



Review Article

VEGETABLE SEED VILLAGE: A KEY TO WOMEN FARMER EMPOWERMENT

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Received: September 15, 2018; Revised: September 25, 2018; Accepted: September 26, 2018; Published: September 30, 2018

Abstract: The Seed one of the critical input has also become an expensive input due to involvement of several multinational companies in its production and distribution system. This in return have devastated the farming community who are completely dependent on private companies on timely supply of vegetable seeds for successful farming. Realising the high investment in procurement of vegetable seeds, the concept of vegetable seed village can be popularised among the farming community with special focus on landless women farmers, who can be successfully involved in the local seed network for strengthening the supply of ample quantity of quality vegetable seeds at grass root level. Such a seed village concept in mass production of vegetable seeds at their homestead areas can prove effective in ensuring livelihood security to these vulnerable groups. This can further be strengthened with suitable policy frameworks and rural infrastructure for enabling the women groups to emerge as successful entrepreneurs in fields of vegetable seed production.

Keywords: Seed village, Women farmers, Vegetable seeds, Production

Citation: Sahu A., *et al.*, (2018) Vegetable Seed Village: A Key to Women Farmer Empowerment. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 10, Issue 18, pp.- 7138-7140.

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Introduction

The agricultural scenario of our country is very dynamic due to varied agro-ecological conditions, which enables the production of various agricultural and horticultural crops with the involvement of wide group of growers. Though India is no longer an "agricultural economy", 50-70 percent of its rural households still depend primarily on agriculture for their livelihood [1]. The magnitude of female workforce is enormous, around 79 % of women are engaged in agriculture and allied activities as against only 63 % of men [2]. Quality seed and planting material are essential pre-requisite for successful farming. The involvement of farm women in planting material production of Horticultural crops is quite significant, however there are lack of evidences which justify the magnitude of women workforce in vegetable seed production. Seed production of vegetables can be a lucrative enterprise for women farmers. However, in country like India it is required to be strengthened with suitable policy framework and rural infrastructure. Since India gained independence, the Govt. policies have favoured and encouraged the seed business through the involvement of private companies specially after the Green revolution. Indian vegetable seed industry is expanding in a rapid manner each year. At present the private seed companies are the leading players especially in vegetable seed production and distribution thus making the public sector much lagging behind. Vegetables occupy an important place in diversification of agriculture and have played a pivotal role in nutritional security. With the changing paradigms of food and nutritional securities, the consumption of vegetables has attained tremendous importance. Globally, India is the second largest producer of vegetables, however the quantity of vegetable seed production in the country is insufficient. It is the tenth-largest importer of vegetable seeds by value and the seventh-largest importer by volume, in the world. India accounts for 0.07% of the total vegetable seed imports by volume in 2016 and the total import of vegetable seed is estimated to be 3.94 thousand metric tons by volume and USD 82.64 million by value[3]. Hence, it is imperative

to state that the use of quality seeds of improved varieties of different vegetable crops has resulted in tremendous growth in vegetable production and productivity, however, the availability of quality seeds in time and at affordable price is still a matter of great concern. Traditionally, women farmers were the primary custodian of seeds. They were actively engaged in seed collection, conservation and multiplication. However, with the passage of time, their role has been substituted by Seed companies both at public and private sector. Seed now has become not only a critical but also an expensive input due to complications in its production, distribution and marketing system. Popularization of Hybrid seeds have even worsened the situation because of the GURT (Genetic Use Restriction Technology) which makes the farmer dependent for seed requirement for the next season. This ultimately have made the entire farming community dependent on Seed companies/agencies for sustaining their farming. There is a need to reorient the seed supply system at the grass root level by redefining the farm women roles and converting them back to their position of seed producers.

Concept

Vegetable seed industry has positive influence on Indian economy in terms of income and employment generation and earning foreign exchange in international market[4]. Hence, initiating vegetable seed production at village level by involving women farmers by organizing seed production in cluster (or) compact area can play a significant role in resolving the issues of timely availability of quality seeds at cheaper rates to meet the local demand along with ensuring stable source of income flow to these vulnerable communities. There will be increase in seed replacement rate, self-sufficiency and self-reliance of the village women. Vegetables seed production needs less time period compare to other crops. No extra labour is required for ploughing the land for the planting of vegetables. It will also empower the farmers, especially women, to save, use, exchange and sell their seeds to sustain the diversity of crops grown on-farm. Generally, in vegetable seed village concept there are mainly two phases.

The prime one is the seed production of different or same crops and the next one is the establishment of processing unit collectively by the farm women in their nearby place. The farm women have to select the area which belongs to them or the area ideal or suitable for raising a particular crop will be selected and raised with single variety of a kind. During critical stages of crop growth necessary care should be taken by the women depending on type of crop i.e., thinning, gap filling, staking, trellising etc. To maintain the purity, the field for seed production should be free from volunteer plants. Specially in cross-pollinated crops, one cultivar should be planted at one location and bee-hive boxes should be placed inside the seed production blocks to enhance pollination and further fruit setting. After the seed production, the seeds should be processed for market sale. Improper handling and processing, will result in loss of all the past efforts in the production process. Thus seed processing and packaging are very important aspect in seed production. To avoid seed storage losses farm women may collectively contribute towards establishment of seed processing unit in the vicinity.

Opportunities

It is a good source of income for farm women particularly vegetable seed production will take less time period compare to other crops. The initial investment to start the enterprise will be less. As the farmwomen are capable of growing vegetables in their home backyards, they may need small training to initiate vegetable seed production in their local farms. Producers and consumers will be mutually benefited. Vegetable seed production in own farms facilitates fast spread of new cultivars of different kinds in neighbouring villages. Nutritious rich vegetables may be available if the weather is not suitable for seed production. Optimum quantity of high quality seed will be available to the farm community at appropriate time at reasonable prices. Capacity building and skill enhancement of women farmers will boost their confidence in field of vegetable seed production. This may trigger the women groups primarily engaged in seed production to evolve as successful entrepreneurs by forming women groups and producer companies. There will be tremendous growth in seed production at farmers field thereby reducing the dependency on private seeds thus making vegetable farming more sustainable at present and profitable in near future.

Scope

Vegetable seed business will ever have a huge scope and play important role in economics of livelihood and nutritional security of farm women. The concept of seed village scheme has achieved a good success and therefore need to be continued for the seed bank in every village[5]. The technical support like proper seed treatment, seed selection and pre-cultivation preparation has changed the yield of the crop. Governments of state or central should help farm women for encouraging or adopting the seed village concept by providing subsidies or alternate measures. Emphasis should be given in reorienting the women farmers into groups (FPO, SHGs, Women Empowerment Groups) for mass scale production and extraction of quality seeds(6). New technologies of vegetable grafting, which is easy, cost-effective and viable is required to be popularized among the farming community to ensure that they get quality seeds and planting materials at their vicinity and at a cheaper rate. Capacity building of women farmers in seed collection, conservation and maintenance of local cultivars, landraces and High Yielding Varieties will also help in maintaining a rich biodiversity of the crop species. Training on package of practices for seed production on a large scale, its distribution and marketing can enable in developing women Seed Entrepreneurs. Linkages with Govt. schemes for production of certified seeds in collaboration or in PPP mode can be strengthened for production of quality seeds at village level.

Constraints

The major constraint is lack of rural infrastructures for optimum processing and drying of vegetable seeds. Another big challenge before establishing the village seed programme is the market linkage which needs to be created at new places and strengthened at the existing places. Women farmers are most vulnerable to climate change, the vagaries of climate change is another big hindrance which may create obstacles in path of vegetable seed production. Sometimes due to

variations in climate or weather the seed production may not be possible and women farmers will have to harvest early in apprehension of losing the entire crop. Complexity of seed production process, lack of soil testing information, optimum plant protection measures and timely irrigation are some of the constraints for successful seed production at village level [7]. Unlike cereals, vegetable seeds are non edible thus, the produced seed should be marketed at appropriate time or saved at favourable conditions for future use as it may lose its viability. Mixing of seed of same crop from different units may adversely affect the quality and uniformity. Migration of the farming community may sometimes leads to failure of seed production. Thus suitable front end and back end support by policy implementation at grass root level through supply of critical inputs like seeds, agro-chemicals, soil testing and irrigation facilities, before initiating the production program are some of the crucial points of intervention. At the same time safe disposal of the produced seeds and storage of the excess seeds produced in suitable store houses and facilities for post-harvest handling are some of the critical factors which needs to be strengthened with suitable Govt. schemes and policies. The public-private partnership mode can also be explored in encouraging the concept of vegetable seeds production at village level and in making the enterprise economically viable for the farming community.

Conclusion

There is significant contribution of women farmers in vegetable production, the same expertise need to be strengthened with few technical interventions for growing vegetables in their backyards for seed production. Women farmers play a fundamental role in food security and seed being a crucial and costly input for vegetable production, the concept of vegetable seed village will prove to be effective in ensuring livelihood and nutritional security of farm families. Strengthening of the local seed network by the involvement of women farmers can be an effective strategy for making agriculture more sustainable and in doubling farmer's income by decreasing their seed input cost.

Application of review: The vegetable seed village concept can be an effective strategy for ensuring the availability of quality seeds at an affordable rate to the farming community and will reduce their dependency on outsourced seeds. Growing of vegetables for seed production will be more profitable than sale of fresh vegetables. The enterprise will be beneficial for poor landless women as they can grow the crops for seed production in their homestead areas.

Review Category: Women Farmer Empowerment

Acknowledgement / Funding: Author thankful to ICAR-Central Institute for Women in Agriculture, Bhubaneswar, 751003, India

***Principle Investigator or Chairperson of research:** Ankita Sahu

Institute: ICAR-Central Institute for Women in Agriculture, Bhubaneswar, 751003
Research project name or number: Frontline Demonstration

Author Contributions: All author equally contributed

Author statement: All authors read, reviewed, agree and approved the final manuscript

Conflict of Interest: None declared

Ethical approval: Author agree to submit ethical clearance certificate from the concerned ethical committee or institutional biosafety committee, if the project involves field trails/experiments/exchange of specimens, human & animal materials.

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