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**POTENTIAL ISSUES OF THE CITRUS INDUSTRY OF PAKISTAN**

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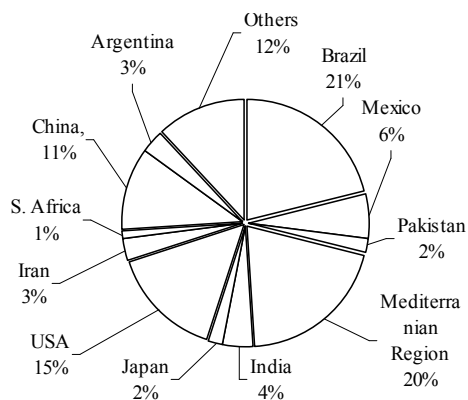
**Abstract**

Citrus is the second largest grown fruit crop of the world and it ranks top most fruit crop with respect to area as well as production in Pakistan. Although the area and production of citrus in Pakistan has an increasing trend from the time of its introduction but the yield of citrus has always been a problem continuously attached with citrus production. Also the export of citrus, although, is increasing year by year but the associated problems with citrus export of Pakistan are its marketing in few selected countries and lowest unit price in the international markets. If the Pakistan wants to improve its yield and to produce fruits of better quality, it will have to adopt the good agricultural practices and the international standards on importers demand. This review paper will highlight the potential issues of the citrus industry of Pakistan.

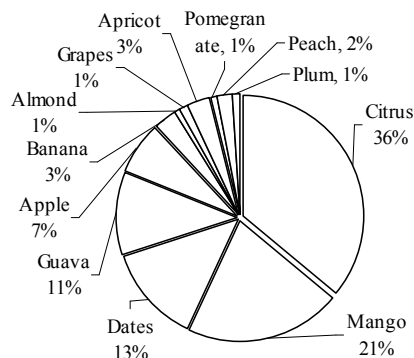
**INTRODUCTION**

Citrus fruits are commercially grown in more than 64 countries of the world, curbed between the latitudes of 40°N to 40°S (Chaudhary et al. 2004). Geographical distribution of citrus is given in Figure 1. Pakistan, lying between 24°-31°N and 61°-75°E, has a suitable climate for the best quality citrus production. Being 11<sup>th</sup> biggest citrus producer of the world, annual production of citrus in Pakistan is 1943 thousand tonnes from an area of 185 thousand hectares (MINFAL, 2005).

Although more than 32 fruit crops are grown in Pakistan but citrus is at the top among these fruits with reference to area and production. Figure 2 expedites the statistics of fruit production in Pakistan. Punjab constitutes 95% of the total citrus production of Pakistan, with major share of Kinnow (65%), followed by oranges, lemons/limes and grapefruit (Khan et al., 2004). The major citrus producing districts of Pakistan are Sargodha, Toba Tek Singh, Faisalabad and Sahiwal in Punjab; Mardan in NWFP and Thatha and Badin in Sindh.



**Figure 1:** Geographical distribution of fresh citrus production

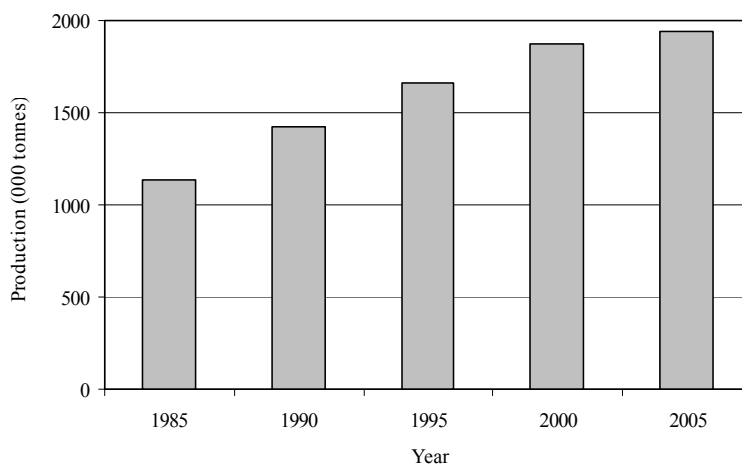


**Figure 2:** Fruit production in Pakistan

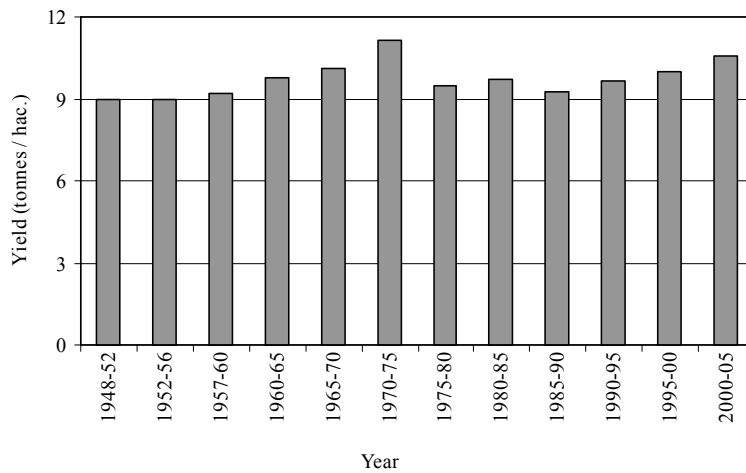
### LOW YIELD OF CITRUS

Sweet oranges were dominating the citrus industry till 1960's, which were later reduced to about obscurity. Since the introduction of Kinnow, the area and production of citrus has been increasing year after year (Figure 3), so the increase in production of citrus is due to increase in acreage and not due to increase in yield per hectare, which is static (8-10 tonnes ha<sup>-1</sup>) since its cultivation was started (Figure 4). The citrus yield of Pakistan stands 12<sup>th</sup> among world eminent citrus producing countries (Figure 5).

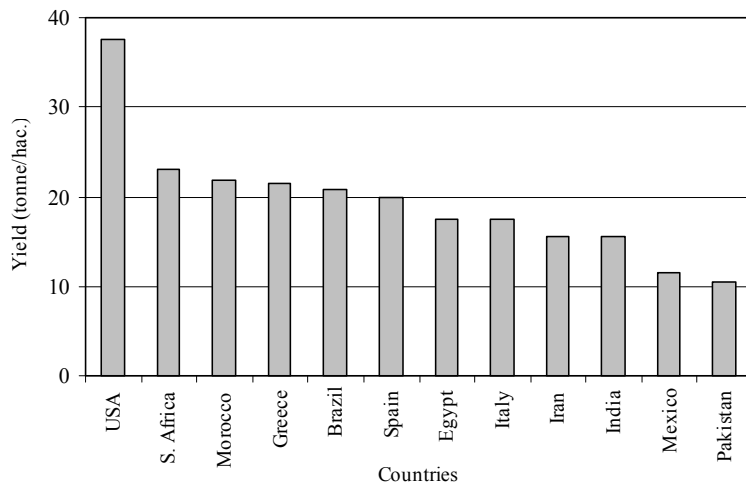
Even the yield of our neighboring countries like India and Iran are higher than Pakistan. The reasons of low yield of citrus in Pakistan include non-availability of disease free nursery plants, poor orchard management, non-availability of inputs at right time, impurity in pesticides and fertilizers, and lack of interest on grower's behalf.



**Figure 3:** Citrus Production Trend in Pakistan



**Figure 4:** Yield trend of citrus in Pakistan



**Figure 5:** Comparison of citrus yield

### CITRUS CONSUMPTION OF PAKISTAN

As discussed earlier, the citrus is the major fruit crop of Pakistan with reference to area, production and export, but the situation of the consumption of citrus in Pakistan is much worst when the statistics are consulted. According to Anonymous (2005), 20% of the citrus fruit produced in Pakistan simply goes waste, 63% of its total production is consumed locally, 10% of the produce is sent to the factories (for conversion into value added products) and only 7% of the total production is exported (Figure 6).

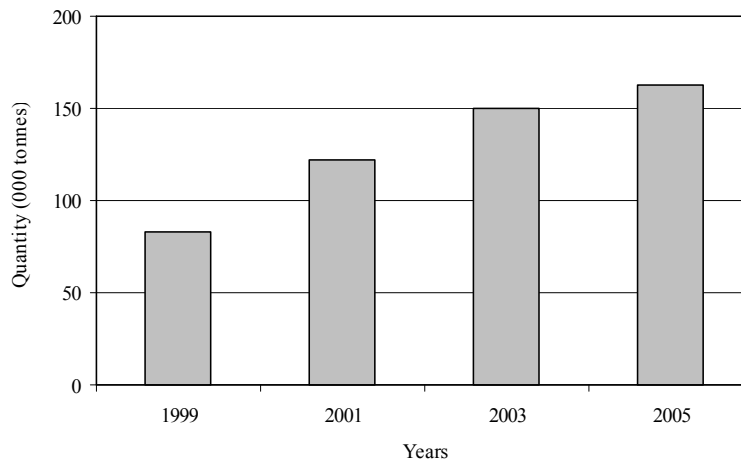
Although the local consumption is important and we have to fulfill the demands of our consumers, but the export markets are always on higher end and pay more for the produce. As the local consumption cannot be decreased, it is possible for us to reduce the losses (20%) and use this portion of the produce for export and manufacturing value added products, which have far less share in consumption.



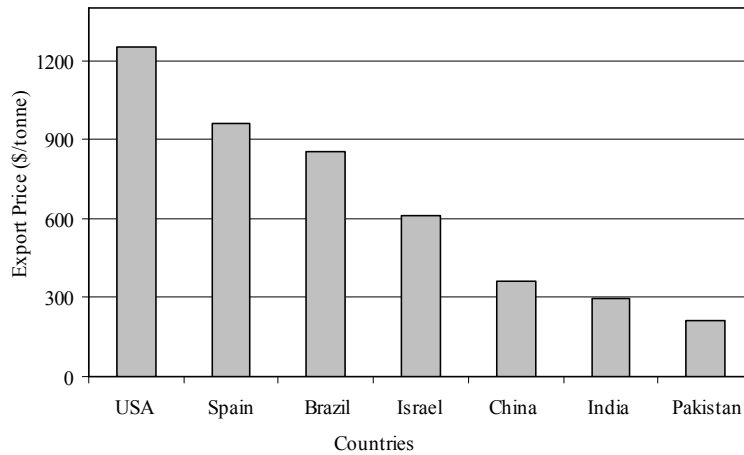
**Figure 6:** Citrus consumption in Pakistan

### EXPORT OF CITRUS

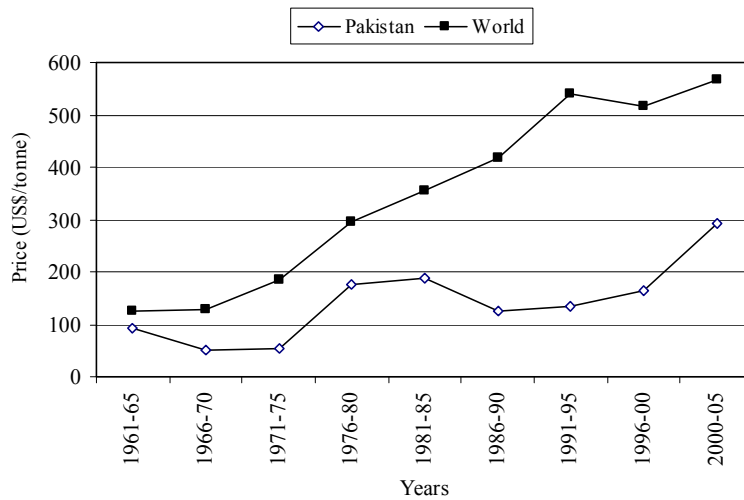
Export of citrus from Pakistan has also increased with the passage of time (Figure 7) and in the present year it was 175 thousand tonnes (MINFAL, 2005). Pakistan occupies 14<sup>th</sup> position in eminent citrus exporters of the world. It is, however, unfortunate to say that the export market of Pakistani citrus is restricted to a few countries, and the export price earned by the citrus of Pakistan in the international market (US\$ 216 per tonne) is far less than the other citrus exporters (US\$ 1200 per tonne) (Figures 8, 9). The reason of low price of citrus of Pakistan in the international market is its inferior quality.



**Figure 7:** Export trend of citrus from Pakistan



**Figure 8:** Export prices of citrus in international market

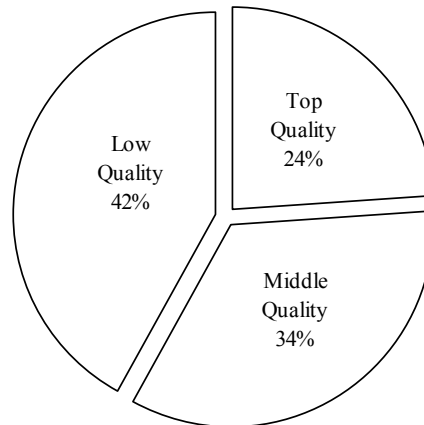


**Figure 9:** Pakistan citrus industry-export Price

**POOR FRUIT QUALITY**

According to the Anonymous (2005), whatever the fruit is exported from Pakistan is again divided into three quality grades (The fruit quality is a combination of many external and internal factors, including colour, shape, size, freshness, aroma, flavour, ratio between the juice and peel, TSS, acidity, ascorbic acid, etc. and keep in mind that these grades are used locally, Pakistan exports not a single crate of A grade fruits according to the international quality standards). Figure 10 illustrates that the top quality fruit comprises the least ratio (24%) compared with the middle quality (34%) and low quality fruit (42%).

There are different quality standards of different countries, with more or less similar parameters. So the citrus industry of Pakistan needs to make up its own standards and to market its produce according to those standards.

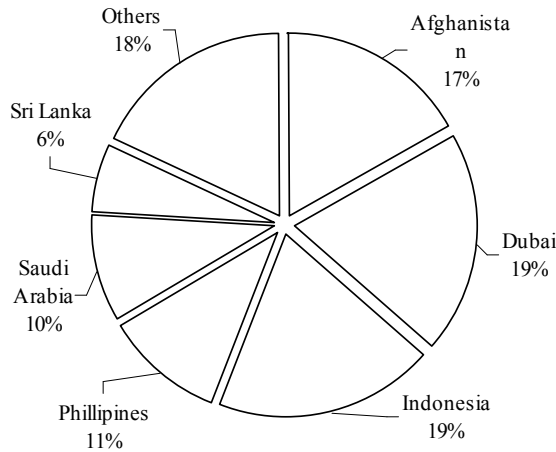


**Figure 10:** Citrus export of Pakistan

**RESTRICTED EXPORT MARKET**

The export market of Pakistan comprises of only few low-end world markets (Figure 11). Indonesia and Dubai are the largest importers of citrus from Pakistan with 19% of total quantity exported each. These are followed by Afghanistan (17%), Philippines (11%), Saudi Arabia (10%), Sri Lanka (6%) and other countries (18%).

Most recently China and Iran have signed some protocols with Pakistan to import citrus with some special treatments, which is an achievement of the citrus industry but still there is a need to get approach to the high end markets of Europe and America.



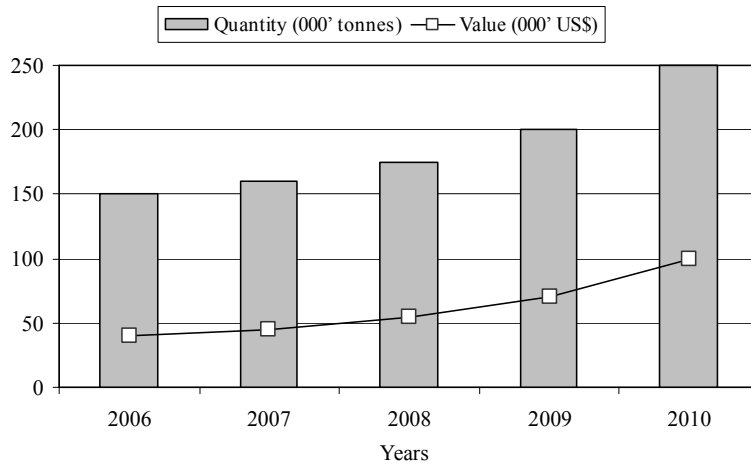
**Figure 11:** Export markets of citrus of Pakistan

**PROSPECTS OF THE CITRUS INDUSTRY OF PAKISTAN**

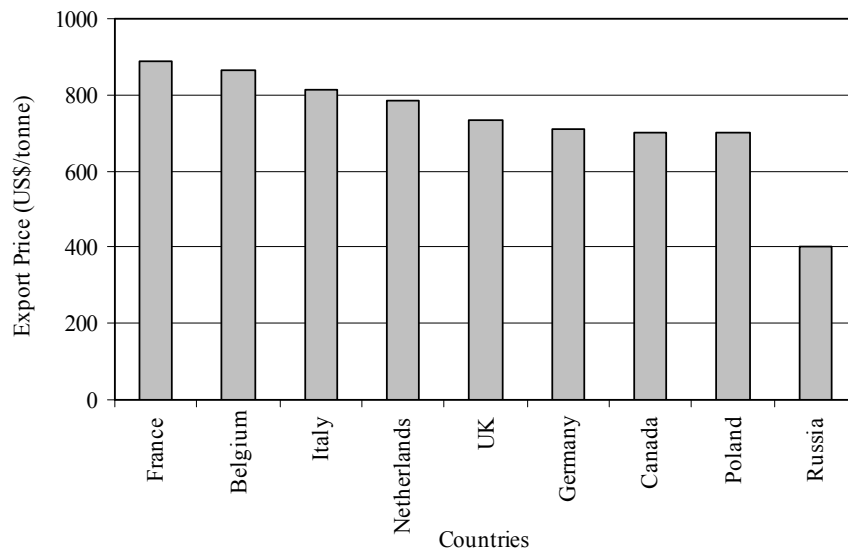
Pakistan needs to improve the external as well as internal quality of its citrus to earn good returns from the international market. The external quality means freeness of fruit from blemishes, colour and size according to the quality standards of the citrus, etc. and the internal quality of citrus means its TSS (Total Soluble Solids), aroma and flavour, etc.

There is a need to adopt Good Agricultural Practices (GAP), improved postharvest technology and to explore new potential markets with suitable agreements as well as to fulfill the demands of existing markets to adopt the protocols of HACCP (Hazard Analysis Critical Control Points), EUREPGAP (Euro-Retailer Produce Working Group Good Agricultural Practices), BAP (Best Agricultural Practices), etc. to boost-up the export of citrus of Pakistan and to run the citrus industry on affluent basis. For the purpose, the government of Pakistan has given subsidies and concessions for EUREPGAP registration and on import of horticultural machinery (Humayun, 2006). Many projects are working under federal as well as provincial governments and also some NGOs are working for improvement of production and marketing of citrus.

If we get achieved all these things and be successful in reducing the postharvest losses of our produce we will be able to export 250 thousand tonnes of our citrus, worth 100 thousand US\$ by the year 2010 (Figure 12) and also would be getting higher citrus export prices from the world top citrus importers (Figure 13).



**Figure 12:** Projected export quantity and value of citrus



**Figure 13:** Average import prices of citrus of top 10 citrus importers

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