



## MARKET BRIEF: MELONS & WATERMELONS

### An Overview of Export Potential

MARKET BRIEF



# Melons & Watermelons

This publication was prepared by USAID's Agricultural Credit Enhancement Program in collaboration with the Statistics & Marketing Information Department of the General Directorate of Policy and Planning of the Ministry of Agriculture, Irrigation and Livestock.

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This market brief focuses on melons and watermelons. All stages relevant for successful marketing intending production, consumption, trade flows, prices at a national and international level are analyzed with respect to following key questions:

1) Can these products be competitive at a regional level or beyond, and if so 2) which countries should constitute target markets, and 3) what should we keep in mind for approaching new export markets?

Answering these questions is important because: 1) watermelons and melons produced in Afghanistan are naturally of prime quality due to climate conditions and meet primary conditions to become an export commodity for high value markets 2) export business generation can contribute to the long term success of agriculture ventures and can serve as a pattern for other similar promising commodities.

## Production

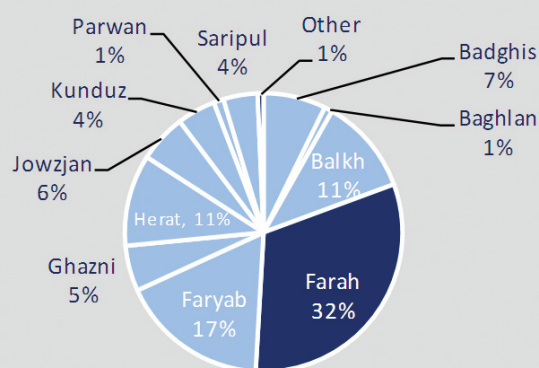
Watermelon production\* was estimated around 800 thousand ton in 2008. The main producing provinces are Farah and Faryab see Fig 1. The expected revenue from production was 143 million USD. The area harvested has also increased 3 times to around 20,000 hectare since 2000\*\*. These estimates show that watermelon production is comparable in quantity with grapes production which makes watermelon an equally commonly grown and consumed fruit in Afghanistan.

Melon production\* was estimated around 640 thousand ton. Production is wide spread more or less all over the country with some main provinces such as Kunduz, Faryab, Herat, Jalalabad etc. accounting for largest shares. The economic value of production was estimated around 126 million USD. Melons account for high production in quantity and value. According to MAIL statistics melons account for the second largest area harvested among fruits, after grapes.

Production of melon and watermelon globally was estimated 125 million ton in 2009. Watermelons accounted for 80% of the share while melons for 20%. Graph 3 shows the main producing countries globally.

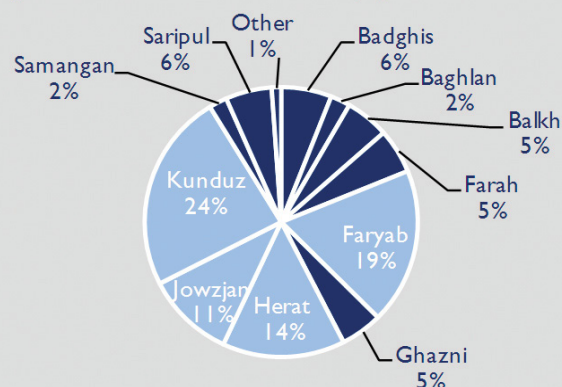
China is by far the main producing country accounting for 62% of global production, while other countries such as Turkey, EU and Brazil follow with far lower shares. According to the latest statistics Afghanistan can be ranked among top producing countries with 1% of global production. Production figures show China as the main producing country but other countries that produce far less are active in the international scene and most likely to influence price dynamics. Mexico, EU countries, Guatemala, Brazil and USA account for highest exports' shares and values.

Fig. 1: Watermelon Production by province



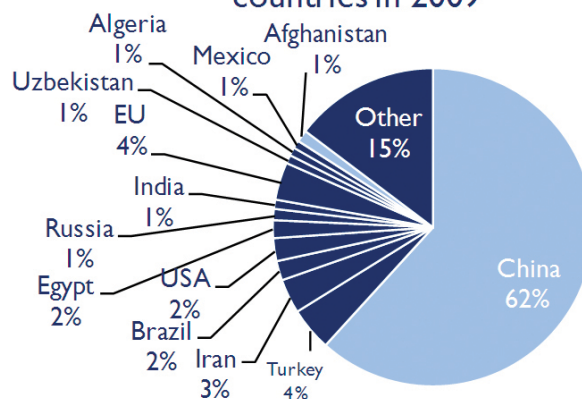
Source: Agriculture Profiles, ASAP 2009

Fig. 2: Melon Production by province



Source: Agriculture Profiles, ASAP 2009

Fig.3: Watermelon and Melon Producing countries in 2009



Source: FAO Online

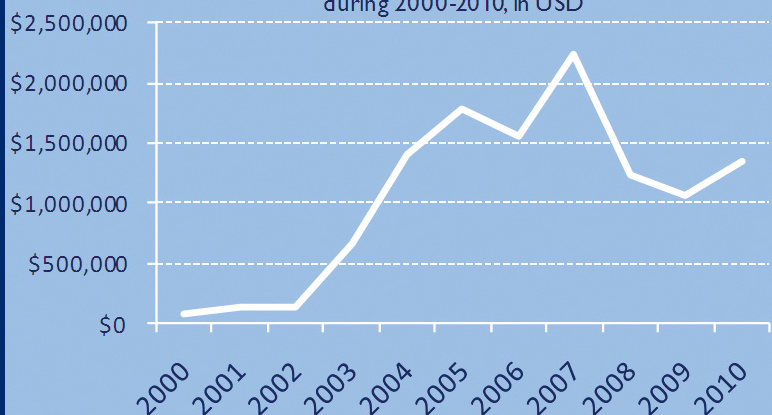
\*Production data is an accumulative of production values in 19 provinces based on 19 Agriculture Profiles from ASAP.

\*\* CSO Yearbook 2009



# Trade Flows

Fig.4: Exports of melons and watermelons from Afghanistan during 2000-2010, in USD



Source: Graph up CSO Statistical Year Book, KMF database, graphdown UNSTAT online database

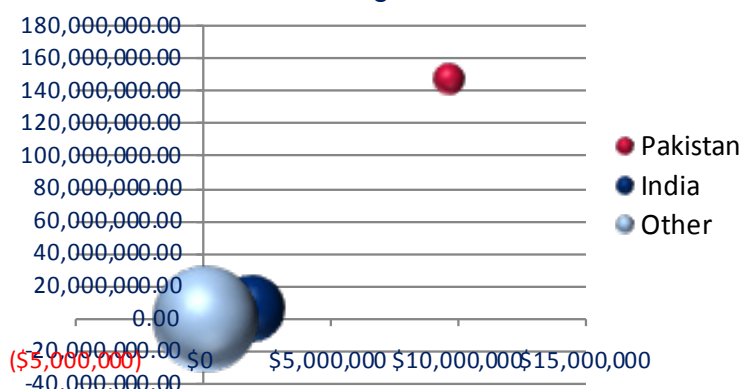
## Exports

Exports of melon and watermelon were valued at 1.36 million USD in 2010. Export values of these commodities reached a peak in 2007 with 2.2 million USD, then re-bounced in 2010. Exports have experienced a growth trend overall, during this decade, having increased 15 times, compared to 2000. Figure 4 shows where melons and watermelons were exported to during this period. Pakistan is the main exporting partner, with highest values and quantities imported from Afghanistan. The average export price to this country is the lowest, signaling low profits per unit value of exports. India is another export partner, values of export to which are 10 times lower than to Pakistan.

Exports to other countries such as UAE, Kuwait, Poland, account for a better average export price but are very sporadic. A closer look on export developments showed that the geography of exports is concentrated in the neighbor country and the export/production ratio is around 10%. Figure 6 shows the geography of international trade flows with regards to main importing countries of melon and watermelon. None of the countries that appear in figure 6 are present in figure 5. This means that currently exporters are not targeting any of the international potential markets such as the EU-27, Russia or Canada.

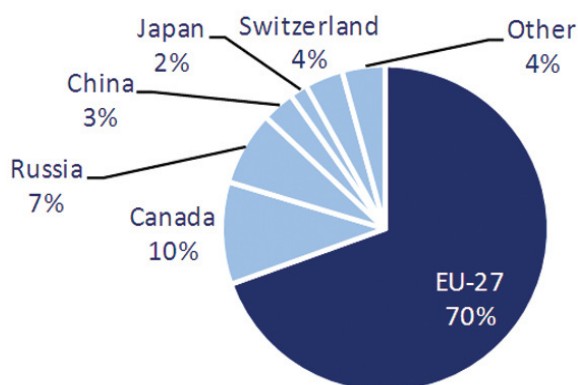
Efforts for the moment are focused on the region. Is this the right strategy to stimulate profit and generate business related to melon and watermelon production? Probably not..

Fig. 5: Main Export Partners for melons and watermelons during 2000-2010,



Source: UNSTAT database, X = Value in US\$ Y = Quantity in Kg  
Size = Average Price US\$/Kg

Fig 6: Main Importing Countries, melon & watermelon



Source: UNSTAT online database

First, because the import absorption in the region for these commodities is lower affecting directly the exports' volume. Second, because the average export price of melons and watermelons, as observed in graph 5 is also lower than elsewhere. Third, the limits in quantity and price, have a direct impact on domestic production, export revenue and possible profit.

*“Where does Afghanistan stand with respect to international dynamics? Is the potential being utilized and if so where and with what benefits? To answer these questions the following paragraphs give an overview of watermelon and melon trade flows and prices competitiveness in new and existing markets.”*

## Existing and New Markets - Watermelon

We looked at the domestic demand and existing export markets from a production and trade flows perspective. Now we will go in more details into calculating entrepreneurs' benefits of bringing the goods to existing markets as compared to other markets. For watermelons we concentrated in export parity prices of bringing goods in two regional countries, India and Pakistan and two new markets Russia and Poland.

## Existing Markets - Peshawar, Lahore, Pakistan

The average prices in the domestic wholesale markets for 2010 was valued at 0.24USD/kg. Its highest peak was registered at the beginning on the season in early April, around 0.50 USD/kg. Watermelon prices reached their lowest values in high season during July and August. The comparison with the wholesale prices in two markets in Pakistan, Peshawar and Lahore does not show a large market price difference. The wholesale market price in Lahore is actually 50% lower than the domestic watermelon price, while the price in Peshawar is on average 7% lower. The import tariff of 35% and transport costs that vary from 10 to 40 cent per kg, result in a high export parity price, which when combined with the highly competitive price in Lahore, make the Lahore market unattractive for the domestic producers.

Fig. 7: Average prices of watermelon in domestic markets and in markets in Pakistan during 2010, in USD/kg

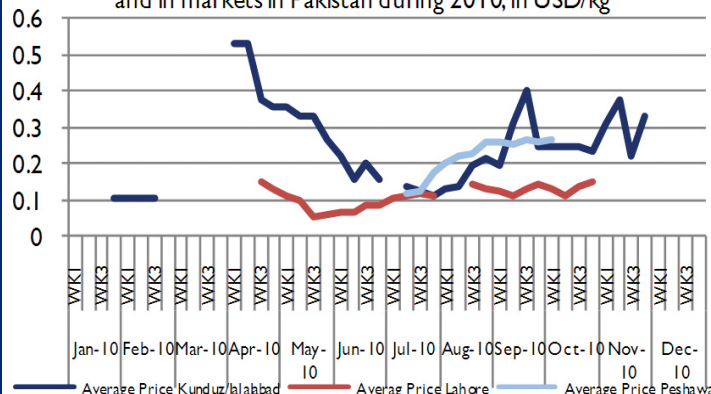
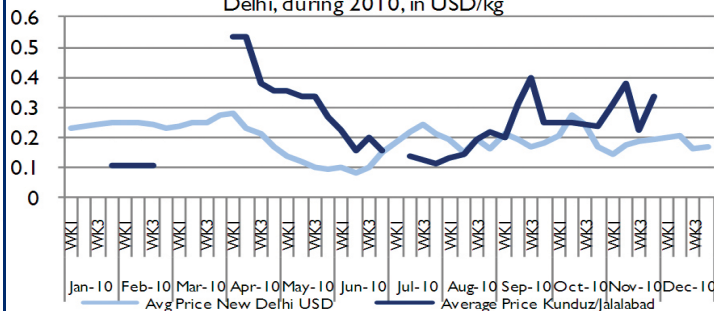


Fig. 8: Prices of Watermelon in domestic market and in New Delhi, during 2010, in USD/kg





# Existing Markets

Producers would have to sell at a low price or almost at a loss in the Lahore market. The Peshawar market has an opportunity window during the last week of July till the last week of August. During this period the watermelon price in domestic markets is on average 30 percent lower than in Peshawar. This window is narrow and the exporter would barely make the same profit as selling it in the domestic market, with the only extra benefits being the larger quantities sold.

## Existing Markets - New Delhi, India

Figure 8 shows watermelons prices in New Delhi and the relevant domestic markets, Jalalabad and Kunduz. The average price of watermelon in the wholesale market of New Delhi, throughout the year is 0.19 USD/kg while in the domestic market 0.24 USD/kg. There is only one period during which watermelons could be sold a profitable price, during the winter season. Because of climacteric advantages watermelons could be grown in warmer areas such as Jalalabad so the product appeared in the domestic market until mid February. Despite the 100% import tariff India poses to this product, watermelon can reach New Delhi with a export parity price of around 0.35 USD/kg, during the winter season, which could be absorbed by the market. During the high season the window of opportunity is very small and the gap not wide enough to cover all the extra costs related to exporting.

Table 1: Export parity Price to Moscow, during high season 2010

Prices/Tariffs/Transport	USD/kg
Average Domestic Price- Wholesale	0.2
Transport Cost	0.4
Import Tariff to Moscow-(5%)	0.01
Estimated Export Parity Price (Wholesale price + Transport + Import tariff)	0.61
Average Price Moscow- Wholesale	0.8
Possible Profit Margin	Percentage
Watermelons	31% of export parity price
Possible Profit Margin	Absolute Value
Watermelons	0.19
Possible Profit Margin	USD/Truck
Watermelons	5700

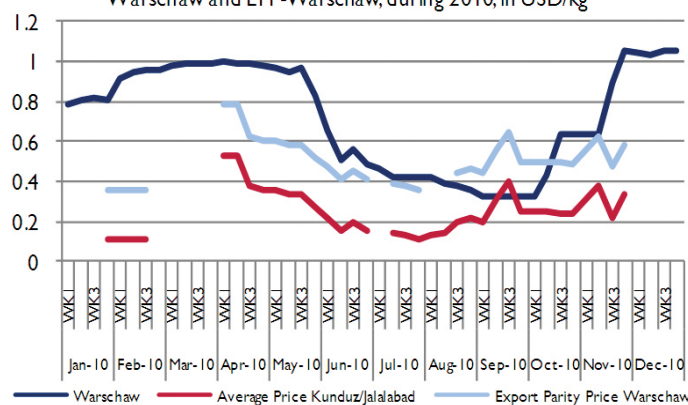
Source: USDA, Fruit Inform, MALOMAT-Roshan & USAID's IDEA NEW, and Import Tariff (Russia 5%, Poland 0%)

To conclude: Export parity calculations show that existing regional markets are highly competitive and leave little room for a suitable profit for the entrepreneur/exporter.

## New Markets - Moscow, Russia

The graph 9 and table 1 below show the export parity price calculations for two new markets, Russia-Moscow and Poland -Warsaw. The reasons for choosing Poland and Russia are 1) watermelons have been exported to these areas sporadically 2) they do not have the best climate conditions for the production of exotic fruit such as watermelon and 3) market entry to Poland would mean market entry in EU-27, Russia and EU 27 are amongst the areas with the highest demand worldwide as shown in graph 3. Graph 9 shows prices of watermelon in the wholesale market in Warsaw and domestic market as well as the export parity price Warsaw throughout year 2010. The average price in the wholesale market in Warsaw is 0.72 USD/kg which is on average 192% higher or almost 3 times the price of domestic markets. The average export price is valued at 0.50 USD/kg. The 100% increase is mainly due to the transport costs since import tariff for watermelon within the EU is 0%. In this market exporters should be selective on the timing of entry in order to maximize their profit.

Graph 9: Prices of watermelon in domestic markets in Warsaw and EPP-Warsaw, during 2010, in USD/kg



\*Export Price includes Transport Costs, Custom Clearance

The best time to sell is during the early season and late season while in August and September the prices in the target market become very competitive. The profit during the winter season could be as high as 0.6 USD per kg or up to 15,000 USD per truck if watermelon was to be sold with the Warsaw wholesale price, while during the early season, up to 10,000 USD per truck. These values speak for themselves.

There is a large gap between the market price in Warsaw and the calculated export price which includes all costs of bringing watermelons to that market. This advantage can be used strategically in several ways.

The exporter can decide to negotiate the selling price, taking the wholesale price as a reference, in which case the profit per kg will be higher, with the possible outcome of selling lower quantities (the importer would not see a real benefit of buying Afghan watermelons as compared to other offers, when it comes to price). The exporter can decide to compete the existing price in the wholesale market and sell the goods with a lower price. This would have a negative impact on the profit per kg but could result in higher quantities sold. The other market under observation is the wholesale market of Moscow. The watermelon was sold at the high price of 0.8 USD/kg or almost 4 times the domestic market price, during the high season. The calculation of the export parity prices—Moscow shows a 200% increase from domestic price to 0.61 USD/kg.

Despite this increase, the profit margin per kg is 31% of the export price. This means 5320 USD profit per truck if watermelon was sold with the wholesale market price.

## Existing Markets - Melon

Next, we focus on melon prices domestically and in Pakistan as the existing export markets for melon. Graph 10 shows the wholesale price of melons in the domestic markets as well as in Lahore. The price in the domestic market was valued at an average of 0.28 USD/kg. The average wholesale price in Lahore was valued at an average of 0.33 USD/kg during 2010, which means that the wholesale price of domestic melon is only 15% lower than the price in Lahore. However again the timing is a very important factor that can change the equation of profit or loss. Prices of melon are higher in the domestic market during the early season. This means that domestic melon is uncompetitive during that period and would probably not find a demand for exports. The export parity price during the early season would be around 0.75 USD/kg a far higher price than the price of melon in Lahore.

The export perspective improves a bit as prices in Lahore move upwards and prices domestically downwards, during high season. Especially during the period August till September, the export parity calculations for Lahore show that melons can make it to that market with a slightly lower price than the wholesale market price there. However the profit margin even during this window of opportunity is 0.04 USD/kg while the maximum profit per truck is 1120 USD/kg if melons were to be sold with the average wholesale price in Lahore.

Melon export stimulation to Pakistan, similar to watermelon export shows few opportunities possible only during certain periods accompanied by low profit margins.

How does the situation appear in new markets? What is the possible profit margin?

“The new market represent a far more lucrative situation for the exporter than the existing export markets. They can offer higher profit margins to the entrepreneurs that take the risk to bring the product beyond regional countries. There is demand and profit included in the existing export pattern however the situation could be far better in new markets where higher efforts would result better paid off. However, consumer behavior and product preferences with respect to shape, color and taste should be further explored before market entry.”



# New Markets

## New Markets—Melon

Fig. 10: Prices of melon in domestic markets and in Lahore, during 2010, in USD/kg

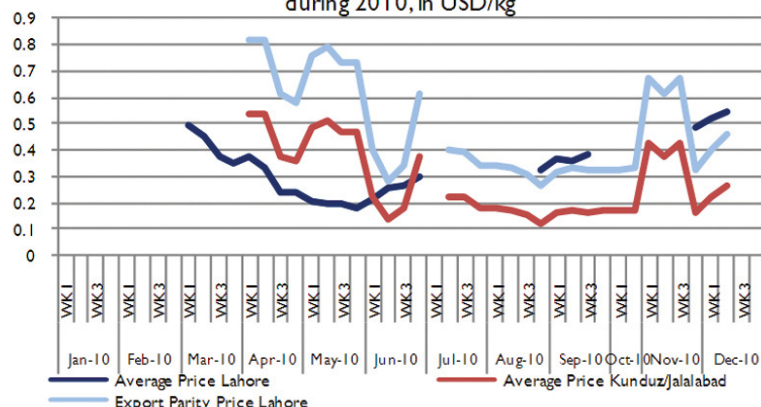


Fig. 11: Prices of melon in domestic markets and Moscow, Export Parity Price -Moscow, in USD/kg, 2010

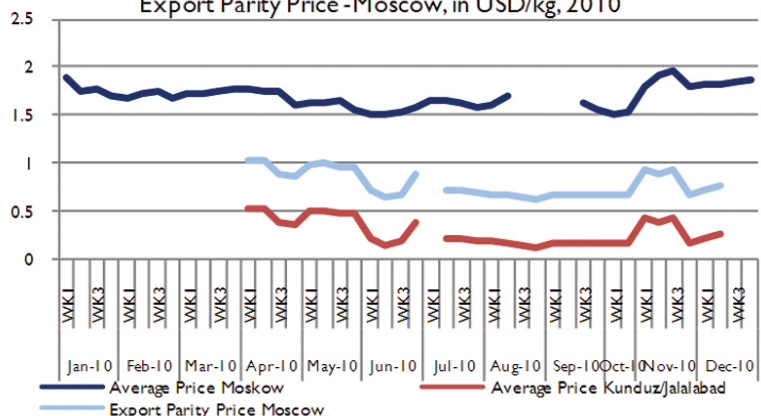
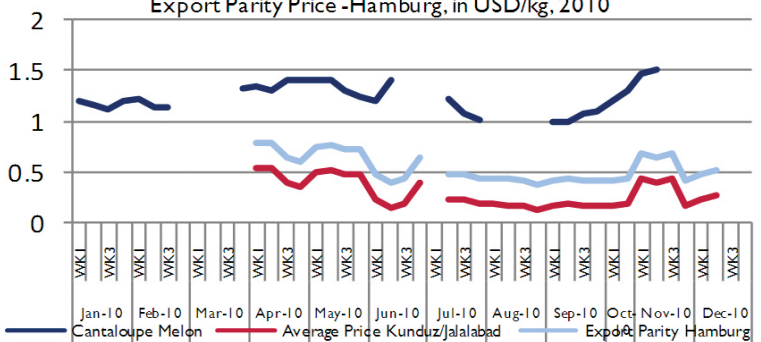


Fig. 12: Prices of melon in domestic markets and Hamburg, Export Parity Price -Hamburg, in USD/kg, 2010



Sources: AMIS, USDA, Fruit-Inform, MALOMAT-Roshan & USAID's IDEA NEW, \*Export Price includes Transport Costs, Custom Clearance and Import Tariff (Russia 5%, Poland 0%, Pakistan 35%)

The Russian market and the European market, were selected as the new markets where the price competitiveness of melons would be tested, because of sporadic export in these areas, their significance as importing countries and inability to feed the domestic demand internally. Figures 11 and 12 show the domestic wholesale prices of melon, the wholesale prices in the respective wholesale markets of Moscow and Hamburg as well as a calculation of the export price Moscow and export price Hamburg.

The wholesale price of melon in Moscow has oscillated around 1.7 USD/kg a value 5 times higher than the average domestic wholesale price of melon. The price difference is huge but is narrowed by export costs to destination, such as import tariffs and transport. The calculated export parity price for Moscow in 2010 is 0.78 USD and its difference with the wholesale market price is around 100%. The price is quite stable in both markets which means that likelihood of profit is distributed almost equally over time. The average profit margin of 0.91 USD per kg means that the maximum profit per truck of the exporter if he were to sell with the Moscow wholesale price would be around 25000 USD.

The situation in the wholesale market of Hamburg is similar; the average wholesale price of melons is 1.26 USD/kg, which is 3 times higher than the domestic wholesale price. Export parity price Hamburg is lower due to lower transport rates and lack of import tariff. The average export parity price of 0.53 USD/kg is less than half the price in the selected European market. This allows a good possible profit margin and for a large negotiation range for the exporter. He can either sell the goods at the market price to make the highest possible gain of 20000 USD or go a bit down with the price as compared to the market to attract attention.

“Either way prospects of export in the new market are far more interesting and lucrative than those in the existing markets. This is true for both commodities melons and watermelons.”

**National perspective:** Melon and Watermelon are an important crop and are rated among the main fruits produced in Afghanistan. Even though production and exports have grown vigorously throughout the decade, their share to agriculture products exports is very small. Melons and watermelons are mainly consumed in the domestic market.

**Global market perspective:** According to national statistics Afghanistan can be ranked among top producing country accounting for 1% of world production, it is however, not famous in the international scene because of low export values. Main producing countries are not always the most successful when it comes to exporting. Countries like China account for the highest production but countries like Mexico, Brazil, EU countries and Guatemala, despite lower production levels have been more aggressive in exploring international markets, accounting for highest export values world wide with export strategies that are well directed towards lucrative markets in terms of demographics, consumption and growth such as EU-27 countries.

**Exports Perspective:** The export price calculations showed that watermelons exports have a very small window of opportunity in existing exporting markets: Pakistan and India. The existing watermelon prices there are very competitive, which leaves the exporter with a very low possible profit margin if he matches the window.

The stimulation of export parity price in new destinations that meet the criteria of a) being among main importing countries in the world, b) not being able to meet the demand for this commodity domestically and c) having been sporadically tested as export destinations, showed that watermelons exports could have a much better outcome in terms of revenue in these markets. The export of watermelons in EU countries such as Poland can be concluded with a very competitive price, allowing very good profit margins for the exporter. The same applies to export in the Russian market.

The exports of melon are directed in the regional market where the costs of exports and profit possibilities are low. The stimulation of exports in new markets that fulfill the above mentioned criteria showed that gains could be much higher in these markets. The exports of watermelon to the EU and Russia would allow better negotiations and profit possibility, for the exporter, from a price perspective. The exporter can decide whether to make the gains in profit margins per unit (in case he sells at the market price of the destination) or to make the gains in larger quantities (if he sells at a lower competitive price as compared to the destination market price).

**Other factors than price competitiveness:** Market and consumer behaviors as well as non tariff barriers should be taken in consideration before market entry.

**Entrepreneurs perspective:** The domestic consumption is mainly being feed by domestic production so there is not much room for business and revenue growth internally. Entrepreneurs' strategy should be growth externally by targeting mainly promising markets in terms of revenue and profit margin, shifting from traditional regional markets to other export opportunities. Important factors to be taken in consideration before deciding to enter new markets are non-tariff barriers, possible market requirement and other marketing issues in order to meet and succeed the end customer demand in the new markets.