

Managing Fresh Fruits Trade under WTO Scenario: A Case Study of Citrus Export from Pakistan

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Abstract

The fruits economy of Pakistan worth more than Rs. 65.5 billion by producing 6.64 million tons, of which Rs. 5.4 billion were earned through exporting fresh fruits during 2004-05. The share of only citrus fruits in total value of fruits' exports is one-third. Pakistan has initiated trade policy reforms in 1997-98, under which custom duties and taxes has been significantly reduced along with entering into free trade agreements under WTO. Kinnow is the prime citrus item exported abroad and fetch good price due to its unique taste. The major importers of Pakistani citrus fruits (kinnow) are Indonesia, Dubai, Afghanistan, Philippines and Saudi Arabia. The export of fresh citrus is nominal in Europe, UK, USA, etc. In order to capture the prime markets of Europe, USA, Australia and South East Asia, the compliance with WTO regulation particularly SPS certifications are necessary. The paper worked out returns to different stakeholders and the society for producing and exporting world class citrus to different regions of the world. It revealed that the returns per kg of export to Europe and Russian Federation are highest, suggesting the citrus export diversion to these nations. For this purpose, there is a serious need to meet the Total Quality Management (TQM) criteria to fully exploit the opportunities provided by WTO. Along with other suggestions, it is recommended that incentives should be extended in establishing the citrus export zone in Sargodha district, where all necessary infrastructures for compliance with WTO regulations.

1. Introduction

In the developing world, the economic and income growth, urbanization and globalization has caused shifts in the dietary patterns away from staples and increasing towards livestock and dairy products, fruits, vegetables, oils etc. This is normal because as the economies grow, there is a gradual and definite movement out of subsistence food crop production (Pingali, 2004). In the developed world, the food consumption patterns are also diversifying towards high value agricultural commodities because of rising health concerns. This implies that the patterns of trade in agricultural commodities will change rapidly in the next 25 years.

Pakistan is blessed with the agro-ecological environment diversity conducive to the production of nearly thirty types of fruits of which citrus, mango, dates, guava and apple account for over 75% of the total annual production. The fruits economy of Pakistan worth more than Rs. 65.5 billion by producing 6.64 million tons and Rs. 5.4 billion were earned through exporting fresh fruits during 2004-05. The share of only citrus fruits in total value of fruits' exports is one-third (Government of Pakistan, 2006b). Low yield, insect/pest attack and inferior quality are frequent problems in horticultural crops including fruits and vegetables. Non-standardized nursery plants, non-availability of disease free seeds, poor management and cultural practices and high post harvest losses are the main causes for it. The post harvest losses are reported as high as 12-40¹ percent causing a loss of more than 25 billion rupees. Our horticultural produces mostly have short shelf lives and the quality usually falls short of being suitable for processing. Inadequate grading, poor quality packaging, and limited cold storage facilities are other constraints to the export of horticultural products. Moreover, only a small proportion of the total production of fruits and vegetables is processed and remaining is consumed and exported in raw and fresh forms (Iqbal and Ahmad, 2005).

More than 95% of the citrus area is located in the Punjab province and within citrus family, Kinnow is the largest planted cultivar. The area and production of citrus in Punjab have grown at the rates of 5.6 and 4.7 percent per annum, respectively during 1980-81 to 1990-91. In subsequent the decade (1991-92 to 2001-02), this pace could not be maintained whereas in 2000s, the citrus area has regular decline till 2003-04 (Government of Pakistan, 2006b). Besides income, citrus is also significantly contributing to employment generation equivalent to full time job of 75 thousand people through the various activities from production to harvesting, and then through the domestic and international marketing activities (Sharif, 2004).

The major proportion of Pakistan's exports is directly/indirectly dependent on agriculture sector. Pakistan's exports are also highly concentrated in few countries as well. The seven countries, namely USA, Germany, Japan, UK, Hong Kong, Dubai and Saudi Arabia account for 50 percent of its exports. The United States is the single largest export market for Pakistan, accounting for 27 percent of its exports followed by the United Kingdom, Dubai, Germany and Hong Kong (Government of Pakistan, 2006c). This indicates that our exports highly regionalized, which implies that the other regions of the world were not explored properly. There is a need to diversify the export band of Pakistan across commodities and regions.

¹ In the report on National Commission on Agriculture the figures reported are 20-40% (Government of Pakistan, 1988).

Increasing exports of agricultural products and simultaneously minimizing the import of agro-based products are one of the objectives of Pakistan's agricultural policy. The WTO Agreement on Agriculture has placed numerous challenges as well as created opportunities for Pakistan's agriculture. In the international trade arena, the issues of marketing with established quality and standards have become more pronounced and complicated. Pakistan must prepare itself to make developments in all sub-sectors for competing internationally. Hence urgent efforts are needed to improve international competitiveness by introducing cost effective production technologies (Sharif, 2004).

On the export side, the growth in Kinnow export has been ever highest during 2003-04 with the quantity and value as 14.96 million tons and Rs. 1.77 billion rupees, however, in the following year the exported quantity reduced to half. Pakistani citrus fruits (kinnow) are Indonesia, Dubai, Afghanistan, Philippines and Saudi Arabia. The export of fresh citrus is nominal in Europe, UK, USA, etc. In order to capture the prime markets of Europe, USA, Australia and South East Asia, the compliance with WTO regulation particularly SPS certifications are necessary. This signifies a need of investigating how the fresh fruits trade is managed as the world is now fully (including Pakistan) is entered in WTO compliance. The case of citrus is picked for this study because it is the top most exported item in fresh fruits. The objectives of this paper are as follows:

- To examine the Kinnow export patterns over the last five years.
- To estimate the economics of Kinnow export to different regions of the world.
- To review the production and infrastructure problems for entering into most profitable markets of the world.
- To suggest recommendations for sustainable improvement of citrus export to replicate the case for other major fruits of Pakistan.

2. Research Methodology

The both primary and secondary data were used for this exercise. The primary data updates were made by consulting 19 kinnow export factories located in Bhalwal tehsil of Sargodha district whereas the secondary data were collected from different sources like Pakistan Economic Survey; Agricultural Statistics of Pakistan; Fruits, Vegetables and Condiments Statistics of Pakistan and office of the Pakistan Horticultural Export Board etc. The analytical tools applied to the gathered data were profitability analysis of citrus export, export margin analysis, deconstruction of export marketing margins and, international competitiveness analysis. For further methodological details, please consult Sharif (2004). Under literature review, besides

various updates, Pakistan's trade policy reforms as well as food quality and safety standards under WTO and Pakistan's SPS management measures are also specially reviewed.

3. Review of Trade Policy Reforms in Pakistan

The pace of trade liberalization in Pakistan has been quite irregular compared with other developing countries (Guisinger and Scully, 1991). The first attempt to liberalize trade was made in 1960s. Until mid-1980s, import and export restrictions were quite severe. The new era of trade liberalization was started from 1989. During 1995, the tariff was reduced from 150% to zero percent and only 70 items out of 5464 goods were left on the import restricted list. All export duties have been removed with a few exceptions, i.e. 251 items in which Pakistan has a comparative advantage in the international markets.

There are three inter-related aspects hindering trade liberalization: i) the country's dependence on tariffs as a source of government revenue; ii) the incidence of illegal trade; and iii) dependence on imports of intermediate goods. Through the 1970s, Pakistan pursued the policy of import substitution that relied heavily on high tariffs and other import restrictions. However, during the 1980s efforts were made to remove import restrictions, whereas efforts to reduce tariffs were less successful for various reasons including high dependence on tariffs as a source of revenue. The incidence of illegal trade further undermines these efforts. This is related to the expected returns and costs; returns vary directly with the tariff structure in home country while costs vary directly with the cost of border patrol and the tariff differential in the neighboring country (Bashir, 2003).

Since 1999 Pakistan has embarked on an export-led growth strategy, which is being managed through successive trade policies. The government believes that consistency and continuity in policies allied with facilitation, is the key to all successful initiatives in trade related areas. This has translated into emphasis on liberalization of our import regime, and facilitation of our stakeholders i.e. (businessmen and exporters), so that the cost of doing business for them was reduced, and they could create exportable surpluses after adding value. Having put Pakistan on a continuous path as far as exports are concerned the new objective is to significantly increase the rate of export growth by adopting a Rapid Export Growth Strategy (REGS) which has been drawn-up and is based on five pillars: (i) improved market access through trade diplomacy, and new FTAs/PTAs with selected priority countries; (ii) focusing on regions neglected by Pakistani exporters i.e. regions like Africa, Latin America, Eastern Europe, Central Asia and the Far East; (iii) strengthening of trade promotion infrastructure of the Government including the EPB and

the trade offices abroad; (iv) improving skill development and productivity through provision of large - scale training; (v) provision of state of the art physical infrastructure by the government to spur investment and foreign direct investment (FDI). These five basic areas need to be concentrated upon to enhance Pakistani exports in a highly competitive manner. Eight areas have been diagnosed to formulate proposals on trade policy. These are (a) diversification of exports; (b) trade facilitation; (c) increased market access; (d) enhancing export competitiveness by reducing cost of doing business; (f) capacity building on WTO and trade negotiations; (g) developing export of services; (h) improving compliance and quality infrastructure; and (i) techno-legal proposals (Government of Pakistan, 2006a).

In summary, a major departure from the strongly protectionist, inward-oriented import substitution policies of the previous decades, the government has embarked on a substantial trade liberalization program since 1998. Improvements in the trade policy regime have been implemented through tariff cuts and rationalization, as well as through the removal of import quotas, import surcharges, and regularity duties. The maximum rate was reduced from 65% in 1996-97 to 45% in 1997-98 and to 25% in 2002-03 through 5 percentage point cuts. The result is that today, Pakistan has the lowest average protection in agriculture in South Asia. Secondly, by any standard, Pakistan's trade liberalization since 1997-98 has been significant (World Bank, 2006).

4. Food Quality and Safety Standard Under WTO and Pakistan's SPS Management²

In recent years, a country's/industry's capacity to manage sanitary and phytosanitary (SPS) risks has emerged as an increasingly important component of international competitiveness in perishable foods these product lines. Trade in these products can contribute to the spread of plant pests or animal diseases and to the consumption of microbial pathogens, chemical/drug residues, and/or naturally occurring toxins in food. Advances in scientific understanding of these risks, recent food safety and animal/plant health scares or crises, and other factors have contributed to the adoption of more stringent SPS standards by many countries as well as a proliferation of private sector codes of practice to mitigate SPS and commercial risks.

Pakistan has developed a relatively modest yet growing trade in high-value perishable foods. Fruit and vegetable exports are primarily directed to other countries in South Asia or other

² Major part of this section is drawn from the study conducted by the World Bank (2006) on "Pakistan: Growth and Export and Competitiveness". Therefore, wherever other sources will be used, they will be referred immediately.

low or middle income countries, although some trade has been developed with the EU. Pakistani exporters face very different official regulations and private standards in the various markets that they seek to compete in. The SPS measures adopted by most low and middle income countries are either comparatively less stringent or only weakly enforced. There are certain exceptions, however, especially on plant and animal health matters. In these markets most private standards also tend to be comparatively less stringent, with most attention given to cost considerations and the reliability of supply. Pakistani exporters have incurred relatively more frequent and more serious problems in meeting the SPS standards of the EU or of individual Member States. In each of the past three years, a dozen or more consignments of Pakistani products have been intercepted entering the EU and put on the latter's Rapid Alert Notification system. The majority of these cases have involved spice products and either violative levels of aflatoxin or the presence of banned colorants. Pakistan presently lacks a coherent strategy (or set of strategies) for quality and SPS management in relation to its trade. Whatever strategy exists is pursued independently at the company or business to-business levels. In the absence of a coherent strategy, Pakistani stakeholders are largely reacting to events and adopting defensive postures in which they seek to limit the apparent impact of standards or potential damage from non-compliance with those standards. While there exist pockets of capacity for quality and SPS management within the non-traditional export sectors, these have tended to be overwhelmed by broader systemic or supply chain weaknesses. The Government is devoting increased attention to SPS issues, yet thus far there is an apparent lack of coordination of the efforts of various Ministries and agencies and still insufficient collaboration between government and industry/farming organizations in this area.

Table 1: Direction of trade of Pakistan's high value food exports

(Percent of Merchandise Trade: 2003)

	Fish	Fruit + Veggies.	Meat	Combined
EU	41	26	0	31
High-Income Asia*	19	2	1	9
Low+Middle Income	29	64	99	51
Others**	11	8	0	9
All	100	100	100	100

Source: World Bank, 2006.

Pakistan has various institutions, which perform testing, quarantine, inspection, and other technically demanding SPS management functions, with a mixed picture on capacity and performance. Some significant capacity is available at the Department of Agricultural and

Livestock Products Marketing and Grading (for chemical, microbiological, and physical tests), the National Veterinary Laboratory (for animal disease diagnosis), the Atomic Energy Commission (for radiation), and the Pakistan Council for Scientific and Industrial Research (for mycotoxins). Despite this, the country's facilities to carry out animal and plant quarantine work are still inadequate. Neither the country's airports nor its seaports had any formal quarantine facilities. The quarantine offices tended to be rented facilities --except the one located in Karachi-- where only visual inspections were possible. However, provincial Veterinary Research Institutes (VRI) services are acquired for laboratory testing, in case of need. New capacity for animal quarantine and for testing of consignments for veterinary residues has been recently put in place at Karachi. And new quarantine facilities are planned to monitor expected trade with China and India.

There are shortcomings in the effectiveness of inspections carried out by various government agencies for purposes of enforcing food safety or other regulations. For example, concerns have been raised by Pakistan's trading partners about the procedures and effectiveness of inspections made by the Marine Fisheries Department of fishing vessels and processing facilities (see below). Pakistan's systems for both animal disease monitoring and plant pest/disease surveillance are underdeveloped and do not inspire confidence on the part of the country's trading partners.

SPS and quality management falls under the jurisdiction of four Federal Ministries; principally departments within MINFAL, Ministry of Commerce, Ministry of Science and Technology, and the Ministry of Health, as well as many provincial and local government departments. There are indications that many of the functioning departments perform their work in isolation. In several matters affecting trade, responsibilities for implementation are divided between federal and provincial (or district) agencies, often involving little coordination (i.e., on matters of phytosanitary and animal health programs; and the enforcement of national food laws): Export regulation is a federal matter.

Despite these shortcomings, some initial steps are being taken. For example, six Pakistani pack houses have now put in place certified Hazard Analysis and Critical Control (HACCP) systems and an additional five companies are in the process of developing such systems. Several of the larger export companies, particularly of citrus fruit, have invested in improved cold stores to extend shelf life and therefore extend their seasonal marketing windows. The government, through the Export Development Fund and through efforts of the Pakistan Atomic Energy Commission and the Pakistan Horticulture Development and Export Board (PHDEB), is

investing in facilities to enable the irradiation of various food products. This may facilitate market access for Pakistani fresh produce into certain markets that accept this form of treatment to increase shelf life and/or control insects. Some pest risk assessment has been done in recent years –i.e., for mango seed weevil, although considerably more work is needed before importing countries relax their phytosanitary requirements for mangoes and citrus fruit. The PHDEB is beginning to promote the concept of good agricultural practice (GAP) and to encourage some of the larger farming units to move toward Euro Retailers Produce Working Group: Good Agricultural Practices (EUREPGAP) certification, a status which could open up more opportunities for sales to West European supermarkets.

There are opportunities for future growth for Pakistani horticultural exports, both to its traditional market outlets and to additional destinations, although this potential will not be realized without improvements in quality and SPS management. Pakistan faces increased (quality and cost-based) competition from China for its citrus sales to Indonesia. Poor storage capacity and broader quality-related concerns inhibit Pakistan's ability to compete with Indian and other supplies of onions in the Middle East and Asian markets. New export potential is possible vis-a-vis the markets of Russia, Eastern Europe, China, and Iran, although plant health issues have thus far been a factor holding up trade with the latter two countries.

The supply side of the industry is the weakest link in the export of fresh fruits for WTO compliance. Already some pack houses and exporters have taken the initiative and are gearing themselves up and preparing for the SPS measures that they face or are likely to face in the future. Yet, their progress in improving risk management systems at the pack house level will pay little dividend in the absence of improved vertical coordination within the supply chain, the development of systems for trace ability, and the promotion of 'good agricultural practices'. There are some things that individual firms can do, yet addressing these challenges will also require government support and some element of collective action at the industry level --either through product-specific or broader exporter organizations.

5. Present Status of Citrus Exports

On the export side, the growth in Kinnow export has been ever highest during 2003-04 with the quantity and value as 14.96 million tons and Rs. 1.77 billion rupees, however, in the following year the exported quantity reduced to half. The un-official statistics of the export promotion bureau indicates that in 2005-06, the exports are again increased, however, not upto 2003-04 levels. An inter-year comparison of the export of Kinnow to different destinations of the

world shows that some diversification and changes in the countries of world Kinnow markets can be observed. The major importers of Pakistani Kinnow during 2-004-05 were UAE, Russian Federation, Saudi Arabi, Indonesia and Philippines. Very minimal amount of Pakistani Kinnow was exported to European countries (Table 3).

Table 3: Kinnow export (tons) diversification by destinations from Pakistan

Destinations	1999-00	2000-01	2001-02	2003-04	2004-05
United Arab Emirates	0.0	0.0	0.0	0.0	19658.5
Russian Fedration	0.0	0.0	0.0	1812.4	12848.0
Saudi Arabia	3399.0	3878.0	5891.0	14483.9	10751.6
Indonesia	18592.0	28644.0	31348.0	29041.7	8531.8
Philippines	13267.0	13192.0	14522.0	15777.6	7882.0
Sri Lanka	9636.0	7303.0	8716.0	9114.9	2314.5
Netherland	830.0	965.0	1615.0	5610.8	2074.7
Singapore	3396.0	5625.0	6988.0	4845.4	1837.5
Behrain	435.0	835.0	1826.0	2343.8	1416.2
UK	540.0	525.0	946.0	1316.9	999.7
Oman	0.0	0.0	0.0	453.9	780.7
Canada	141.0	195.0	461.0	557.4	741.1
Mauritius	0.0	0.0	0.0	1286.6	684.8
Kuwait	72.0	278.0	951.0	1149.8	684.0
Hong S.A. Re. China	0.0	0.0	0.0	872.9	579.6
Dubai	23034.0	22085.0	25220.0	28787.6	487.7
Malaysia	1461.0	3716.0	5117.0	2434.4	416.4
Viet Nam	0.0	0.0	0.0	263.6	409.2
Romania	0.0	0.0	0.0	0.0	351.0
Qatar	0.0	0.0	0.0	226.1	240.1
Norway	0.0	0.0	0.0	207.4	185.0
Poland	0.0	0.0	0.0	0.0	140.0
Ukraine	0.0	0.0	0.0	25.1	133.2
Angola	0.0	0.0	0.0	56.0	81.3
Malta	0.0	0.0	0.0	71.7	73.0
Greece	0.0	0.0	0.0	10.3	53.0
USA	359.0	106.0	0.0	126.4	51.2
Bosnia & Herzegovina	0.0	0.0	0.0	99.8	26.8
Japan	155.0	95.0	0.0	62.1	26.8
Bangladesh	0.0	0.0	0.0	124.2	26.0
Nigeria	0.0	0.0	0.0	0.0	26.0
Niger	0.0	0.0	0.0	0.0	25.9
Myanmar	0.0	0.0	0.0	0.0	25.3
Mauritania	0.0	0.0	0.0	0.0	24.6
Mozambique	0.0	0.0	0.0	0.0	13.0
Kazakstan	0.0	0.0	0.0	0.0	8.4
Afghanistan	3919.0	6982.0	10685.0	25523.7	0.0
Abu Dhabi	0.0	0.0	0.0	705.1	0.0
Australia	0.0	0.0	0.0	339.3	0.0

Source: Government of Pakistan, 2006. "Fruits, Vegetables and Condiments Statistics" and Sharif (2004). The estimates for the year 2002-03 are missing.

6. Economics of Citrus Export

This section deals with the profitability of citrus export from Pakistan to Middle East, Far East, Europe and Russian States. The estimates of costs and returns to citrus export are presented in this section.

Purchase Price, Transportation and Processing

About 20 percent produce is purchased directly from producers and 80 percent through contractors. The purchase price of citrus Rs. 5.75 per kilogram was reported for the year 2005-06. The exporter chooses superior quality produce from well-reputed growers. During harvesting exporters monitor vigilantly and takes extraordinary care. Producer or contractor pays the harvesting charges of the produce. Exporters have skilled labor for sorting the produce. After sorting the fruit having well quality and size, is transported from garden to factory in specially made plastic vessels to save its skin from any scratches and stress (Sharif, 2004). Labor and transportation cost from citrus orchard to Kinnow processing factory Rs. 0.25 per kilogram were reported. After arriving fruits in factory, they are processed next day. This period is given to the fruits to reduce field heat and the Stains or scratches on the fruits are exposed and these fruits can be separated easily. After this fruit is washed with abundance water. During complete process of washing, waxing, grading and packing fruits are scrutinized repeatedly and any fruit with lower quality is separated. Processing cost per kilogram Rs. 1.75 was reported (Table 4).

Packing Material Cost

Exporters provide packing according to buyer's requirements. The quality of packing material is important to keep the fruit in best condition. Packing material cost for the year 2005-06 was reported as Rs. 1.77 per kilogram.

Inland Transportation Charges

After processing produce is loaded in containers to send the produce to Karachi port. Although, the rail line is passing through the Sargodha and Bhalwal cities but unfortunately, rail transport is not reliable and all of citrus fruit results show that all of the exporters used hired transported to send the produce from Kinnow processing factories to Karachi port. Due to unavailability of reliable rail transport facility, exporters have to bear high inland transport charges (Sharif, 2004). The inland transport cost from Kinnow processing factories in district Sargodha to Karachi port for the whole season was estimated to be Rs. 2.00 per kilogram. This included truck cost plus refrigerator operational charges while carrying the output from Sargodha to Karachi.

Custom Clearance Fee

Exporters paid custom clearance fee Rs. 0.40 per kilogram in whole season.

Shipment Charges

It varies from region to region due to distance and rent of ships. Shipment charges of Rs.4.34, Rs. 5.30, Rs.7.71 and Rs. 11.09 per kilogram for Middle East, Far East, Europe and Russian Federation, respectively.

7. Export Margin and Deconstructing Marginal Analysis

The profitability analysis of citrus export revealed that net returns per kilogram were Rs.1.76, 2.30, 11.39 and 6.21 rupees for Middle East, Far East, Europe and Russian Federation, respectively with corresponding rate of returns to these regions were estimated as 9.16, 11.38, 50.36, and 24.10 percent, respectively. The low net returns for Middle East and Far East countries are due to low prevailing prices of Pakistani citrus in these destinations (Table 4).

Deconstruction of marketing margin among different stakeholders across various regions of the world shows that packing and its material cost followed by shipment charges are major cost items for Middle East and Far Eastern countries whereas shipment charges are high when exported to European countries and Russian Federation. Except Europe, the profit margins are relatively high in Russian Federation which explains the reason of highest relatively high export to Russian Federation than exporting towards Eastern and southern sides of Asia (Table 5).

Table 4: Economics of Citrus Export (per kg) to Different Regions of the World, 2006.

Cost Items/Operations	Middle East	Far East	Europe	Russian Fed.
Purchase price	5.75	5.75	5.75	5.75
Labor & transport charges	0.25	0.25	0.25	0.25
Processing charges	1.75	1.75	1.75	1.75
Losses	0.25	0.25	0.25	0.25
Packing & material cost	4.50	4.50	4.50	4.50
Inland transport charges	2.00	2.00	2.00	2.00
Custom clearance fee	0.40	0.40	0.40	0.20
f.o.b. price at Karchi	14.90	14.90	14.90	14.70
Shipment charges	4.34	5.30	7.71	11.09
c.i.f price destination	19.24	20.20	22.61	25.79
Sale price at destination	21.00	22.50	34.00	32.00
Net return	1.76	2.30	11.39	6.21
Rate of return (%)	9.16	11.38	50.36	24.10

Source: Information gathered from Kinnow processing and exporting factories at Bhalwal. The proprietor of Zahid Kinnow Grading and Vaxing Plant, has coordinated the data collection/update efforts in Bhalwal.

Table 5: Distribution of the margin between export and purchase prices of Kinnow exported to various world markets

Cost Items/Operations	Middle East	Far East	Europe	Russian Fed.
Sale price (Rs/kg)	21.00	22.50	34.00	32.00
Purchase price (Rs/kg)	5.75	5.75	5.75	5.75
Margin (Rs/kg)	15.25	16.75	28.25	26.25
Labor & transport charges (%)	1.64	1.49	0.88	0.95
Processing charges (%)	11.48	10.45	6.19	6.67
Losses (%)	1.64	1.49	0.88	0.95
Packing and material cost (%)	29.51	26.87	15.93	17.14
Inland transport charges (%)	13.11	11.94	7.08	7.62
Custom clearance fee (%)	2.62	2.39	1.42	0.76
Shipment charges (%)	28.45	31.65	27.30	42.23
Profit (%)	11.55	13.72	40.31	23.67
Total (%)	100.00	100.00	100.00	100.00

The average returns to society from citrus export to Middle East, Far East, Europe and Russian Federation were estimated as Rs. 0.25, 1.75, 13.25, 11.25 per kilogram, respectively (Table 6). Based on these estimates, the returns to the additional cost incurred by the exporter were computed as 8.50, 32.73, 46.10, and 114.54 million rupees for the Kinnow exports to Middle East, Far East, Europe and Russian Federation, respectively (Table 6). This indicates earnings of the society from the citrus export as they sacrificed consumption of premium quality fruit. This also indicates returns to the society's sacrificed Kinnow should be much higher, if the exports are diverted to Europe and Russian States. However, this demands strict compliance to the SPS and other certifications of WTO. In other words, if the infrastructure for these certification is created in the country, there is great scope to earn high profits from exporting Pakistani high value of agricultural products.

Table 6: Returns to additional cost (Rs./kg) incurred by the exporters

Items	Middle East	Far East	Europe	Russia
Sale/ export price	21.00	22.50	34.00	32.00
Price of export quality kinnow at Karachi	12.00	12.00	12.00	12.00
Difference	9.00	10.50	22.00	20.00
Additional costs incurred by exporter	8.75	8.75	8.75	8.75
Return to additional costs to exporter	0.25	1.75	13.25	11.25
Rate of return (%)	1.19	7.78	38.97	35.16
Total quantity exported from Pakistan in 2001-02 (000 tones)	34.02	18.71	3.48	12.85
Average returns to society from citrus export (Rs./kg)	0.25	1.75	13.25	11.25
Total earnings of the society from citrus export (Million Rs.)	8.50	32.73	46.10	144.54

8. Constraints and Prospects in the Export Marketing Systems of Citrus

According to the study findings, it can be concluded that citrus export is economically viable. There is need to explore new international markets, establishment of dry port and packing material manufacturing industry at Bhalwal in the private sector and participation of exporters in foreign tours with export promotion bureau official to access the international markets. There must be advertising of the citrus export because it is generally assumed that, with a given supply, advertising could shift the demand curve of a given product to the right, thus increasing the quantity of product sold and total revenue received. The role of export promotion bureau must be to provide information about international markets for the size, weight standards acceptable in international markets. Government should conduct survey of different international markets to identify the potential markets (Sharif, 2004).

Our citrus exporters' profile shows that they were mainly transformed from domestic marketing to international marketing, and possesses locally manufactured citrus processing plants, which are meant for only processing Kinnow. The constraints reported by them include lack for export and pack houses, expensive international advertising, smaller in size and capacity therefore unable to explore new markets independently, always compete among themselves, using very expensive refrigerated transport facility due the its limited availability, limited availability of good quality packing material and other inputs needed in citrus processing and non-availability of credit on easy terms and conditions (Table 7). The inability of our citrus to compete in the expensive markets of the world is because of non-availability of infrastructures like hi-tech labs for issuing various certificates for health and environmental safely, non-coinciding the tastes and preferences of our citrus with high-price markets, we have to confine to cheaper markets of the world.

Table 7: Constraints reported by sample Kinnow processors-cum-exporters in the area

Constraints	Freq.	%
Limited and expensive refrigerated transport at national and inter. levels	17	89
Lack of export house and pack-house	14	74
Expensive international advertising	13	68
Non-exploring of other international markets	12	63
Ruthless competition among exporters for compromise on quality and prices	12	63
Limited and expensive good quality packing material	11	58
Non-availability of credit	11	58

Source: Sharif (2004).

9. Potential for Improvement in Export Marketing Systems of Citrus

The upcoming challenge of WTO can become an opportunity for the citrus exporter provided they prepare themselves to comply with the specifications needed. The returns to exporters and society for sacrificing consumption of export quality fruits are highest in European countries. Similar returns may be expected from other destinations like USA, Japan etc. The policy support from the government is also equally important in this respect. As the studies in Bangladesh and Sri Lanka shows that the initial costs of compliance with SPS measures are quite high, but once the infrastructure is established, then the returns will be much higher than the costs incurred. Pakistan has to make necessary investment to comply with the export requirements under WTO, otherwise it is quite likely that we may loose our existing markets. The efforts made so far are commendable, but still lot more needs to be done as already indicated in the earlier sections of the paper. Therefore, well coordinated efforts among research, extension, export promotion bureau and exporters are need to achieve the potential by exporting good quality fruit at high prices by providing all necessary certifications. It is suggested that in Sargodha, citrus export zone may be established where all necessary infrastructure like cold stores, refrigerated transport facilities, financial institutions, SPS certifying laboratories, marketing information analysis department, etc. are available.

Recommendations

- Defining grades and standard keeping in view the national and international requirements should be used to regulate the domestic marketing of horticultural crops including citrus. Pakistan Horticulture Development and Export Board (PHDEB) is suggested to take this responsibility.
- Among horticultural growers, there is a general lack of awareness about good agricultural practices and quality plants from nurseries, with little application of integrated pest management (IPM) and/or integrated crop management (ICM).
- The export promotion bureau is suggested to provide all export marketing related information to the exporters in the study area. Pakistan must try to explore and compete in international markets interested in buying high quality food possessing certification for being healthy.
- Appropriate incentives should be extended by the policy makers in establishing the citrus export zone in Sargodha district, where all necessary infrastructure like cold stores, refrigerated transport facilities, financial institutions, SPS certifying laboratories, marketing information analysis department, etc. are available. In particular for SPS measures, the following recommendations should also be seriously considered.

- There is a serious need to meet the Total Quality Management (TQM) criteria to fully exploit the opportunities provided by WTO.
- For SPS management institutions, it is better to demarcate the roles and responsibilities of different federal and provincial ministries and agencies related to SPS management matters.
- It is also important to institutionalize early warning and surveillance systems for pest and diseases, contaminants on fruits and vegetables, which can affect Pakistan's trade as well as domestic consumers and producers.
- It is suggested to continue reviewing and upgrading the laws and regulations dealing with food safety and agricultural health to bring them to conformity with international standards and good practices.
- Detailed studies should be conducted on various issues like cost of compliance with various WTO requirements like SPS, means of reducing costs of exporting citrus to Europe and other high class markets of the world, etc.

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