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A CASE STUDY

For higher income grow vegetable crops

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Abstract: A vegetable grower engaged in various agricultural activities under the expertise advice has the potential to empower him/her through the adoption of knowledge, skills, motivation, and competencies that underpin sustainable agriculture. A case study was undertaken to analyse the factors affecting level of income earned from vegetable growing and summarize the benefits after following the improved agricultural technology. For this, the achievements by a progressive vegetable grower Mr. Davinder Singh, village Mushkabad, tehsil- Samrala and district Ludhiana were assessed through an interaction. Though, being a marginal land holder, he has made a unique identity through vegetable cultivation in Punjab state through his scientific attitude, ideas and hardworking. According to him it could possible after he adopted all the advanced agricultural technologies of Punjab Agricultural University in his vegetable farming. Though, farming over a total of ten acres of his operational agricultural land, Mr. Singh emerged as a successful vegetable grower and has become a nation symbol. In addition to these, he has also made a milestone in dairy farming. In this manuscript, his achievements as vegetable grower and allied expertise have been presented which can be lessons to other poor and marginal land holders.

Key Words: Income, Vegetable, Crops, Grow, Higher

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Introduction

In India, about 70 per cent of the population lives in rural areas, the development of a more sustainable agricultural system is a major policy concern. Whole agricultural system across the country is much under increasing pressure from a range of sources that made the marginal farmers either to give the farming profession or have followed the way of suicide. Since four decade back there has been a widespread reduction in centralized, state-led extension activities across much of the developed and developing nations, in favour of

approaches that have more involvement from the private sector and farmers themselves. In essence, the message from extension practitioners and the agricultural experts is that 'self-help is the order of the day' (Black, 2000). This, of course, needs to be balanced against the requirement for continued support from the government side, particularly in terms of financial aids, capacity building, co-operation and the co-ordination. For remaining competitive, a grower is required to engage in a process of ongoing adaptation of improved technologies, ensuring that the use of such technologies and practices

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maximize both his efficiency and profitability, while at the same time ensuring long-term economic, social, and environmental sustainability. Indeed, the notion of farmer participation in the generation and dissemination of the new knowledge, skills and the practices is now accepted as one of the most effective means for promotion of a more sustainable system (Robinson, 2003). This reflects a growing recognition that the development of more sustainable agriculture requires integrated approaches that not only involve high levels of farmer participation, but also engage with the complex economic, social and environmental processes. The volatile global commodity prices, enhanced input costs, degradation of land and the socio-demographic changes are the common ones (Tonts and Siddique, 2010).

Today, in several parts of the developing nations of the world, growers are facing a range of challenges such as cost-price pressures, climate change, knowledge and skill deficits, and the difficulties accessing the latest technologies (Siddique, 2011).

Bijalwan (2014) presented the success story of Mr. Dewas who made tremendous progress as vegetable grower in district Madhya Pradesh and laid a milestone for other vegetable growers.

The government agricultural institutions especially the extension wing plays a critical role in ensuring to have a grower with great knowledge, skills and competencies to remain competitive and sustainable. The central government's retreat from the agricultural research and development, and the extension in agriculture, and the increasing focus on farmer-led participatory strategies, has contributed to the emergence of farmer-based bodies which have played a significant role in the promoting a more sustainable agricultural system. This case study involved the story of a innovative and progressive vegetable grower Mr. Davinder Singh who has created a milestone example for the other marginal land holders.

The objectives of the study were - to know the gain of agricultural knowledge by the farmer, and to know the adoption of agricultural technologies by the farmer.

MATERIAL AND METHODS

The present case study of a vegetable grower was undertaken to analyse the factors affecting level of income earned from vegetable growing and summarize the benefits achieved through adoption of the improved agricultural technologies.

A team of experts from PAU, Ludhiana made a visit to his native village Mushkabad which is 6.8 kilometres away from tehsil Samrala in district Ludhiana. A personal interview was conducted with him and important information of the interview was recorded. In the interview, he told that after registered as member of PAU Kisan Club, attended several trainings, seminars, group discussions, training camps besides some foreign visits under the direction of agricultural experts. According to him, he cultivates vegetables on 20 acres including 13 acres of his lease. Based on his knowledge from the trainings under expertise of PAU, Ludhiana he applied all the recommended practices on his farm.

RESULTS AND DISCUSSION

In this paper, the assessment of the achievements of a progressive vegetable grower named Mr. Davinder Singh after he adopted all the advanced agricultural technologies recommended by Punjab Agricultural University were made. Besides being a marginal land holder, he has made a unique identity through vegetable cultivation in Punjab state through his scientific attitude, ideas and hardworking. Though, farming over a total of ten acres of his operational agricultural land, Mr. Singh emerged as a successful vegetable grower and has become a nation symbol. In addition to these, he has also made a milestone in dairy farming. He thinks his purpose has solved through right direction to farming and increased communication for marketing. Inspite of his small land holding, he has created an example not only in Punjab but whole India how to get highest returns from vegetable cultivation.

Farm practices:

He did not have much fertile land but land with sand domes. However, it was his dedication and hard work that all his land is highly fertile now. He started his farming on 0.75 acre with PAU chilli variety CH-1 and earned excellent returns by self marketing in Chandigarh and this motivated him to continue with vegetables. One day after looking good returns from the tomato cultivation by his fellow farmers, he started tomato cultivation over one acre land and increased more area under tomato farming. Besides tomato, Mr. Singh also started farming with cucumber, capsicum, sponge gourd, bitter gourd and potato. He told that he cultivates early sown tomato which is sown in October and gets ready to give first picking in February that ends in month of March whereas

timely sown tomato matures in April. He fetches more profit from his early sown tomato. He ties tomato, bitter gourd, cucumber, sponge gourd and capsicum around straight bamboo through a wire and raises plants up by tying above. He gets good quality yield.

Land holding and farm techniques:

Of his 20 acres land, on 19 acres in summer season, he grows 9 acres of bitter gourd, 5 acres of cucumber and sponge gourd each, and during winter he grows tomato on 9 acres, potato and capsicum on 5 acres each (Table 1). One can notice him making use of new techniques such as drip irrigation, sprinkler irrigation, polyhouse, nethouse and mulching etc. He has also constructed a one man run home grader. He keeps daily records of temperature and humidity through home installed thermometer and hygrometer.

Vegetable produce and economic returns:

According to Mr. Singh cultivation of bell pepper in nethouse gives three times extra yield than in open fields. He obtains 20-25 per cent more yield in vegetables through drip irrigation gives. For better market price he himself grades and sells all his vegetables in the market.

Base of gain of agricultural knowledge:

He goes for soil and water testing after every three years and applies insecticides based on expert advice. Mr. Singh gets timely advice from experts of KVK, Samrala and Department of Vegetable Science, PAU, Ludhiana, and also shares his experiences with them.

Allied enterprise other than agricultural crops:

Mr. Singh has adopted dairy as allied business. He owns 12 murrah buffaloes which produce 9500 litres milk annually giving him handsome income (Table 1). Besides vegetables, he has kept some land under *Rabi* and forage offering excellent feed to cattle. Although a marginal land older, he purchases food grains for his family needs and does not grow cereal crops. Being merely a vegetable grower, his economic returns are better than his fellow farmers.

Role in resource conservation and quality produce:

He does not burn vegetable debris but uses for the next crop due to which the damage of vegetables like bitter gourd is reduced from surface water touch and also air pollution can be avoided. Besides this, he has constructed a extra water recharging well so that it can be utilized to irrigate the crops when required. S. Davinder is one of the largest vegetable producers in Punjab who pays special attention towards quality grading and packaging for vegetable production.

Foreign visits:

He has visited few countries like Italy and Germany. He is working hard for achieving Euro-gap certificate for exporting his produce at international market.

Awards received:

- S. Ujjagar Singh Dhaliwal Award (September 2008)
 - Chief Minister Award (March 2009)

Table 1 : Details of the crop/allied enterprises			
Crop	Acre (s)	Production (quintals)	Yield/acre (quintals)
Vegetables (Winter)			
Capsicum	1	110	110
Cucumber	2	200	100
Tomato	6	2100	350
Vegetables (Winter)			
Bitter gourd	6	720	120
Bottle gourd	2	250	120
Capsicum	1	80	80
Fodders			
Bajra	1	125	125
Berseem	1	150	150
Dairy	Animals (No.)	Average production/year	-
Buffaloes	12	9500 litres	-

- Chief Minister Award in Horticulture Category (2009)
 - National Level Award by ICAR, New Delhi.

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Conclusion:

It is evident from this manuscript that though being a marginal land holder, Mr. Singh made a unique identity through vegetable cultivation that was possible through his adoption of improved agricultural technologies. He emerged as a successful vegetable grower and has become a nation symbol. In addition to these, he has also made a milestone in dairy farming.

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