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A study to Assess the Agriculture Needs of the Farmers

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Abstract

Indian agriculture has been the backbone of Indian economy. It contributes a significant role in overall growth of the country. India is expected to remain an agricultural society. Past researches showed that total area in India, sown with Rabi crops reached 64.29 million hectares in 2018. Exports in agriculture constitute 10 percent of the country's exports. Farmers have no understanding of modern agriculture methods to improve productivity. Majority of the farmers lack proper marketing channels and mediums to sell their products reducing their revenues. An inadequate storage facility and improper marketing channels leads wastage and results in poor agricultural exports and maintaining quality in many cases. Present paper aim is to discuss the need assessment of farmers. Total 200 respondents were selected for data collection. Majority of respondents were unaware about Systemic crop intensification, Milk quality and hygienic practices, Plant protection measures, Value addition and post harvesting, Post-harvest handling/Value of mushrooms and Substrate preparation technique for mushrooms, Integration with other farming system, Methods of mulberry propagation, Repair and maintenance of machineries and implements.

Key words: *Need Assessment, Kisan Mela, Agriculture, Farmers*

Introduction

Agricultural exports from India reached USD 28.09 billion during the April 2017-January 2018 with exports of Basmati. During 2017-18 crop years, food grain production is expected to touch 277.49 million tonnes. People are unaware about the advanced farming technology. GB Pant University of Agriculture and Technology (GBPUA&T), Pantnagar, Uttarakhand, popularly known as harbinger of Green Revolution in India. The University has made significant achievement in research, extension and many other fields. Regarding extension, Directorate of Extension organises "Farmers' Fair" twice in a year. Its main purpose is to benefit the farming community. The various exhibitors expected are to be from chemical fertilisers, micro-nutrients and bio-fertilisers, tractors, farm machinery and tools pumps, motors, seed sprayers, panting materials pesticides, bio-pesticides, veterinary medicines, animal feed, food additives and beverages and herbal products [5] . Publication houses, banks and financial institutions, Government/Non-government organisations, academic and research institutions are also the part of the grand event. The other activities including sale of quality seeds and planting materials, animal show, horticultural show, scientific exhibition, Kisan Gosthi special lectures, field visits, cultural programme are also organised in the fair.

Nearly 10,000 farmers, farm women, extension workers and development functionaries from Uttar Pradesh, Uttarakhand, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh and Delhi always participate in the fair. The University also invites various ICAR institutes dealing with different agri-horticultural crops, state agricultural universities (SAUs) and

development agencies from public and private sectors, banks and NGOs for participation and display their latest technologies and products in the form of live specimens, charts, photograph among other ways. Stalls demonstrate the newly released varieties and improved varieties in the fair. Diverse farming practice approaches like livestock production, fish farming, honeybee cultivation, post-harvest techniques are also demonstrated in the fair. The

Farmers' Fair promotes the products, brand and services for huge potential market. The fair provides opportunity to meet buyers, new agents and dealers. It provides new business venture opportunity and joint venture possibilities. The fair demonstrates and showcases the valued products and services[3]. The platform provides opportunity to interact with the farmers and dialogue with business prospects and farmers. This types of fair provides the opportunity of professional networking with industrialist, professionals, competitors and farmers. Farmers' fair provide live demonstrations of latest technologies and new developed ideas[1]. The main emphasis and objective of this programme is to provide solutions to major problems faced by horticulture farmers and also create awareness about improved production technologies, crop protection and post-harvest management practices. In the fair agri-professionals, policymakers, like-minded individuals, government officials and media from all parts of India come together to have a dialogue with the who's of Indian agriculture sector. Farmers' fair has always been engaged in bringing together the key players of the agribusiness for strengthening the future of Indian agriculture sector.

Present research study was designed with the objective of to assess the needs of the farmers.

Theoretical Framework

Training needs assessment determines an individual's present level of competency, ability or knowledge in one or more areas and compares it to the needed competency standard for their or other's roles. The five phases of the Training Needs Assessment process are as follows: (i) Identifying problem and needs, (ii) Determining the design of needs assessment, (iii) Collecting data, (iv) Analysing data, and (v) Providing feedback found that the greatest training need was expertise and knowledge of teaching methods. While the use of computer, information and communication technology (ICT) was a moderately required skill, the least needed training field was management skills. Accordingly, training needs and animal health, accompanied by marketing and financial control, farming and general management, hygienic milking methods, animal nutrition, animal welfare management, and housing and environmental management, are seen by livestock owners. Roosta (2020) found that the age of farmers, their access to information sources and their level of technological competence could be clarified by the variation in training needs. It was found that agricultural waste management, participatory technology development, water conservation, integrated crop management, and soil erosion were amongst the top five competencies in the training needs in agricultural sector[2].

Research Methodology

Present research investigation was conducted in GBPUA &T, Pantnagar. Data was collected through Farmers who have visited Farmers Fair in March 2022. Data

was collected through questionnaire. Total 200 respondents were selected for data collection.

Results and Discussion

The data related to need assessment is given in table 1.

Table 1: Need Assessment of the farmers N=200

Sl. No.	Category	Aware	Unaware
A.	**Organic crop production**		
1	Land preparation	169 (84.50)	31 (15.50)
2	Planting methods	56 (28)	144 (72)
3	Application of organic manures	78(39)	122 (61)
4	Seed treatment	45(22.50)	155 (77.50)
5	Weed management	67 (33.50)	133 (66.50)
6	Mulching	89 (44.50)	111 (55.50)
7	Green manuring	79 (39.50)	121(60.50)
8	Systemic crop intensification	34 (17)	166 (83)
9	Organic certification	59 (29.50)	141(70.50)
B.	**Dairy farming**		
1	Milk quality and hygienic practices	61(30.50)	139 (69.50)
2	Animal health management	89 (44.50)	111 (55.5)
3	Animal nutrition	90 (45)	110 (55)
4	Animal welfare management	97 (48.50)	103 (51.50)
5	Breeding and general management	76 (38)	124 (62)
6	Housing and environment management	77 (38.50)	123 (61.50)
7	Marketing and financial management	76 (38)	124 (62)
C.	**Vegetable crop production**		
1	Field management	56 (28)	144 (72)
2	Selection of seeds	67 (33.50)	133 (66.50)
3	Fertilizer management	55 (27.50)	145 (72.50)
4	Irrigation management	58 (29)	142 (71)
5	Weed management	87 (43.50)	113 (56.50)
6	Plant protection measures	46 (23)	154 (77)
7	Harvesting and storage	78 (39)	122 (61)
D.	**Fruit crop production**		
1	Rejuvenation of old orchards	77 (38.50)	123 (61.50)
2	Layout and management of orchard	87 (43.50)	113 (56.50)
3	Training and pruning	67 (33.50)	133 (66.50)
4	Micro-irrigation techniques in orchards	98 (49)	102 (51)
5	Plant propagation techniques	89 (44.50)	111 (55.5)
6	Value addition and post harvesting	59 (29.50)	141 (70.50)
E.	**Medicinal and aromatic plants**		
1	Nursery management	78 (39)	122 (61)
2	Scientific ways of harvesting, storage,	77 (38.50)	123 (61.50)

	transporting		
3	Value-addition and post-harvest handling	81 (40.50)	119 (59.50)
4	Integration with other farming system	71(35.50)	129 (64.50)
F.	**Mushroom cultivation**		
1	Cultivation technology of mushrooms (Paddy straw, White button, Oyster)	76 (38)	124 (62)
2	Spawn production technique	56 (28)	144 (72)
3	Substrate preparation technique for mushrooms	49 (24.50)	151 (75.50)
4	Pest/Disease management in mushrooms	67 (33.50)	133 (66.50)
5	Post-harvest handling/Value ion of mushrooms	39 (19.50)	161 (80.50)
G.	**Bee keeping**		
1	Handling of bee-hive frames and its products	121(60.50)	79 (39.50)
2	Colony management	51(25.50)	149 (74.50)
3	Queen production methods	53 (26.50)	147 (73.50)
4	Disease and pest management of honeybees	67 (33.50)	133 (66.50)
5	Honey production, harvesting, processing, storage, and use	45 (22.50)	155 (77.50)
H.	**Sericulture**		
1	Methods of mulberry propagation	61(30.50)	139 (69.50)
2	Seed cocoon selection, moth selection, pairing and egg production	78(39)	122 (61)
3	Harvesting and transportation of cocoons	100 (50)	100(50)
4	Silk cleaning, examination, lacing, skening, and bailing	131(65.50)	69 (34.50)
5	Mechanization in sericulture (Reeling on country charka, cottage reeling machine)	90 (45)	110 (55)
I.	**On-farm production of inputs**		
1	Seed and planting material production techniques	98 (49)	102 (51)
2	Bio-agents production techniques	87 (43.50)	113 (56.50)
3	Bio-pesticides and fertilizer production techniques	121(60.50)	79 (39.50)
4	Vermi-compost production techniques	132 (66)	68 (34)
5	Organic manure production techniques	100 (50)	100 (50)
6	Agricultural engineering	98 (49)	102 (51)
7	Installation and implementation of micro irrigation systems	89 (44.50)	111(55.50)
8	Production of small agricultural tools and implements	123(61.50)	77 (38.50)
9	Use of plastics in farming practices	115 (57.50)	85 (42.50)
10	Repair and maintenance of machineries and implements	81(40.50)	119 (59.50)
11	Post-harvest technology	87 (43.50)	113(56.50)

Under the category of Organic crop production it was reported that majority of farmers were unaware about Systemic crop intensification (83 per cent) followed by Seed treatment (77.50) and Planting methods (72 per cent), Organic certification (70.50 per cent). Total 72 per cent respondents were unaware about Planting methods and Weed management (66.50 per cent). Total 60.50 per cent respondents were unaware about Green manuring. Less number of respondents (15 per cent) were unaware about Land preparation.

Under dairy farming, 69.50 per cent respondents were unaware about Milk quality and hygienic practices followed by Marketing and financial management and Breeding and general management (62 per cent). Total 55 per cent respondents were unaware about Animal health management and Animal nutrition.

Under Vegetable crop production, total 77 per cent respondents were unaware about Plant protection measures (77 per cent) and Field management (72 per cent). Total 72.50 per cent respondents were unaware about Fertilizer management (72.50 per cent) and Irrigation management (71 per cent).

Under Fruit crop production, majority of respondents were unaware about Value addition and post harvesting (70.50 per cent) and Training and pruning (66.50 per cent). Total 61.50 per cent respondents were unaware about Rejuvenation of old orchards followed by Layout and management of orchard (56.50 per cent) and Plant propagation techniques (55.50 per cent).

Under Mushroom cultivation 80.50 per cent were unaware about Post-harvest handling/Value of mushrooms and Substrate preparation technique for mushrooms (75.50 per cent) and Spawn production technique (72 per cent). Majority of respondents were unaware about Pest/Disease management in mushrooms (66.50) followed by Cultivation technology of mushrooms (62 per cent).

Under the Medicinal and aromatic plants component majority of respondents were unaware about Integration with other farming system (64.50 per cent) followed by Scientific ways of harvesting, storage, transporting (61.50 per cent). Total 61 per cent respondents were unaware about Nursery management, Value-addition and post-harvest handling (59.50 per cent).

Under Bee Keeping component, majority of respondents (77.50) were unaware about Honey production, harvesting, processing, storage, and use and Colony management (74.50 per cent). Total 73.50 per cent respondents were unaware about Queen Production methods followed by Disease and pest management of honeybees (66.50 per cent).

Under Sericulture component total 69.50 per cent respondents were unaware about Methods of mulberry propagation (69.50 per cent) and Seed cocoon selection, moth selection, pairing and egg production (61 per cent). Total 55 per cent respondents were unaware about Mechanization in sericulture followed by Harvesting and transportation of cocoons (50 per cent).

Majority of respondents (59.50 per cent) were unaware about Repair and maintenance of machineries and implements followed by Post-harvest technology (56.50 per cent) and Installation and implementation of micro irrigation systems (55.50 per cent). Total 42.50 per cent respondents were unaware about Use of plastics in farming practices and Production of small agricultural tools and implements (38.50 per cent).

Conclusion

Farmer's Fair is an important tool for the development of farmers as well as transfer of technologies. Majority of respondents were unaware about Weed management, Honey production, harvesting, processing, storage, and use, Methods of mulberry propagation, Repair and maintenance of machineries and implements, Post-harvest handling/Value ion of mushrooms, Fertilizer management, Fertilizer management. Farmer's fair is an important method to provide different types of knowledge to the farmers. As research showed that farmers are not aware about many aspects. Farmers get information, education and knowledge in the Farmer's fair.Kisan Goshti, Exhibition and various other activities are organized for the welfare of farmers. Thus, farmer's fair is very important extension activity for the welfare of community.

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