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Economic empowerment of farm women through management of vegetable nursery

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ABSTRACT

The production of good quality seedlings is very much essential for getting higher yield and quality of vegetable crops. Vegetable growers frequently face problems associated with raising seedlings in a standard nursery beds for off-season vegetable production during monsoon. Huge losses in income of farm women have been assessed due to high mortality of vegetable seedlings. Keeping these factors in view the frontline demonstrations were conducted by JNKVV Krishi Vigyan Kendra, Mandla, Madhya Pradesh. The study was conducted during Kharif 2013 and Kharif 2014 at three locations in two adopted villages. The results revealed that farm women had good knowledge of marketing nursery locally but there was a vast gap in the knowledge of preparation of nursery beds (82.4%) and field preparation (77.6%). The total seedling production under recommended practices was 1790/5 sqm in comparison to 1260/5 sqm in farmers' practices. The gross and net returns and cost-benefit ratio under recommended practices were Rs 8950 and Rs 7040 and 3.68 as compared to Rs 5040 and Rs 3280 and 1.86 under farmers' practices respectively.

Keywords: Farm women; empowerment; off-season vegetables; seedlings

INTRODUCTION

Vegetables share 38.3 per cent area of horticulture but contribute to 60 per cent of total production. Women play major role in cultivation of fruits, vegetables and flowers (Baba et al 2010). They play an active role in production activities of vegetable crops. They are mainly engaged in seed sowing, nursery management, transplanting of vegetables, harvesting and grading of produce however the involvement of women as entrepreneurs is substantially low. Nurseries are places where seedlings are raised for planting purpose.

The production of good quality seedlings is very much essential for getting higher yield and quality of vegetable crops. Growers face difficulties due to non-availability of quality seedlings in Kharif season when there is high mortality by damping off disease. Crop can tolerate high temperature but cannot withstand heavy rains during germination and growth.

The present study was conducted to assess the technological knowledge gap and the economic gain of farm women through nursery raising.

The women play a significant and crucial role in agriculture and allied fields (Chayal and Dhaka 2010). Singh et al (2015) reported that adoption of vegetable nursery raising leads to empowerment of farm women and upliftment of their social and financial status. To improve their skills it is required to impart them trainings in the field of vegetable nursery raising.

Dhaka et al (2012) stated that women participation in agriculture will be acknowledged when women farmers actively participate to build and improve their knowledge and gain access to new and necessary information to make use of most of them in their farming activities. By linking the knowledge and information flow amongst women socio-economic progress can be achieved.

METHODOLOGY

The study was carried out by Krishi Vigyan Kendra, Mandla in kharif 2013 and 2014 at three locations in two adopted villages namely Backchhera Dona and Lingapondi as it was observed that there was less availability of good quality planting material particularly that of chilli, brinjal and tomato seedlings in these villages. It resulted in very low income of farm women due to poor practices and management of vegetable nursery. Sixty frontline demonstrations were conducted by the KVK in these villages. To raise healthy and quality seedlings of brinjal, tomato and chilli 20 g hybrid seeds of each crop were distributed to 60 farm women.

Step by step skill-based training programmes on nursery raising were conducted for vegetable growing farm women. Line sowing of nursery in raised beds was promoted. The new recommended technologies adopted were standard size of nursery beds, soil solarization, seed treatment with *Trichoderma viride* @ 5 g/kg seed, line sowing, drenching of nursery beds with mancozeb (0.25%) and carbendazim (0.05%) on the appearance of damping off symptoms and dusting with 250 g neem cake so as to save the seeds from pests. After about 30 days of sowing of tomato and 40-45 days of brinjal and chilli seedlings were removed for transplanting and selling purpose. Each demonstration was conducted in an area of 20 sqm.

RESULTS and DISCUSSION

Nursery raising and maintenance by the farm women in the villages were the new domains to improve their livelihood status. Evaluation of technological knowledge gap of farm women in raising of nursery was done by personal interview method.

The following tool was used to measure the knowledge of farm women regarding selected technologies recommended for vegetable nursery raising.

Knowledge= Total obtained knowledge score/Maximum obtainable knowledge score

Data given in Table 1 depict that farm women had good knowledge of marketing nursery locally but there was a vast gap in their knowledge of preparation of nursery beds (82.4%) and field preparation (77.6%) followed by seed treatment (72.8%), transplanting of seedlings (71.2%), seed sowing (69.6%) and selection of seed (55.2%)

Sahu et al (2009) conducted a study in Bageshwar district of Uttarakhand to assess the training needs of farm women for vegetable cultivation technology. It was assessed that farm women needed trainings in areas like knowledge of improved varieties, IPM, spacing, seed treatment, weed control, cropping system, marketing, management of fertilizers, quality improvement and nursery raising. The study concluded that the practices like sowing time, harvesting, seed rate, intercultural operations, irrigation and use of organic manures in which farm women received trainings played major role in reducing overall knowledge gap.

Perusal of the data given in Table 2 show that the total number of seedlings produced in plots of recommended practices was 1790/5 sqm in comparison to 1260/5 sqm in farmers' practices. The gross and net returns and cost-benefit ratio under recommended practices were Rs 8950 and Rs 7040 and 3.68 as compared to Rs 5040 and Rs 3280 and 1.86 under farmers' practices respectively.

Table 1. Technological gap in knowledge in off-season vegetable nursery raising practices

Activity	Maximum score	Average score	Difference in score	Technological gap in knowledge (%)	Rank
Field preparation	12.5	2.8	9.7	77.6	II
Selection of seed	12.5	5.6	6.9	55.2	VI
Preparation of nursery beds	12.5	2.2	10.3	82.4	I
Seed treatment	12.5	3.4	9.1	72.8	III
Seed sowing	12.5	3.8	8.7	69.6	V
Irrigation	12.5	5.8	6.7	53.6	VII
Marketing	12.5	7.2	5.3	42.4	VIII
Transplanting of seedlings	12.5	3.6	8.9	71.2	IV

Table 2. Yield and economics of off-season vegetable seedlings grown under recommended and farmers' practices (mean of 60 trials)

Item	Recommended practices	Farmers' practices
Total cost of inputs (chemicals, seeds, labour cost and other expenses) (Rs)	1910	1760
Seedling production (number/5 sqm)	1790	1260
Gross return (Rs/unit)	8950	5040
Net return (Rs)	7040	3280
Cost-benefit ratio	3.68	1.86

CONCLUSION

The study showed that there was a big gap in the knowledge of farm women in off-season vegetable production. By adopting the improved technology they could earn more and adopt nursery raising as an income generating venture for themselves and their families.

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