# The Current Situation of Citrus in the World and Turkish Markets 

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#### Abstract

Turkey is among the leading countries in the world in citrus production as far as its geographical position and its ecological properties are concerned. In 2008 data indicate a global world citrus production of 122.087.751 tonnes, 22.019.156 tonnes of which is produced by China, with Brasil second with a production of 20.774 .752 tonnes, the USA third with 11.692.770 tonnes, Turkey ninth with 3.026 .940 tonnes. About $47.2 \%$ of this production is represented by oranges, $25 \%$ mandarins, $22 \%$ lemons, $5.5 \%$ grapefruit. Citrus constitutes $23.6 \%$ of total fruit production and $35.4 \%$ of total exports of Turkey. Citrus is produced mainly in Mediterranean and Aegean regions and partially in East Black Sea region in Turkey. The study has evaluated the current situation of citrus in the World and Turkish markets, common varieties associated.


Keywords: Citrus, species, cultivar, import, export

## Introduction

Citrus is produced in the tropical and subtropical climate zones between $40^{\circ}$ north and south latitudes. It is also possible to commercially produce citrus in more northerly or southerly suitable microclimate areas and locations where ocean winds soften the climate.

## Citrus Production And Market In The World And In Turkey

Citrus is produced on 8.716 .255 hectares in the world and 113.061 hectares in Turkey. World citrus production amounted to 122 million tonnes in 2008. Production in Turkey was recorded as 3.026.940 tonnes. World productivity average was calculated as $1401 \mathrm{~kg} / \mathrm{da}$, whereas the average in Turkey was above that of the world with $2677 \mathrm{~kg} / \mathrm{da}$. (FAO, 2008) (Table 1)

| Years | World |  |  | Turkey |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Production <br> (ton) | Area (ha) | Yield(Kg/da) | Production <br> (ton) | Area (ha) | Yield(Kg/da) |
| 2001 | 104273191 | 7201786 | 1448 | 2475000 | 88933 | 2786 |
| 2002 | 106245530 | 7298577 | 1456 | 2490000 | 89982 | 2771 |
| 2003 | 106557953 | 7582818 | 1405 | 2485000 | 94494 | 2633 |
| 2004 | 110965382 | 7607900 | 1459 | 2705000 | 96778 | 2800 |
| 2005 | 105431984 | 7605363 | 1386 | 2585000 | 96778 | 2674 |
| 2006 | 116223849 | 8318929 | 1397 | 3220435 | 97173 | 3314 |
| 2007 | 118563114 | 8658760 | 1369 | 2988664 | 98300 | 3040 |
| 2008 | 122087751 | 8716265 | 1401 | 3026940 | 113061 | 2677 |

Table 1. Citrus production figures, areas and productivity figures in the world and Turkey between 2001 and 2008.

As far as the production figures of countries are concerned, China leads with 22.019.156 tonnes, followed by Brasil with 20.774.752 tonnes, USA with 11.692 .770 tonnes, India with 7.168 .700 tonnes, Mexico with
7.502.917 tonnes, Spain with 5.911.600 tonnes, Iran Islamic Republic with 3.756.000 tonnes, Egypt with 3.230.986 tonnes. Turkey is the ninth with a production of 3.026.940 tonnes. Table 2. indicates production figiures in Turkey, China and Brasil with respect to species.

| Species | Production <br> (tonnes) <br> Turkey | Production <br> (tonnes) <br> China | Production <br> (tonnes) <br> Brasil |
| :--- | :--- | :--- | :--- |
| Grapefruit (inc. pomelos) | 167.765 | 567.546 | 72.000 |
| Lemons and limes | 672.452 | 917.166 | 1.040 .000 |
| Oranges | 1.427 .160 | 3.454 .125 | 18.389 .752 |
| Tangerines, mandarins | 756.473 | 15.622 .593 | 1.273 .000 |
| Citrus fruit, nes | 3.090 | 1.457 .726 | - |
| Total | 3.026 .940 | 22.019 .156 | 20.774 .752 |

Table 2. Production figiures in Turkey, China and Brasil with respect to species in 2008.
World citrus production is composed of oranges with $55 \%$, mandarin with $23 \%$, lemons with $11 \%$, grapefruit with $4 \%$ and other citrus species with $6 \%$. Our national production was made up of oranges with $47 \%$, mandarin with $25 \%$, lemons with $22 \%$ and grapefruit with $5,5 \%$. Due to the properties of the varieties produced in Brasil and the market structure of the country, around $70 \%$ of the production is channelled to orange juice industry. Brasil is unique in concentrated juice export with this feature. While most of the production is kept for juice industry in the USA, mostly fresh consumption is preferred in the EU. Spain is the most important exporter of fresh orange varieties among EU countries and third countries. It is followed by South Africa Egypt and Morocco are important players on the Russian market. Recent production increase and accordingly the increasing export figures in Egypt draw attention (Anonymous, 2009a). 2,3 millions of tonnes of fresh fruit and vegetables were exported by Turkey in return for 1.759.114.179 USD Dollars in 2008 (Anonymous, 2009b). Citrus hold the greatest percentage as far as both amount and revenue are concerned in total fresh exports (Table 3). 826.385 tonnes were exported with a revenue of 587.420.060 USD Dollars (Table 3) (Anonymous, 2009b).

| Groups | 2008 |  | $\mathbf{2 0 0 9}$ |  | Increase/Decrease <br> (\%) 2008-2009 |  |
| :--- | :--- | :---: | :--- | :--- | :---: | :---: |
|  | Ouantity <br> (tonnes) | Value(\$) | Ouantity <br> (tonnes) | Value(\$) | Ouantity | Value |
|  | 826.385 | 587.420 .060 | 1.184 .608 | 801.829 .022 | 43 | 37 |
| Other fresh <br> fruits | 1.052 .098 | 672.071 .059 | 1.055 .712 | 653.478 .303 | 0 | -3 |
| Fresh vegetable | 457.501 | 499.623 .060 | 530.870 | 492.239 .087 | 16 | -1 |
| Total | 2.335 .984 | 1.759 .114 .179 | 2.771 .190 | 1.947 .546 .412 | 19 | 11 |

Table 3. Changes in Turkish fresh fruit and vegetable export figures between 2008 and 2009.

An increase of $19 \%$ was recorded in fresh fruit and vegetables in quantity and $11 \%$ in revenues. Citrus had an increase of $43 \%$ in quantity and $37 \%$ in revenues and topped the list in 2009 with 801.829.022 USD Dollars (Table 3). Lemon has increase by $82 \%$ in quantity and $37 \%$ in value among citrus, with a revenue of 282.140.639 USD Dollars (Table 4).

| Crop | 2008 |  | 2009 |  | Increase/Decrease <br> (\%) 2008-2009 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ouantity (tonnes) | Value(\$) | Ouantity (tonnes) | Value(\$) | Ouantity | Value |
| Lemon | 226.600 | 206.506.893 | 412.089 | 282.140.639 | 82 | 37 |
| Mandarin | 313.833 | 203.957.036 | 369.141 | 259.096.215 | 18 | 27 |
| Orange | 157.295 | 94.917.841 | 266.371 | 171.386.364 | 69 | 81 |
| Grapefruit | 128.615 | 82.006.525 | 136.904 | 89.089.742 | 6 | 9 |
| Other citrus | 42 | 31.765 | 104 | 116.062 | 147 | 265 |
| Citrus total | 826.385 | 587.420.060 | 1.184.608 | 801.829.022 | 43 | 37 |

Table 4. Changes in Turkish citrus exports between 2008 and 2009 won the basis of varieties.
Turkey exports citrus to around 55 countries with Russia being the first with $33 \%$ (Anonymous, 2009b). It is followed by Ukraine with $13 \%$, Iraq with $11 \%$, Saudi Arabia and Romania with $7 \%$ respectively. Table 5 shows the countries importing citrus from Turkey in the 2008-2009 period and the figures thereof.

Russian Federation is the most important importer of oranges after EU. There is a serious competition between Egypt and Turkey regarding orange exports to the Russian Federation. The most important supplier of this country in the summer period is South Africa (Anonymous, 2009a).

While Egypt is the most important exporter to Saudi Arabia, remarkable amounts are also exported by Turkey as well. Other important orange importing countries after Saudi Arabia are Canada, Hong Kong, Ukraine and UAE. The 2007/2008 season has been quite negative for the lemon sector. The drought in Spain in the summer of 2007, the very hot fronts and drought in the summer and the freezing winter in Turkey, USA and Argentina have impeded the global lemon production considerably. EU counties, the Russian Federation and East European countries constitute the major markets of fresh lemon consumption. Grapefruit production is not globally common as opposed to other varieties. The majority of global grapefruit production is China where internal consumption is remarkable. USA, however is the major exporter of grapefruit supplying Japan and EU, France in particular. Among the countries channelling most of the production to export are South Africa, Israel and Turkey. Israel and Turkey are competing on EU, Russia and Eastern European markets. Another major global exporter of grapefruit is Japan. China leads the mandarin production, followed by Spain, the producer and exporter among EU countries. Italy and Greece are the other mandarin producers in the EU. Although Japan is another major producer, the vast majority of the production is designated for internal consumption. If the Spanish exports of small citrus such as mandarin to other EU countries is ignored, the major exporter is Turkey. Morocco is also a leading small citrus variety producer and exporter (Anonymous, 2009a).

| Country |  | $\mathbf{0 1 . 0 1 . 2 0 0 8 / 3 1 . 1 2 . 2 0 0 8}$ |  | $\mathbf{0 1 . 0 1 . 2 0 0 9 / 3 1 . 1 2 . 2 0 0 9}$ |  | Increase/Decrease(\%) |  |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Value | Ouantity | Value | Ouantity | Value |  |
|  | (KG) | (\$) | (KG) | (\$) | (KG) | (\$) |  |
|  | Russian |  |  |  |  |  |  |
| 1 | Federation | 263.366 .301 | 197.610 .561 | 366.137 .606 | 262.427 .176 | 39 | 33 |
| 2 | Ukraine | 120.662 .795 | 84.176 .607 | 148.366 .169 | 101.834 .292 | 23 | 21 |
| 3 | Iraq | 58.748 .558 | 32.969 .220 | 150.846 .877 | 92.004 .505 | 157 | 179 |
| 4 | Saudi Arabia | 49.422 .158 | 38.143 .132 | 83.807 .482 | 56.128 .526 | 70 | 47 |
| 5 | Romania | 77.329 .888 | 50.067 .286 | 83.413 .875 | 53.143 .402 | 8 | 6 |
| 6 | Poland | 20.293 .208 | 17.481 .198 | 31.359 .147 | 22.676 .299 | 55 | 30 |
| 7 | Germany | 17.897 .675 | 16.113 .335 | 24.202 .830 | 18.670 .197 | 35 | 16 |
| 8 | Bulgaria | 24.701 .474 | 13.184 .195 | 34.335 .994 | 18.203 .620 | 39 | 38 |
| 9 | Iran Islamic | 13.485 .732 | 7.173 .831 | 26.316 .685 | 15.144 .800 | 95 | 111 |


|  | Rep. |  |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | Serbia | 16.326 .321 | 12.572 .409 | 20.367 .586 | 13.354 .453 | 25 | 6 |
| 11 | Holland | 15.879 .184 | 13.467 .998 | 18.301 .002 | 13.281 .050 | 15 | -1 |
| 12 | Czech <br> Republic | 13.141 .721 | 9.855 .083 | 16.948 .416 | 12.657 .647 | 29 | 28 |
| 13 | Greece | 11.649 .969 | 9.581 .353 | 18.838 .523 | 12.382 .527 | 62 | 29 |
| 14 | United <br> Kingdom | 6.079 .733 | 5.205 .389 | 16.204 .217 | 12.211 .823 | 167 | 135 |
| 15 | Mersin free <br> zone | 20.819 .794 | 13.469 .408 | 13.733 .565 | 10.523 .868 | -34 | -22 |
| 16 | Macedonia | 10.686 .998 | 6.572 .327 | 12.979 .121 | 7.936 .157 | 21 | 21 |
| 17 | Georgia | 10.710 .643 | 5.953 .686 | 12.235 .071 | 7.750 .935 | 14 | 30 |
| 18 | Azerbaijan- <br> Naxcivan | 8.821 .234 | 5.281 .276 | 10.402 .230 | 7.082 .757 | 18 | 34 |
| 19 | Hungary | 8.662 .943 | 6.503 .128 | 9.724 .990 | 7.050 .150 | 12 | 8 |
| 20 |  <br> Herzegovina | 6.406 .327 | 4.289 .849 | 10.307 .368 | 6.184 .279 | 61 | 44 |

Table 5. Leading 20 countries in exports from Turkey in 2008-2009 January-December periods.
Table 6. indicates export figures with respect to species for the leading 5 countries citrus is exported from Turkey (in 2008 \& 2009).

| Counrty/ Species | 2008 (January-December) |  | 2009 (January-December) |  | Increase/Decrease (\%) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LEMON | $\begin{gathered} \hline \text { Ouantity } \\ (\mathrm{kg}) \end{gathered}$ | Value (\$) | $\begin{gathered} \text { Ouantity } \\ (\mathrm{kg}) \end{gathered}$ | Value (\$) | $\begin{gathered} \text { Ouantity } \\ \text { (kg) } \end{gathered}$ | Value (\$) |
| Russian <br> Federation | 69.497 .395 | 64.270 .024 | 105.807.501 | 73.412 .406 | 52 | 14 |
| Saudi Arabia | 26.448.779 | 23.047.550 | 59.882.035 | 39.208.246 | 126 | 70 |
| Ukraine | 28.846.246 | 25.021 .890 | 43.061.854 | 29.003.885 | 49 | 16 |
| Romania | 13.178.895 | 11.172 .656 | 24.521 .321 | 16.607.912 | 86 | 49 |
| Iraq | 2.049 .845 | 1.227.117 | 25.200.401 | 15.085.872 | 1.129 | 1.129 |
| MANDARIN | $\begin{gathered} \text { Ouantity } \\ (\mathrm{kg}) \end{gathered}$ | Value (\$) | $\begin{gathered} \text { Ouantity } \\ (\mathbf{k g}) \end{gathered}$ | Value (\$) | $\begin{gathered} \text { Ouantity } \\ \text { (kg) } \end{gathered}$ | Value (\$) |
| Russian Federation | 115.647.114 | 78.941 .231 | 136.819.370 | 102.552.369 | 18 | 30 |
| Ukraine | 60.287.784 | 39.225 .126 | 59.645.469 | 42.189.962 | -1 | 8 |
| Iraq | 26.458 .966 | 15.218 .945 | 54.069.596 | 33.623 .819 | 104 | 121 |
| Romania | 26.041.715 | 16.253.723 | 25.201 .944 | 15.983.525 | -3 | -2 |
| Saudi Arabia | 15.382.207 | 10.346.869 | 17.456 .666 | 12.476 .592 | 13 | 21 |
| ORANGE | Ouantity (kg) | Value (\$) | Ouantity (kg) | Value (\$) | Ouantity (kg) | Value (\$) |
| Russian <br> Federation | 45.496 .530 | 30.207 .892 | 85.162.069 | 59.803 .414 | 87 | 98 |
| Iraq | 29.474.842 | 16.128 .749 | 69.005.202 | 41.736 .700 | 134 | 159 |
| Ukraine | 21.447.552 | 13.388 .450 | 34.139.195 | 22.851.972 | 59 | 71 |
| Iran Islamic Rep. | 10.369 .580 | 5.436.229 | 14.541 .426 | 8.099.085 | 40 | 49 |
| Romania | 13.618 .365 | 8.060.034 | 12.439.311 | 7.540.283 | -9 | -6 |
| GRAPEFRUIT | Ouantity (kg) | Value (\$) | Ouantity (kg) | Value (\$) | Ouantity (kg) | Value (\$) |
| Russian | 32.725.262 | 24.191 .414 | 38.327 .246 | 26.645.064 | 17 | 10 |
| Romania | 24.490.913 | 14.580 .873 | 21.251 .299 | 13.011.682 | -13 | -11 |
| Ukraine | 10.081.213 | 6.541 .141 | 11.519 .651 | 7.788.473 | 14 | 19 |


| Poland | 10.777 .922 | 6.846 .338 | 10.228 .297 | 6.918 .095 | -5 | 1 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Germany | 6.422 .274 | 4.295 .899 | 6.246 .179 | 4.439 .746 | -3 | 3 |

Table 6. Export figures with respect to species for the leading 5 countries citrus is exported from Turkey

## Varieties Produced And Exported By Turkey

Varieties exported by Turkey are; in oranges; Washington Navel, blood orenges, Jaffa, Valencia, Thomson, Hamlin, Trablus, Navelina, in mandarin; Clemantin, Monreal, Satsuma, Wilking, Tanjerin, Fremont, Mineola Tanjelo, Nova, Marisol, Okitsu, in grapefruit; Marsh Seedless, Thompson, Red Blush, Star Ruby, Pink Ruby, Rio Red and in lemon; Interdonat, Lamas, Kütdiken, Yatak, Meyer, Tatlı limon (Anonymous, 2006; Dal \&Gübbük 2007; Koç et al., 2009).

## Conclusion

In order to increase export figures of Turkey, it is important to widen product diversity and lengthen the production season. Sustainability is also of high importance to endure on the market. It is necessary to plan product and production with a view to exporting. With the broadening of the diversity of varieties in citrus and thus filling in the gaps on global market, the sector will benefit considerably.

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