



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; 11(4): 526-529
© 2022 TPI
www.thepharmajournal.com
Received: 19-01-2022
Accepted: 28-02-2022

Santhosha HM
ICAR-Krishi Vigyan Kendra,
University of Agricultural
Sciences, Dharwad, Haveri,
Karnataka, India

Ashok P
ICAR-Krishi Vigyan Kendra,
University of Agricultural
Sciences, Dharwad, Haveri,
Karnataka, India

Mahesh Kadagi
ICAR-Krishi Vigyan Kendra,
University of Agricultural
Sciences, Dharwad, Haveri,
Karnataka, India

Enhancement of farm income through skill development training on quality seed production

Santhosha HM, Ashok P and Mahesh Kadagi

Abstract

Skill development trainings in the field of Agriculture plays a major role in farm income enhancement. The study was conducted in Haveri District where skill development training programmes on Quality seed production was conducted by Krishi Vigyan Kendra (KVK), Haveri, Karnataka. This programme was evaluated to assess the impact on the knowledge gain, extent of adoption of new techniques/practices and enhancement of farm income. Majority of these trainees belong to 18-25 years of age and educated up to higher secondary level. About 72.56 per cent knowledge gain and 64 per cent adoption of improved cultivation practices by the trainees was observed. Further after one year of skill development training an increase in seed yield (39.24%) and increase in net income (68.31%) was found.

Keywords: Skill, seed production, adoption, knowledge

Introduction

Seed is the most important critical input to harvest good yield in any crop. The potential of crop yield depends upon the quality of seed used for cultivation. The quality of seed alone is known to account for at least 10-15 per cent increase in the productivity. One of the main reason for low productivity of crops is non availability of quality seeds. India ranks second in vegetable production, but productivity it lags behind in most of the vegetable crops (Annon, 2019) ^[1]. Apart from other factors, limited availability of quality vegetable seed and at reasonable price is one of the major cause. However, quality seed alone can lead to 15-20 per cent increase in productivity (Singh *et al.*, 2010) ^[5]. India grows vegetables in an area of 9.3 million ha and requires around 51,000 tonnes of seeds for sowing annually but the actual availability is around 40,000 tonnes and large quantity of seeds is still being multiplied by farmers themselves (Dutta, 2004) ^[2].

The state of Karnataka produces nearly 90 per cent of the total vegetable hybrids in India and majority of the area is concentrated around Ranebennur area of Haveri district. The availability of quality seeds can be enhanced by two approaches. One by increasing the production and productivity of seeds and second by increasing the quality of the seeds by enhancing the germination, seed vigour and storability etc. there by reduction of seed rate could be possible. The use of improved seed production and seed enhancement technologies shall not only be helpful in increasing the profitability of the seed producers but will also helpful to vegetable growers by making available the best quality seed. The technological interventions could improve the seed productivity and increase the availability. Hybrid seed production on commercial scale is being done by hand emasculation and pollination. Hence, involvement of skilled labours resulting employment to rural youth and also producer fetches higher price for hybrid seed as compared to open pollinated variety seed production and vis-à-vis commercial vegetable production (Tomar and Yalamalle, 2016) ^[9].

Training means to bring about continuous improvement in quality of work performed by the individuals. It should equip the trainees with necessary knowledge, skills or abilities and attitude to perform the job (Taylor, 1961) ^[7]. So, training is an important tool to bring improvement in the skills of the individual and apply to the performance of his or her specific work situation. Training provides an opportunity to the farmers to get awareness of agricultural technologies as well as the shift in agricultural development approach through farming enterprises (Wani and Khan) ^[10]. The ministry of skill development and entrepreneurship, Govt. of India has also launched a Skill India programme to improve the socio-economic conditions of youth by making them more productive and addressing unemployment and underemployment (Thakur *et al.*, 2021) ^[8].

Corresponding Author:
Santhosha HM
ICAR-Krishi Vigyan Kendra,
University of Agricultural
Sciences, Dharwad, Haveri,
Karnataka, India

The major benefits of seed production are higher income and higher quality seed for next sowing. Keeping these points in view ICAR- Krishi Vigyan Kendra, Haveri under Agriculture Skill Council of India (ASCI), organized skill development training programme of 200 contact hours on Quality seed production for rural youths and farmers during the year 2019-20. The present study elucidates the impact of these training on knowledge gain and farm income enhancement.

Materials and Methods

Selection of trainees

Applications were invited from interested candidates for undergoing 200 contact hours training on job role of quality seed production through newspaper advertisement. The applicants were screened through personal interview and only individuals who were involved in crop production were selected for training. Training was organised on January month of 2020 for 20 individuals as per ASCI guidelines.

Collection of Data

Pre-evaluation and post-evaluation were conducted to assess the knowledge gain on seed production aspects. Both the pre and post evaluation questionnaires comprised the same questions on seed demand, forecasting, healthy nursery raising techniques for transplanted crops, methods of growing, relay sowing of crops, trailing, stacking and pruning, direction of sowing, frequency of leaf cutting in leafy vegetable seed production, pollination management, method of pollination, isolation distance, rogueing, foliar spray of micro nutrients, post-harvest ripening to enhance the seed yield, use of drip-irrigation and fertigation, manipulation of sex expression, bio-fertilizers and integrated nutrient management, use of protected structures for seed production, seed quality enhancement and fruit regulation, seed threshing, seed storage, seed act, seed coating and pelleting, seed stimulation, seed invigoration, seed germination and organic farming aspects. At the time of pre-evaluation, farmers basic information like age, crops cultivated, land holding, education and their contact details etc. were also collected.

Gain in Knowledge

The difference in knowledge before and after the training programme revealed the extent in gain of knowledge of the trainees regarding the different aspects of the training under the present study which was determined by subtracting the pre-training knowledge score from the knowledge score obtained after the training.

Result and Discussion

Socio-economic Profile

The profile of the trainees presented in table 1, reveals that all the trainees (100%) were male. It may be because of the reason that seed production along with flower crossing aspects, it involves crop cultivation aspects like ploughing, land preparation, sowing, weeding, harvesting, threshing

aspects also which will be difficult for females. Majority of participants were belongs to the young age (60.00%). Which shows that young rural youth attracted towards higher income generating activities like seed production. About 25 per cent participants did belong to middle age group and 15 per cent belongs to the more than 36 age group. Majority of the enrolled trainees were educated up to higher secondary education (55%) followed by degree/ diploma (20%) also reflects that need of skill for educated ones to perform seed production activities.

Majority (65%) of the trainees covered in the training programme did belong to the marginal land holding group, indicating seed production activity best suited to marginal farmers to enhance their farm income. Around 20 percent of them did belong to low annual income group category followed by medium (65%) and high (15%). About 30 per cent of participants were earlier involved in seed production and 70 per cent participants were not involved.

Overall knowledge gain was 72.56 per cent (Table 2). The overall knowledge level of respondents was found to be changed after the training. Change in knowledge regarding quality seed production was recorded for various techniques and practices of seed production. Thus, it can be inferred that exposure to training had increased the knowledge of trainees regarding different aspects of quality seed production. The reason behind the satisfactory gain in knowledge might be their good educational background and keen interest of participants in seed production (Singh *et al.*, 2019) ^[6]. The findings were similar to the results reported by Nagaraj *et al.* (2017) ^[4] and Kaur (2016) ^[3] that exposure to training increased the knowledge of farmers and youths.

About 64 per cent of farmers adopted the various techniques and practices of quality seed production (Table 2). This may be due to the fact that the seed production is an assured income generating activity. It might have influenced them to adopt the various scientific techniques and practices to increase the seed quality and yield.

Among 20 trainees, six trainees were involved in seed production activity before training. After one year of the training, this was increased to 14 trainees. All of these 14 trainees involved in vegetable seed production. The rise may be attributed to training because, besides knowing the importance of seed production as an income generating activity in short span of time, they got firsthand information about different schemes being run by Department of Horticulture, Department of Agriculture, Agriculture lead banks, seed corporations and non-government organizations to promote seed production and how to avail the benefit of these schemes. It is evident from the Table 3 that there was about an average increase of 68.31 per cent in net income due to seed production and 39.24 per cent increase in seed yield after training. Increase in net income and seed yield is attributed to adoption of various new scientific techniques and practices learnt during the 25 days quality seed production training programme by trainees.

Table 1: Socio-economic profile of the the trainees participated in skill development training

Sl. No.	Variables	Category	No.	Percentage
1	Gender	Male	20	100.00
		Female	0	0.00
2	Age	18-25 Years	12	60.00
		25-36 Years	05	25.00
		> 36 Years	03	15.00
3	Education	Illiterate	0	0.00
		Functionally Literate	01	5.00
		Primary School	01	5.00
		Secondary	03	15.00
		Higher Secondary	11	55.00
4	Land Holding	Degree/ Diploma	04	20.00
		Marginal Farmers (< 2.5 acres)	13	65.00
		Small farmers (2.5 to 5 acres)	04	20.00
		Medium farmers (> 5 acres)	03	15.00
5	Annual Income	Low up to 1 Lakh	04	20.00
		Medium 1-5 Lakh	13	65.00
		High more than 5 L	03	15.00
6	Seed production prior to training	Yes	06	30.00
		No	14	70.00

Table 2: Knowledge gain and per cent adoption of improved cultivation practices by the trainees discussed during the training programme

No.	Techniques/practices discussed during the training programme	Knowledge gain (%)	No. of farmers adopted (%)
1	Seed demand forecasting	58.00	85.71
2	Healthy nursery raising for transplanted crops	72.00	92.86
3	Methods of growing	86.00	85.71
4	Relay sowing of crops	71.00	92.86
5	Trailing, stacking and pruning	89.00	100.00
6	Direction of sowing	68.00	71.43
7	Frequency of leaf cutting in leafy vegetable seed production	62.00	85.71
8	Pollination management	74.00	92.86
9	Method of pollination	83.00	92.86
10	Isolation distance	74.00	100.00
11	Rogueing	61.00	64.29
12	Foliar spray of micro nutrients	58.00	50.00
13	Post-harvest ripening to enhance the seed yield	51.00	42.86
14	Use of drip-irrigation and fertigation	73.00	42.86
15	Manipulation of sex expression	48.00	28.57
16	Bio-fertilizers and integrated nutrient management	66.00	78.57
17	Use of protected structures for seed production	73.00	21.43
18	Seed quality enhancement and fruit regulation	81.00	42.86
19	Seed threshing	94.00	100.00
20	Seed storage	66.00	64.29
21	Seed act	85.00	21.43
22	Seed coating and pelleting	66.00	14.29
23	Seed stimulation	84.00	28.57
24	Seed invigoration, germination	79.00	42.86
25	Organic farming	92.00	57.14
	Overall	72.56	64.00

Table 3: Per cent increase in income of trainees undergone skill development training on quality seed production

Farmer	Area (Acre)	Production (Q)	Gross Income (Rs.)	Net Income (Rs.)	% Increase in seed yield after training	% Increase in net income due to seed production after training
01	1.00	1.93	179250.00	114250.00	48.46	107.72
02	0.5	0.65	162000.00	73000.00	30.00	143.34
03	0.5	1.50	82500.00	52500.00	100.00	100.00
04	0.50	2.10	140000.00	70000.00	100.00	100.00
05	1.25	1.11	322000.00	144000.00	33.73	92.00
06	1.25	0.70	395000.00	135000.00	100.00	100.00
07	1.25	2.51	257200.00	137000.00	100.00	100.00
08	0.50	0.60	225000.00	120000.00	60.00	87.50
09	1.50	2.64	265000.00	170000.00	100.00	100.00
10	2.00	2.10	515000.00	290000.00	100.00	100.00
11	1.00	3.10	185000.00	108000.00	100.00	100.00

12	2.50	2.20	575000.00	293000.00	31.78	27.60
13	2.25	1.75	445000.00	208000.00	22.22	26.75
14	0.75	0.82	233000.00	114000.00	100.00	100.00
Average	1.19	1.74	310405.00	168925.00	39.24	68.31

Conclusion

The study revealed that the skill development training on quality seed production by Agriculture Skill Council of India through KVK did enhance the income of farmers who involved in seed production and also improved the knowledge of participants on seed production aspects.

Reference

1. Anonymous. National Horticulture Database (Second Advance Estimates), National Horticulture Board. 2019
2. Dutta OP. Recent innovations in hybrid seed production in vegetables. Proc. Indian sci. cong. New Delhi 2004;1(6-9):217-242.
3. Kaur K. Impact of training course on knowledge gain of mushroom trainees. Journal of Krishi Vigyan. 2016;4(2):54-57.
4. Nagaraj R, Arun KP, Hanumanthaswamy BC, Jyoti, MR. Mushroom production for self-employment – An impact study, International Journal of Current Microbiology and Applied Sciences. 2017;6(9):2991-2997.
5. Singh PM, Singh B, Pandey AK, Singh R. Vegetable Seed Production - A ready reckoner. Technical bulletin No.37, IIVR, Varanasi, 2010.
6. Singh S, Garg R, Malik JS, Bhakar S, Chander S. Impact assessment of skill development training on low-cost mushroom production technology in panipat district of Haryana. Indian Journal of Extension Education. 2019;55(1):11-15.
7. Taylor HC Jr. (Ed.). The recruitment of talent for a medical speciality. A report to the American Gynecological society on the problem of procurement of academic and scientific personnel for obstetrics and gynecology. St. Louis C.V. Mosby Co, 1961.
8. Thakur R, Sharma N, Mankotia BS. Impact of skill development trainings on poultry production. International Journal of Livestock Research. 2021;11(1):119-124.
9. Tomar BS, Yalamalle, VR. Improving the availability and quality of vegetable seeds for higher profitability. Advances in production technology of commercial vegetable crops, CAFT training manual, 2016, 26-32.
10. Wani S, Khan IM. Study on impact of training programmes of KVK Shopian on the knowledge level of rural women of district Shopian (J&K). International Journal of Scientific and Research Publications. 2019;9(3):126-128.