



## Review article

# Direct Marketing of Fresh Mangoes: A Case Study of Mango Smallholders in Pakistan

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### Abstract

In Pakistan, 86 percent small-scale farmers whose average cultivated landholding is less than 5.0 hectares and who mostly engage in subsistence farming dominate the fresh mango value chain in Pakistan. Most mango smallholders devote their time to what they know best, growing but leaving the harvesting and handling of mangoes to other partners in supply chain, mainly preharvest contractors. Selling directly to consumers is a new option for smallholders, which on a pilot scale in 2014 & 2015 has proven more profitable for them. An initiative was taken under the ASLP Mango Value Chain Improvement Project to promote the ASLP 'best practices mangoes' in domestic markets in Multan through direct marketing by smallholders. Under this initiative, six small-scale farmers near the city of Multan formed a group and trained by ASLP project team members on pre and post-harvest techniques. During the 2014 mango season, 13 consignments of mangoes were prepared adopting ASLP best mango practices. These consignments were sold by adopting direct marketing through a dedicated roadside retail outlet, which they established, and through home delivery. More than 13 tonnes of mangoes were sold in 20 days activity. When supply of best practice mangoes ran out there did unfilled orders from consumers, as well as other local small and medium farmers want to participate in direct marketing in future. This paper provides a detailed account of this pilot project's direct marketing strategy as an approach to linking small-scale farmers with consumers, increasing farmers' incomes and improving their livelihoods in Pakistan, a developing country.

**Keywords:** Mango, Direct Marketing, Small-Scale Farmers, Domestic Market, Quality, Profitability.

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## INTRODUCTION

Pakistan is a developing country with a Gross Domestic Product (GDP) of around 270.05 billion USD and a per capita income of around 1,629 US\$ in the year 2016-17. The major sectors of the economy are agriculture (19.5 percent), manufacturing industry (13.5 percent) and services (67 percent) (Economic Survey, Government of Pakistan 2016-17). In spite of the fact that the share of agriculture in GDP has dropped overtime from more than fifty percent (Zaidi 2005), it is still regarded as the lifeline of the Pakistan economy with 19.5 percent share in GDP and plays the main role in national development, food security and poverty reduction (Economic Survey, Government of Pakistan 2016-17). Nearly, 60% of Pakistan population is directly or indirectly concomitant with the agriculture sector and employing 42.3 percent of the labour force and providing raw material for several value-added sectors. Besides serving food needs of the population, agriculture sector also provides inputs to agro-based manufacturing industries including textile and leather industry (ADB 2005). Agriculture is therefore, considered as the engine for economic growth, poverty reduction and accorded high priority in government policies in Pakistan (Economic Survey, Government of Pakistan 2016-17).

Mango (*Mangifera Indica L.*) popularly known as the “*King of fruits*” is the second most important fruit crop produced in Pakistan in terms of its area under cultivation (175 thousand hectares) and production (1717 thousand tonnes) in Punjab and Sindh province (Badar 2015; Government of Pakistan 2015; Ghafoor *et al.* 2009; Malik *et al.* 2010). Pakistani mangoes are famous for their sweet taste, juiciness, nutrition and flavour around the global (Collins *et al.* 2006; Rathore *et al.* 2007; Hussain *et al.* 2010). During the summer season, domestic demand for mango is very high and is popularly consumed both as raw and in processed form as jams, juices, nectars, squashes, milk shakes, and jellies. Although a wide variety of mangoes are grown in Pakistan, Sindhri, Chaunsa (SB & White & late) and Dusehri are the most prominent varieties (Badar 2015; Ghafoor *et al.* 2010; Collins & Iqbal 2011; Sun *et al.* 2011).

Pakistan produces around 4% of the total mango production in the world and contributes around USD 150 million per annum in the national GDP. By production, Pakistan stands at number three in the world (Memon 2005). Mangoes stand second in horticultural segment of the Pakistan after citrus crop with production of 1.659 million tonnes in 2013-14. Pakistan’s two provinces produce almost all the mangoes in the country. Punjab produces more than 70% and around 23% produced in Sindh province. As in any other industry, the input suppliers for the industry concentrate in these two provinces.

The main commercial mango varieties include Sindhri, Chaunsa (Samar Bahisht, Black, and White), Dusehri, Anwar Ratole, Late Ratole No. 12, Sonera, Began Pali, Langra, Malda, Fajri and Sensation. Among these, Sindhri and Samar Bahisht Chaunsa are predominantly being exported. Sindhri is the main cultivar grown in the Sindh province (70% share), while in the Punjab province, 55% mango production captured by cv. Samar Bahisht Chaunsa only.

As the world's 6<sup>th</sup> most populated country, with 208 million inhabitants, Pakistan has huge domestic market for fresh and processed mango products. The domestic consumption of fresh and processed mango is increasing as primarily fueled by the high rate of population growth, which estimated to be 1.95 % annually. This is the highest population growth rate among the world's six most populated nations. Marketing of mangoes is mainly in private hands, and the role of the public sector is confined to creating and enabling environment that may include the provision of physical infrastructure, regulatory measures, market intelligence and market promotion. The major portion (90-95 %) of Pakistani mangoes marketed through the different wholesale markets located in the major cities (PHDEC, 2005; Ghafoor, 2010). Major wholesale markets to handle mango product are in these two provinces at Karachi (Sindh), Multan, Lahore and Faisalabad (Punjab), Quetta (Baluchistan), and Peshawar (KPK). The fruit procured on daily basis in these wholesale markets by street vendors, small fruit retail shops, and exporters. Most of the domestically marketed mangoes sold through street cart vendors directly to individual consumers.

They will create significant domestic market opportunities for those Pakistani growers able to provide the stores with consistent supplies of high quality mangoes. However, growers must be able to meet the quality, packaging, and food safety standards of these large supermarkets in order to establish a market presence. As a nation's economy grows and buying power increases, consumers typically spend additional amounts of their disposable income on high quality fruits, or value-added fruit products. The Pakistani economy is growing and the increasing amount of disposable income represents a market opportunity for the mango sector.

Grasping these opportunities and problems, the international project #HORT/2010/001 "Mango Value Chain Improvement Project" under the Australia-Pakistan Agriculture Sector Linkage Program (ASLP), attempted to demonstrate the benefits of ASLP best practices through linking small-scaled mango growers to customers through direct marketing approaches.

### **Methodology**

To link the small-scaled mango farmers directly to customers through direct marketing as domestic market development activity of the international project #HORT/.2010/001 "Mango Value Chain Improvement Project" under the Australia-Pakistan Agriculture Sector Linkage Program (ASLP), attempted to demonstrate the benefits ASLP best practices for mango quality improvement and selling to mangoes directly to consumers. Following were objectives of the study;

- To promote and demonstrate the ASLP best practices mangoes in domestic market
- To develop and test a business model for small scaled mango growers to deliver their product directly to consumers with improved quality

- To build the capacity of small-medium mango growers in ASLP best practices and direct marketing approaches
- To document the model for adoption by other growers

### ***Identification of Small Scaled Mango Growers and Project Partnership***

The focus of the project was to demonstrate the benefits of ASLP best practices to small-medium scale mango growers, who participated in the on-farm as well as market research activities and link them with consumers through direct marketing approaches. For this activity, a group of eleven (11) small-medium scale mango growers, who were willing to work cooperatively under the ASLP project. Before this direct marketing of ASLP best practices mangoes, project carried out domestic market survey based research in major cities (Islamabad, Karachi, Multan and Faisalabad) to gain an understanding of consumer attitudes towards the quality of mangoes currently available in the domestic markets, and to gauge the market potential for improved quality mangoes.

### ***Capacity Building of Mango Growers***

Capacity building activities were arranged for identified small-medium scale mangoes growers to provide them hands-on training on ASLP best practices (harvesting, desapping, ripening, post-harvest handling, grading & packing of mangoes) and market surveys to dissemination of information about ASLP best practices mangoes and identification of potential customers.

### ***Technical Assistance to the Identified Small-Scaled Mango Growers***

An enthusiastic technical team was appointed by the project to train, help and supervise the farmer's labor involved in preparation of consignments under the ASLP best practices guide. For consignment preparation following ASLP best practices observed;

- Stem-end harvesting was done with a hand cutter and sticks in order to harvest high quality mangoes at the identified mango farm
- Mangoes were de-sapped, washed and properly stored for ethylene ripening
- Mangoes were graded by size ranged from 350-400 grams and packed into cardboard boxes for marketing

### ***Establishment of Farmer-owned Outlet for Direct Selling***

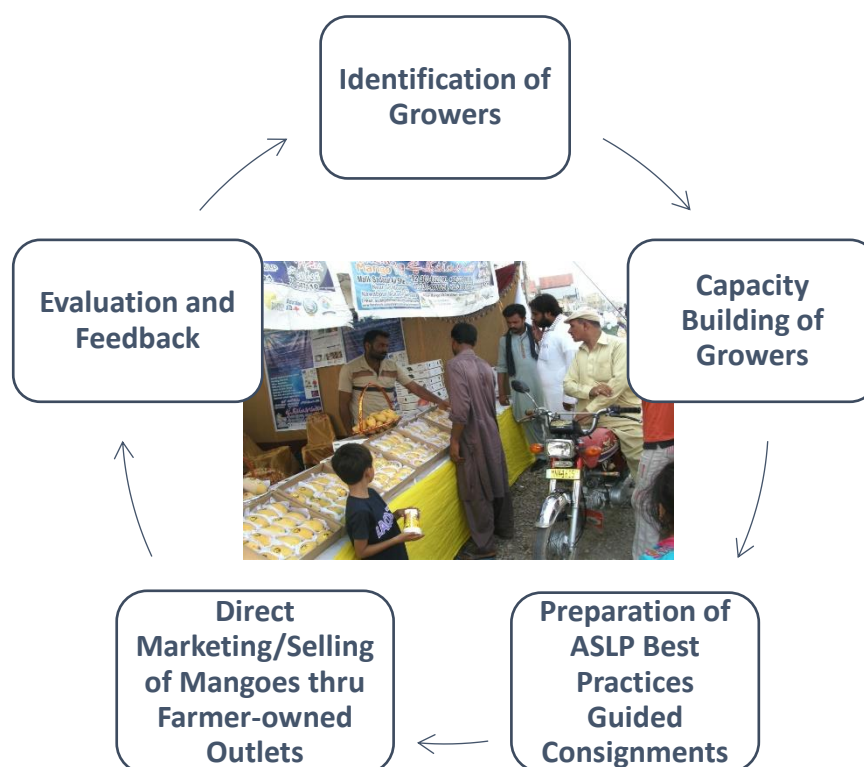
Project team helped small-medium mango growers in identification of point in city-populated area to establish farmers-owned outlet for direct marketing/selling of ASLP best practices mangoes. For this purposes, official permission was seek from District Government-Multan. Following farmer-owned outlets were established for direct marketing/selling of ASLP best practices mangoes;

- **2014** - Gulghast Area, Chungi # 6, Multan
- **2015** - Gulghast Area, Tehsil Chowk, Multan

### ***Cost of Preparation Documentation***

The ASLP project team documented the cost of preparation for ASLP best practices mango consignment at farm level. Moreover, team facilitated the growers in building farmer-owned outlets and collected customers' feedback regarding their perceptions on price, quality and expectations about the ASLP best practices mangoes. The direct marketing/selling case study depicted in Figure 1.

There were five (05) different mango varieties (Sindhri, Anwar Ratol, Dusehri, SB Chaunsa & White Chaunsa) were taken for direct selling, as presented in Table 1 in domestic market and cost-benefits analysis carried out to calculate financial out of direct marketing/selling activities.



**Figure 1.** Study cycle for Direct Marketing of ASLP best practices mangoes

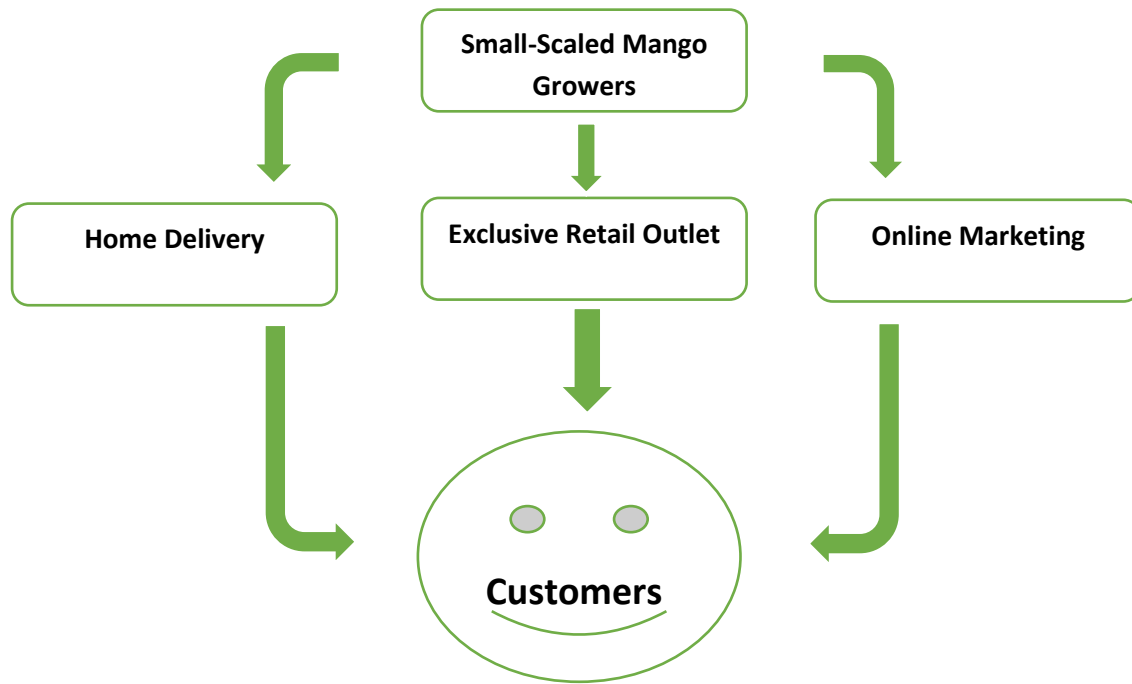
Before the establishment of farmers' owned outlet, market survey was conducted to disseminate information about ASLP best practices mangoes and get potential customers feedback. An exclusive farmers' owned outlet was organized in a highly populated areas in Multan city. Promotional campaign was also conducted through promotional material such as banners and handouts/brochures in Urdu (local language) used to communicate and differentiate the ASLP best practices mangoes from the traditional mangoes.

**Table 1.** Comparison of the grower's margin in Direct Selling of ASLP best practices mangoes (PKR/KG) and Traditional Selling through Wholesale Market

Description (Cost-PKR)	ASLP Best Practices Mangoes through Direct Marketing					Traditional Selling through Wholesale Market
	Sindhri	Anwar Ratol	Dusehri	SB Chaunsa	White Chaunsa	
<b>Farm Fate Price/KG</b>	50	55	50	60	65	50
<b>Postharvest Handling</b>	8	8	8	8	8	2
<b>Packaging Material</b>	15	15	15	15	15	5
<b>Marketing Cost Involved</b>	2	2	2	2	2	1
<b>Transportation</b>	10	10	10	10	10	0
<b>Commission Agent Fee</b>	0	0	0	0	0	4
<b>Total Cost</b>	85	85	85	95	100	62
<b>Retail Prices</b>	100	100	100	105	110	70-80
<b>Farmers' Additional Profit with Direct Selling</b>	15	20	15	10	10	-----
<b>Source: Authors' Calculations</b>						

### Results and Discussion

The direct marketing/selling activity was repeated in two years (2014 & 2015), where small & medium scale mango growers were involved in selling their quality mangoes prepared under ASLP best practices guides directly to customers through exclusive farmer's owned retail outlet, home delivery and online marketing approaches. Based on direct selling activity domestic marketing model developed for small scaled mango growers as depicted in below mentioned Figure 2.



**Figure 2.** Domestic Direct Marketing/Selling Model for Small Scaled Growers

This was not amazing since it was the mango producers, who had not gotten any consumer's feedback under the traditional selling systems. The customer survey in the domestic markets recognized that most of the mango shoppers were willing to pay 20-25% more price for quality mangoes. The lesson learnt from ASLP domestic market research activities that more values were available for mango growers than other domestic market stakeholders, if they deliver quality mangoes under ASLP best practice guidelines. A financial comparison of the on-farm activities, traditional versus best practices and direct selling versus traditional marketing system confirmed extra value for the mango growers as shown in table 1. The information depicted in Table 1 indicates that the growers got 10-20 PKR/KG more price while selling their ASLP best practice mangoes through direct marketing as compared to traditional wholesale market system. It is observable that the small-medium mango growers have an adequate profit margin in direct marketing. The growers who were involved in the ASLP domestic marketing activities are more motivated to continue self-marketing of their produce in future.

The higher level of 128 percentage increase in sales of quality mangoes prepared under ASLP best practices guidelines was noted as 30.75 tonnes of mangoes sold in 40 days in 2015 through direct marketing as compared to 13.5 tonnes of mangoes sold in 2014. Small-scaled mango growers got 15-20 percent higher prices through direct selling to customers as compared to traditional marketing channels. It was also noted that, mango growers group sold ASLP best practices mangoes through home delivery 31% intra-city & 36% inter-city and 33% through growers owned stall.

**Table 2.** Total Volume Sold and Revenue Generated through Direct Marketing in 2014 & 2015

Sr. #	Mango Growers	# of (5kg) Boxes Sold	Total Volume Sold (KG)	Total Sale	
				PKR	USD
1	Grower-1	4400	22,000	2,310,000	22427
2	Grower-2	250	1,250	131,250	1274
3	Grower-3	200	1,000	105,000	1019
4	Grower-4	600	3,000	315,000	3058
5	Grower-5	100	500	52,500	510
6	Grower-6	100	500	52,500	510
7	Grower-7	100	500	52,500	510
8	Grower-8	100	500	52,500	510
9	Grower-9	100	500	52,500	510
10	Grower-10	100	500	52,500	510
11	Grower-11	100	500	52,500	510
<b>Total Sales (2015)</b>		6,150	30,750	3,228,750	31,347
<b>Group of 6 Mango Growers (2014)</b>		2,704	13,520	1,046,195	10,150
<b>Source:</b> Authors' Calculations					

The growers were successful in developing direct links with customers. Consequently, growers found it compatible model to market and sell their produce directly to customer as they got higher return and willing to continue with direct marketing rather selling through traditional marketing systems.

### Conclusion

The ASLP Mango Value Chain Improvement project adopted a system-based model, which requires the integration of technical (quality management through ASLP best practices guidelines), business (market research), and social (supply chain management) knowledge and skills. The direct marketing model has revealed some key success factors that need to be consider in the planning and implementation for building domestic markets for small & medium-scaled growers in developing countries like Pakistan.

There are some issues identified in linking growers directly with customers like as identification and selection of committed growers group, suitable place/site for growers-owned stall, inconsistent supply of quality mangoes, ripening of mangoes at small scale, availability of skilled labour for



postharvest operations, and inter & intra city transportation. Lessons learnt through this activity was that, there is niche local market exist for premium quality mangoes and small medium-scaled growers can participate in these local niche markets with relevant technical & business skills.

The main key success factor for direct marketing and linking of customers directly with customers is the selection of a multidisciplinary approach that requires technical team members not only to have the disciplinary knowledge and skills but the capacity to work across disciplines in a collaboration manner.

Finally, there was a need to keep the relevant government agencies informed about project's activities as it may motivate them to work with other donor agencies in the areas that are critical to address. For example, the mass level awareness creation of direct marketing of fresh product and linking small & medium-scaled growers with customers directly and development of farmers' owned entrepreneurship.

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