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### Resource-Poor potato growers and marketing tribulations

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#### Abstract

Olericulture or vegetable production is an important subsector in developing countries, like Pakistan. Pakistan's agro-climatic conditions are very favorable for vegetables cultivation but post-harvest losses are much higher and also after harvest, farmers lose a substantial amount of its merchandise in developing countries especially in Pakistan. About 40 to 50% vegetables are lost before consumption in the developing countries. Potato growers are facing a lot of problems regarding production and harvesting, the purpose of study was to identify the marketing issues which potato growers are facing after harvesting the crop. District Gujranwala was selected as study area as it is one of the main vegetable growing district of the province. From the district, a sample size of 144 potato growers was selected purposively. Well-structured and pre-tested interview schedule was used for data collection. Statistical Package for Social Sciences (SPSS) was used for data analyses. Results revealed the most prominent marketing issues of potato growers were no contact or entrance to the international market; expensive transportation; fluctuation in price; poor roads; lack of established market; vegetable market is ignored by the government; loss of quality during movement of produce; unawareness about market rates; double-dealing of dealers and unfamiliarity regarding marketing system are the major restrictions which make it difficult for the improvement of vegetable sector. Therefore, it is suggested that government should pay attention on these problems. There should be a strong linkage between extension agencies and potato growers. These are necessary for eradicating marketing problems of potato growers.

**Keywords:** Identification; marketing problems; potato growers

#### 1. Introduction

Botanical name of potato is *Solanum tuberosum* L. Potato is the most consumed crop all over the world. It is very nutritious and non-grain food and playing a major role in the food security (Xun *et al.*, 2011) <sup>[13]</sup>. With the increase in population, food security is becoming a serious issue all over the world. It is very favorable food in developing countries also. It is the best alternative for overcoming the shortage of food in developing countries. It is cheap, highly productive and rich with nutrients (Hassan *et al.*, 2003) <sup>[4]</sup>. Vegetables have a great importance in daily diet. Vegetables make immune system strong and good for balanced and healthy diet. Agriculture is becoming a profitable business for small farmers also through the cultivation of vegetables (Bulllar, 2005). Export of vegetables is helpful for earning foreign exchange that make the country's economy strong. Pakistan fulfils the local needs of vegetables and also export to other countries like Dubai, Afghanistan, Saudi Arabia, United Kingdom and India (Mari, 2009) <sup>[10]</sup>. Extension agents are trained to aware people for using better practices for better production. Extension agents also facilitate them for using knowledge and machinery (Ovwigbo *et al.*, 2014) <sup>[11]</sup>.

Food security is the biggest challenge in the developing countries as the population of the world is increasing day by day. The demand of processing food is also increasing and

there is need to be fulfill the gap of food shortage. The most demand of processed food is fried and chips among all over the world (Lathika *et al.*, 2005) <sup>[8]</sup>.

The demand of potato and its by product like potato powder, potato starch, potato preserved in vinegar granules, baby food items and alcohol is increasing with increasing the rate of urbanization and demand of fast food (Das 2007) <sup>[2]</sup>. Preservation of potato and verities of its by-products in large quantity is most difficult process in high temperature seasons. Due to the number of factors while its processing there is need to be quick process of food item (Luckow 2009). There is significant opportunity to establish the processing industry in all over the world. Potato cultivation has the major contribution in agriculture sector and quick source of earning (Hein *et al.*, 2008) <sup>[5]</sup>.

Potato cultivation is expensive method at small level because it requires heavy equipment and inputs and labour for handling the cultivation and harvesting season (Harbans & Sharma, 2006) <sup>[3]</sup>. Unavailability of inputs at the time of cultivation is the major issues in the developing countries that effect the overall production of potato (Kumar 2005) <sup>[7]</sup>. Due the competing price of the other crops, unawareness about the modern technology and old method of cultivation is the major challenges in potato cultivation. It is observed that due to strict food safety rules of world trade organization there is market gap among developing and

developed countries (Hu *et al.*, 2009)<sup>[6]</sup>.

To overcome the market gap among the different countries there is need to be contract farming. Contact farming is basically an agreement among farming community and processing units, in which marketing of crops is done on the specific conditions (Rampal, 2013)<sup>[14]</sup>.

Potato seed production is profitable business for the contact farmers. There is need to special guidance from sowing to harvesting and adoption of latest innovative strategies to farming community. There is need to proper training about field management and advance cultivation methods (Sing 2000).

**2. Research methodology**

Gujranwala is the famous city of Punjab province regarding agriculture. It is selected as study area as it is one of the main vegetables growing district of the province. It consists of 4 tehsils. All the tehsils are famous for agriculture products. Out of these 4 tehsils equal number of respondents were selected. 144 respondents were selected from all over the district. 36 respondents from each tehsil purposively to make the sample size of 144 potato growers. Data was collected through interview schedule which was pretested by interviewing 20 respondents randomly which were not included in sample size. Interviews were conducted at farms, at home of farmers and at the vegetable markets. After collecting data, it was analyzed through a software named Statistical Package for Social Sciences (SPSS). Through this software frequency, standard deviation, percentage and mean were calculated for getting results.

**Research methodology**

A survey research methodology was applied to conduct the study. The study was conducted in Gujranwala, Pakistan, the largest rice-producing district in the country. The population or sampling frame was made up of rice growers registered with the Department of Agriculture (Extension Unit) and the largest private extension unit, a pesticide

company. The largest private unit in the district was Syngenta Agrochemicals. A sample size of 342 farmers was drawn out of 2,365 rice growers from the four tehsils of the district: Gujranwala, Wazirabad, Kamoky and Noshehra Virkan (Fitz-Gibbon and Morris, 1987). The respondents from each tehsil were selected on the basis of number of farmers in the tehsil. There was: 103 respondents selected from tehsil Gujranwala; 97 respondents from tehsil Kamoky; 83 respondents from tehsil Wazirabad; and 59 respondents from tehsil Noshehra Virkan. An interview schedule was prepared in English but ad-libbed in vernacular (Punjabi) to facilitate the respondents (Flower Jr., 2004). Its validity and reliability was checked through pre-testing. Data collection was carried out by the lead author through face-to-face interviews. Of 342, 289 respondents were interviewed on their farms locally known as Deras while rest of them was at their homes or shops. Data analysis was done using the SPSS 24 (Statistical Package for Social Sciences). The small sample size of 342 smallholder farmers is not enough to generalize the results to whole the whole country or even to the province. Though, it does help answer the research hypothesis ‘Private extension services are more effective than public extension services?’

**3. Results and Discussions**

**3.1 Impediments regarding marketing of potatoes**

After harvest, main issue which farmers can face is marketing issue. This study was designed to identify the marketing issues which potato growers are facing. It is necessary for the better production and for uplift of living standards of farmers to find out those problems and give sustainable solution.

**3.2 Marketing of potatoes**

It is necessary to ask the respondents about the problems that they are facing regarding marketing of potatoes. The relevant data is given in the Table.

**Table 1:** Response of respondents regarding impediments related to marketing of potatoes

Impediments regarding Marketing of potatoes	Yes		No	
	Frequency	Percentage	Frequency	Percentage
	144	100.0%	-	-

Data mentioned in the Table 1 narrate that all of respondents are facing impediments regarding marketing of potatoes. Further respondents were asked about different aspects of marketing.

**3.3 Marketing of produce**

Marketing means selling and buying of potatoes and the purpose of study was to find out the problems which make the buying and selling process difficult. Interview schedule

was prepared to ask about these problems from potato growers. During interview a Likert scale was used with five different levels of satisfaction these scales were given numbers 1-5 according to their response. 1 number used for very low level of satisfaction, 2 number was used for low, 3 number was used for medium, 4 number was used for high and 5 number was used for very high level of satisfaction. Details are given in the following table.

**Table 2:** Frequency, mean, standard deviation and percentage of various impediments regarding marketing of potatoes

Impediments	Frequency	Mean	S.D	Percentage
Low price of potatoes in market	97	3.43	1.249	67.3
Monopoly of dealers	69	3.09	1.134	47.9
Unawareness about market rates	73	2.86	1.194	50.6
Unawareness regarding marketing system	67	3.39	1.029	46.5
Substandard roads	111	3.27	1.235	77.0
High fare of transportation	119	3.02	1.207	82.6

Lack of Govt. interest in vegetable market	97	3.44	1.216	67.3
Market price uncertainty	115	3.23	1.332	79.8
No access to international market	127	3.30	1.249	88.1
Non availability of established market	109	3.39	1.216	75.6
Quality degradation during transport	87	3.24	1.141	60.4

(Scale: 1= Very Low, 2= Low, 3= Medium, 4= High, 5= Very high)

Problems related to the marketing of potato are briefly described in the table. All farmers are facing problems which were interviewed. Different questions were asked about impediments and farmers show different level of satisfaction about every question which was given a number for statistical analysis of those responses. No contact or entrance to the international market (mean=3.30, 88.1%) was found main problem. After that, expensive transportation (Mean=3.02, 82.6%) was the second largest problem. Fluctuation in the price of potato (79.8%) was recorded third most found problem. Other problems which were recorded after completing interviews were poor roads, lack of established market, vegetable market is being ignored by the government, loss of quality during movement of produce, unawareness about market rates, double dealing of dealers and unfamiliarity regarding marketing system of potato were the main problems which farmers mentioned.

### Conclusion

On the basis of findings it is concluded that almost all the respondents claimed about marketing issues of potato. Main problem that the potato growers claimed is no access to the international market. 2<sup>nd</sup> ranked problem regarding potato marketing was expensive transportation. 3<sup>rd</sup> prominent impediment was market price uncertainty. Other problems which identified are substandard roads, lack of established market, vegetable market is being ignored by the government, fluctuation in price of potato and double dealing of dealers. The Government should pay attention by giving transport facilities to potato growers and by maintaining roads for easy access to markets. Monopoly of dealers should be minimized. The Government should also create awareness among potato growers through extension agents for overcoming the quality degradation during transport.

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