the respondents 72.78 per cent had no knowledge level, 24.44 per cent had partial level and only 2.77 per cent had full level of knowledge about inhibits the growth of micro-organism e.g. molds, yeast and bacteria. As regard with protecting against cataract and macular degeneration, it was observed that 93.89 per cent of the respondents had no knowledge level, 3.33 per cent had partial and 2.77 per cent had full level of knowledge.

Table 2: Value addition provides nutritive and healthy food products (n=180)

S. No.	Statements	Full	Knowledge Level (%) Partial	No knowledge	Total weighted Score	Weighted mean Score
1.	Good techniques to preserve taste and nutritional value	23 (12.77)	148 (82.22)	9 (5.00)	3	2.07
2.	Variety in preparation and recipes makes eating more interesting and healthy	31 (17.22)	126 (70.00)	23 (12.78)	368	2.04
3.	No knowledge calorie products	8 (4.44)	87 (48.33)	85 (47.22)	283	1.57
4.	Available no knowledge sugar content	8 (4.44)	79 (43.89)	93 (51.67)	275	1.52
5.	Decreasing risk of heart attack and stroke	10 (5.56)	71 (39.44)	99 (55.00)	271	1.50
6.	Less protein content/no knowledge energy	8 (4.44)	65 (36.11)	107 (59.44)	261	1.45
7.	No knowledge regarding blood pressure	5 (2.77)	52 (28.89)	123 (68.63)	242	1.34
8.	Inhibits the growth of micro-organism e.g. molds, yeast and bacteria	5 (2.77)	44 (24.44)	131 (72.78)	234	1.30
9.	Protecting against cataract and macular degeneration	5 (2.77)	6 (3.33)	169 (93.89)	196	1.08

Figures in parentheses in column 3, 4 and 5 indicate percentages; column 6 indicates total weighted score and column 7 indicates weighted mean scores.

CONCLUSION

It was concluded from the observation that most of the respondents had medium to high level of knowledge towards value addition horticulture and vegetable crops in Hisar and Sonipat districts. It was found that majority of the farmer 82.22 per cent had partial level but a few of them 12.77 per cent had full level and 5 per cent had no knowledge level of knowledge regarding Good techniques to preserve taste and nutritional value. It was observed that 70.00 per cent of the respondents possessed partial level of knowledge, 17.22 per cent had full level and 12.78 per cent had no knowledge level of knowledge about Variety in preparation and recipes make eating more interesting and healthy. It was found that majority of the farmer 66.11 per cent had partial level but a few of them 31.11 per cent had full level and 2.77 per cent had no knowledge level of knowledge regarding full employment opportunities. It was observed that 80.55 per cent of the respondents possessed partial level of knowledge, 19.44 per cent had full level of knowledge about increase in farmer's income, not even a single respondent was found to have no knowledge level of knowledge of it. It was found that farmers were interested to know about the value addition in horticulture and vegetable crops to raise their income.

REFERENCES

Arah, I. K., Ahorbo, G. K., Anku, E. K., Kumah, E. K., & Amaglo, H. (2016). Postharvest Handling Practices and Treatment Methods for Tomato Handlers in Developing Countries: A Mini Review. *Advances in Agriculture*.

Awagu, E. F., Adedayo, M. R., & Olayemi, F. F. (2014). Assessing the Storage Potential of Some Vegetable Products in Some Selected Areas in Kano State IOSR. *Journal of Agriculture and Veterinary Science* (IOSR-JAVS), *7*(5), 51-59.

Boland, M. (2009). Based on Value Added Industry Profile, *Department of Agricultural Economics*, Kansas State University.

Joshi, P. K., Joshi, L., & Birthal, P. S. (2006). Diversification and its impact on

smallholders: Evidence from a study on vegetable production. *Agricultural Economics Research Review*, *19*(2), 219-236.

Manvar, V. S., Wakle, P. K., Raul, U. S., & Shinde, G. B. (2003). A study on knowledge and adoption of recommended package of practices of mango by farmers in Marathwara region. *Journal of Soils and crops*, *13*(2**)**, 282-285.

Njaya, T. (2014). The Economics of Fruit and Vegetable Marketing by Smallholder Farmers in Murehwa and Mutoko Districts in *Zimbabwe international journal of research in humanities and social studies*, *1*, 35-43.

Wakholi, Byoung, K. C., Changyeun, M., & Moon, S. K. (2015). State of post-harvest fruit and vegetable management in east Africa Collins. *J. Biosystems Eng*. *40*(3), 238-249.