The Market for Walnuts in Germany and the United States
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List of abbreviations

BIL BILLION
CAGR COMPOUND ANNUAL GROWTH RATE
CPA CLASSIFICATION OF PRODUCTS BY ACTIVITY
CPC CENTRAL PRODUCT CLASSIFICATION
€ EURO
EU EUROPEAN UNION
FDA US FOOD AND DRUG ADMINISTRATION
HS HARMONIZED COMMODITY DESCRIPTION AND CODING SYSTEM
ISIC INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION
M METRES
MIL MILLION
MT METRIC TON
NACE NOMENCLATURE GÉNÉRALE DES ACTIVITÉS ÉCONOMIQUES DANS LES COMMUNAUTÉS EUROPÉENNES
NAICS NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM
SITC STANDARD INTERNATIONAL TRADE CLASSIFICATION
SPS SANITARY AND PHYTOSANITARY MEASURES
TARIC EUROPEAN UNION INTEGRATED COMMUNITY TARIFF
TBT TECHNICAL BARRIERS TO TRADE
US$ UNITED STATES DOLLAR
US UNITED STATES OF AMERICA
USDA UNITED STATES DEPARTMENT OF AGRICULTURE
WTO WORLD TRADE ORGANIZATION
YR YEAR
Executive summary

This survey explores walnut export opportunities to the German and US markets with an emphasis on the Persian or English walnut (Juglans Regia), which are production and trade leaders throughout the world.

Walnut consumption is increasing. Walnuts are being used in a greater variety of foods, increasingly consumed as a snack, and consumers are now more aware of the health benefits walnuts offer. The world market for walnuts is increasing by 9% per year while the world consumption of walnuts has grown by nearly 76% since 2006 (Food and Agriculture Organization of the United Nations, 2011).

Germany is the world’s leading importer of shelled walnuts. As the fourth largest consumer of walnuts, not counting the EU in aggregation, Germany represents a strong export opportunity for producers. Domestic production is minuscule so demand is met by importation. The US is the largest supplier of walnuts.

The US represents a huge market, but a challenging export opportunity at the same time. Consumption in the US is second only to China, but imports are barely measurable due to exceptional level of domestic production, which meets over 99% of the demand (Borris, Bur-ke and Kreith, 2011).

A growing trend in the walnut value chain is off-shore processing to reduce costs. Exporters may ship in-shell walnuts to processing centers in China or the Republic of Moldova (New Rural Industries Australia, 2011). Shelling can double the price of walnuts sold in the US and Germany (Perez and Pollack, 2005).
1 Product description

This export opportunity survey is intended for exporters interested in selling walnuts in both German and US markets. It covers the markets for walnuts, classified under the following codes:

- HS 080231: Walnuts in shell, fresh or dried;
- HS 080232: Walnuts without shells, fresh or dried;
- SITC 057.76: Walnuts (Edible nuts (excluding nuts chiefly used for the extraction of oil)), fresh or dried, whether or not shelled or peeled;
- CPC 2 21429: Other shelled nuts;
- CPC 2 01376: Walnuts, in shell;
- CPA 01.25.35: Walnuts;
- ISIC 0125: Growing of other tree and bush fruits and nuts;
- TARIC 0802 31: Walnuts, in shell;
- TARIC 0802 32: Walnuts, shelled;
- NAICS 111335: Tree Nut Farming (Walnut farming);
- NACE 01.25.35: Walnuts.

Walnuts (Juglans) are edible seeds of the genus Juglans, which belongs to the family Juglandaceae (Fruit and Nut Trees, 2007). Walnuts grow on trees characterized by large and aromatic compound leaves. There are about twenty-one species of walnuts. Species of the walnut family have their origin mostly in the North Temperate Zone\(^1\), but also range from Central America along the Andes to Argentina and through tropical Asia to Java and New Guinea (The Columbia Encyclopedia, 2011). Persian walnuts were once used as food on the ancient trade routes across Asia and Europe and the trees became established in China in the East and Europe in the West.

An inedible green fleshy husk encloses the walnut seed. Removing the husk reveals the wrinkly hard walnut shell that holds the edible kernel. In the North Temperate Zone, walnuts are ready for harvesting by August, when the green husk begins to crack. Mechanical shakers shake each tree, causing the walnuts to fall to the ground. Afterwards, mechanical harvesters pick them up for cleaning. A huller removes the green husk and the nut is dried to optimum moisture level (8%) to protect its quality during storage.

---

\(^1\) The North Temperate Zone extends from the Tropic of Cancer (23.5 degrees north latitude) to the Artic Circle (65.5 degrees north latitude).
Walnuts are sold both in shell and shelled and are certified for quality in the US according to USDA standards. In-shell walnuts are sized as jumbo, large, medium, or baby. Shelled walnuts are inspected to ensure an end-product that is clean, well-dried, and of specific color as determined in the official walnut color chart (California Walnuts, 2011).

Walnuts have a significant nutritional value due to their high fat content. They are rich in monounsaturated fatty acids and are a good source of important omega-3 essential acids. In 2003, the FDA recognized the nutritional benefits of nuts and their role in heart disease prevention (Tsang, 2006).

Persian walnuts, also referred to as English walnuts (Juglans regia), are the primary species of walnut production worldwide. There are hundreds of cultivators of Persian walnuts around the world (Germain, 2003). Persian walnut trees grow in a range of well-drained soils from sand to clay loam and prefer warm temperatures during the growing season. The buds are very sensitive to frost damage. The trees grow to 15 m tall. It takes approximately three to four years for grafted trees to produce full crops and about five or more years for seedling trees (Society of Ontario Nut Growers, 2008).

Black walnuts (Juglans nigra and Juglans hindsii) are often used as a rootstock for English walnuts. Black walnut trees produce a natural herbicide that inhibits the growth of many vegetative species. Black walnuts are available from commercial sources in the US but production is often from gathering in the wild. The trees are approximately 20-27 m tall and have a diameter of about 0.5-1.0 m. Black walnuts are more resistant to frost than Persian walnuts (Medicinal Herbs, 2011).

The Butternut (Juglans cinerea), also known as the white walnut, can be found mostly on bottomlands and lower slopes on moist soils. Mature trees seldom grow more than 21 m in height and 90 cm in diameter (LandOwner Resource Center, 1997).

Walnuts are used in many different ways. They may be eaten raw, either by themselves or in products like trail mixes. They are also used in baked goods. The nutmeat is also processed into walnut oil that is ideal for salad dressings.
2 Production, foreign trade and consumption

Production

China and the US account for a majority of the world production. China leads production with 560,000 MT of walnuts in 2010 and a projected volume of 700,000 MT in 2011 (USDA, 2011b). The US is second, producing 456,300 MT in 2010 and is expected to produce 440,000 MT in 2011.

The other world leaders in production are the Ukraine (80,000 MT), Turkey (75,000 MT), the European Union-27 (59,000 MT), Chile (40,000 MT), and India (30,000 MT) (USDA, 2011b). Germany’s production volume is a distant thirteenth producing 19,778 MT in 2009, which are the most current production numbers available from the Food and Agriculture of the United Nations database (Food and Agriculture of the United Nations, 2011).

Between 2006 and 2010, the annual average growth rate for the US was 9% with a slight reduction in 2007. 2011 production is projected to decrease slightly (USDA, 2011b).

German production has been relatively stable for four years. Production decreased slightly from 19,754 MT in 2006 to 17,000 MT in 2007, before increasing again to 19,778 MT in 2009. Unfortunately, there is no projected production numbers extending beyond 2009 (Food and Agriculture of the United Nations, 2011).

Most walnut producers in the US are based in California. That state grows 99% of the walnuts in the US and 75% of the world’s exports (Borris, Burnke, Kreith, 2011). Most growers are small family farms with an average of 46 acres per walnut farm (Boriss, Burnke, Kreith, 2011a). 90% of the farms are located in California, 5% in Oregon, and the remaining 5% are in Washington, Pennsylvania, Michigan, Utah, Iowa as well as in Maine (Perez, Pollack, 2005).

In total, there are 58 processors of walnuts in the US. Top processors include John B. Sanfilippo & Son, Inc., Diamond, and Crain Walnut Shelling, Inc.

Currently, US growers average 227 trees per acre, which represents an increase of ten trees per acre over the last five years. Walnuts are currently grown on 227,000 acres (USDA, 2011c).
Table 1: Top World Producers of Walnuts in Shell in Metric Tons

<table>
<thead>
<tr>
<th>Rank</th>
<th>Producer</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011 (Projections)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>World</td>
<td>996,310</td>
<td>1,032,410</td>
<td>1,186,730</td>
<td>1,282,240</td>
<td>1,332,700</td>
<td>1,463,500</td>
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<td>China</td>
<td>425,000</td>
<td>460,000</td>
<td>490,000</td>
<td>560,000</td>
<td>580,000</td>
<td>700,000</td>
</tr>
<tr>
<td>2</td>
<td>USA</td>
<td>313,890</td>
<td>297,560</td>
<td>395,530</td>
<td>396,440</td>
<td>456,300</td>
<td>440,000</td>
</tr>
<tr>
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<td>Ukraine</td>
<td>30,000</td>
<td>70,000</td>
<td>80,000</td>
<td>100,000</td>
<td>80,000</td>
<td>90,000</td>
</tr>
<tr>
<td>4</td>
<td>Turkey</td>
<td>75,000</td>
<td>85,000</td>
<td>85,000</td>
<td>88,000</td>
<td>85,000</td>
<td>80,000</td>
</tr>
<tr>
<td>5</td>
<td>EU - 27</td>
<td>70,000</td>
<td>60,600</td>
<td>70,900</td>
<td>67,000</td>
<td>59,000</td>
<td>60,000</td>
</tr>
<tr>
<td>6</td>
<td>Chile</td>
<td>22,200</td>
<td>26,000</td>
<td>30,000</td>
<td>32,500</td>
<td>40,000</td>
<td>46,000</td>
</tr>
<tr>
<td>7</td>
<td>India</td>
<td>28,000</td>
<td>31,000</td>
<td>33,000</td>
<td>36,000</td>
<td>30,000</td>
<td>45,000</td>
</tr>
<tr>
<td>13</td>
<td>Germany (Im)</td>
<td>19,754</td>
<td>17,000</td>
<td>18,374</td>
<td>19,778</td>
<td>19,778</td>
<td>19,778</td>
</tr>
</tbody>
</table>

Im: based on FAO imputation methodology

Source: Based on USDA (2011), Food and Agriculture of the United Nations (2011)

Foreign trade

Imports

World imports (general)
As shown in Figure 1, the world market for shelled walnuts and in-shell walnuts has consistently grown in recent years. The total imports of shelled walnuts grew from US$612 million in 2006 to US$865 million in 2010, an annual growth rate of 9%. The total quantity imported increased by an annual growth rate of 5%.

After a noticeable decline in 2009, the import value of walnuts in shell grew by 16% per year on average with a total of US$486 million in 2010. The quantity compound annual growth rate over this time interval is 12%. This imputes to an average market price increase of 4% (Comtrade, 2011).

Figure 1: Total World Imports of Walnuts: Value and Quantity

Source: Comtrade database

World imports of walnuts in shell
In 2010, Hong Kong was the world’s major importer of walnuts in shell, with 20% of global imports (US$95.0 mil.), followed by Italy (US$90.2 mil.), Turkey (US$50.5 mil.), Mexico
(US$47.2 mil.), Spain (US$46.3 mil.), and Germany (US$39.6 mil.). Together these top 6 importers account for 77% of the world imports. The US share of world imports is negligible. The average price per MT is US$2,755. The Russian Federation has the lowest MT value of US$1,597. Israel pays the most at US$5,133 per ton. (Due to the negligible amount of imports, the US is not considered.) China (value: +154% / qty: +96%) and Hong Kong (value: +135% / qty: +130%) are leading in terms of import growth, while the Republic of Moldova decreased the quantity imported by 11% since 2006 (Comtrade, 2011).

Table 2: Top World Importers of Walnuts in Shell in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Importer</th>
<th>Value imported (in US$)</th>
<th>Share of world imports (value in %)</th>
<th>Quantity imported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Import trend: Annual growth rates 2006-2010 (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Value</td>
</tr>
<tr>
<td>1</td>
<td>China, Hong Kong SAR</td>
<td>95,000</td>
<td>20</td>
<td>32,002</td>
<td>2,969</td>
<td>135</td>
</tr>
<tr>
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<td>Italy</td>
<td>90,249</td>
<td>19</td>
<td>26,571</td>
<td>3,397</td>
<td>20</td>
</tr>
<tr>
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<td>Turkey</td>
<td>50,519</td>
<td>10</td>
<td>27,369</td>
<td>1,846</td>
<td>54</td>
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<tr>
<td>4</td>
<td>Mexico</td>
<td>47,189</td>
<td>10</td>
<td>15,963</td>
<td>2,956</td>
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</tr>
<tr>
<td>5</td>
<td>Spain</td>
<td>46,314</td>
<td>10</td>
<td>15,242</td>
<td>3,039</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Germany</td>
<td>39,566</td>
<td>8</td>
<td>12,759</td>
<td>3,092</td>
<td>-2</td>
</tr>
<tr>
<td>7</td>
<td>China</td>
<td>30,914</td>
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<td>14,962</td>
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<td>154</td>
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</tr>
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<td>USA</td>
<td>20,000</td>
<td>0</td>
<td>3</td>
<td>7,846</td>
<td>-3</td>
</tr>
</tbody>
</table>

Source: Comtrade database

World imports of shelled walnuts

As seen in Table 3, Germany is the world’s largest importer of shelled walnuts with a total amount of US$89.8 mil. and a 10% share of the global volume. Both value and quantity rose in a rather moderate way. The US is ranked 29th with very little imports (US$4.7 mil.), but the average annual growth rates (value: +46% / qty: +19%) are considered high in comparison to other countries, except from the Russian Federation. The shelled walnut market is roughly twice the size of the in-shell market. The top 15 countries account for 75% of the world’s imports. Again, the Russian Federation, on average, has the lowest price level (US$3,397 per ton). Brazil’s import value is US$11,250 per MT, while the average unit value is US$6,049 per MT (Comtrade, 2011).
Table 3: Top World Importers of Shelled Walnuts in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Importer</th>
<th>Value imported (in US$)</th>
<th>Share of world imports (value in %)</th>
<th>Quantity imported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Import trend: Annual growth rates 2006-2010 (in %)</th>
<th>Value</th>
<th>Quantity</th>
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<td>13,667</td>
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<td>71,697</td>
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<td>8,641</td>
<td>7,636</td>
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<td>4,784</td>
<td>1</td>
<td>1,317</td>
<td>3,633</td>
<td>46</td>
<td>19</td>
<td></td>
</tr>
</tbody>
</table>

Source: Comtrade database

German imports of walnuts in shell

In 2010, 12,795 MT of walnuts in shell were imported into Germany. This equals a value of US$39.6 mil. (Figure 2). Germany’s most important trading partners are the US (US$23.3 mil.; 8,419 MT) and France (US$12.7 mil.; 3,405 MT). Together they deliver 92% of the total German imports. Further notable trading partners are Hungary (US$1.6 mil.; 482 MT), Chile (US$0.9 mil.; 217 MT), Belgium (US$0.4 mil; 161 MT), and Greece (US$0.2 mil.; 200 MT) (Comtrade, 2011).

Figure 2: German Imports of Walnuts in Shell
German imports have declined slightly since 2006. Between 2006 and 2010, the import value decreased by 1.8% per annum, while the import volume decreased by 5.9% on average. However, the unit value increased US$3,092 per MT in the same period. Imports from Belgium and Greece were recorded in 2010 for the first time. Vietnam has reported significant growth rates (value: +508%; qty: +486%) since the time of first recording in 2009, but has only exported 7 MT to Germany in 2010 (Comtrade, 2011). (For more information please see Annex 2.)

**German imports of shelled walnuts**

Similar to the world market, German imports (value) of shelled walnuts are approximately twice as high as those of walnuts in shell. In 2010, Germany imported US$89.8 mil. (13,677 MT) of in-shell walnuts. Germany’s most important trading partner is the US (US$50.7 mil.; 7609 MT), followed by Chile (US$14.0 mil.; 14,030 MT), the Republic of Moldova (US$7.3 mil.; 7,268 MT), France (US$6.6 mil.; 6,586 MT), and India (US$5.0 mil.; 5,033 MT). Imports have increased moderately since 2006 (value: +4.0%; qty: +3.2%), while the average unit value increased by 0.8% per year. While imports from the US also have a slight increase (value +5.8%), imports from Chile (value: +29.9%) and the Republic of Moldova (value: +25.1%) show ongoing growth at rapid pace. Imports from France (value: -16.0%) and further smaller training partners have declined (Comtrade, 2011). (For more information please see Annex 2.)

![Figure 3: German Imports of Shelled Walnuts](image)

Source: Comtrade database

**US imports of walnuts in shell**

In 2010, the US imported US$20,305 worth of in-shell walnuts from China and France. The inflows in this commodity class are declining (value: -3.4%). In the light of domestic production, such declines have virtually no impact in the world market (Comtrade, 2011).

**US imports of shelled walnuts**

Imports of shelled walnuts are also very small, but show relatively strong increases (value: +46.0%; qty: +19.0%) in comparison to the domestic production of 456,300 MT. The unit value in 2010 was US$3,633 per MT (22.7% average annual growth since 2006), while the total...
imports equaled about US$4.8 mil. or 1,317 MT. The high average annual growth rates are considered a result of the massive increase of imports in 2008 (3,450 MT, +280% in comparison to 2007). The most important (recent) trading partners of the US are Mexico (since 2007, US$1.9 mil.; 350 MT), China (US$0.6 mil.; 350 MT), India (since 2007, US$0.6 mil.; 90 MT), Turkey (since 2010, US$0.4 mil.; 60 MT), and Spain (US$0.4 mil.; 336 MT) (Comtrade, 2011). (For more information please see Annex 2.)

**Comparison of US and German imports**

The US has a huge production capacity and therefore does not require significant import quantities. Germany is a typical import country for both shelled and in-shell walnuts. The US imports of shelled nuts are increasing noticeably, while the German imports remain almost constant (Comtrade, 2011).

**Exports**

*World exports of walnuts in shell*

In 2010, global exports of walnuts in shells valued US$679.3 mil. or 219,112 MT. The average unit value was US$3,100 per MT. Worldwide, the exported value increased annually by
25.3%, while the quantity increased by 17.1% at the same time. The US (US$359.3 mil.), France (US$87.0 mil.), Mexico (US$78.7 mil.), Chile (US$54.9 mil.), and Hong Kong (US$41.5 mil.) top the list of exporters of walnuts in shells and, together, account for 91.4% of the global export volume.

The US is the world’s largest exporter of walnuts in shells. In 2010, they exported 116,183 MT, which equaled US$359.3 mil., realizing unit values on world market level of US$3,092 per ton. Exporters in the US succeeded in increasing their overseas sales by 31.9% (+21.8% in qty).

Italy exported its commodities for the highest unit value (US$4,655 / MT), while the value per MT of Dutch products was about US$1,366 (lowest) (Comtrade, 2011). (Please note that differences between import and export data may occur due to different bases of calculation of the Comtrade database.)

Table 4: Top World Exporters of Walnuts in Shell in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value exported (in US$)</th>
<th>Share of world exports (value in %)</th>
<th>Quantity exported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Export trend: Annual growth rates 2006-2010 (in %)</th>
<th>Value</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>359,273</td>
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<td>116,138</td>
<td>3,092</td>
<td>25</td>
<td>32</td>
<td>22</td>
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<tr>
<td>2</td>
<td>France</td>
<td>87,035</td>
<td>13</td>
<td>25,707</td>
<td>3,386</td>
<td>12</td>
<td>12</td>
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<tr>
<td>3</td>
<td>Mexico</td>
<td>78,035</td>
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<td>18,547</td>
<td>4,244</td>
<td>11</td>
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<td>0</td>
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<tr>
<td>4</td>
<td>Chile</td>
<td>54,924</td>
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<td>12,833</td>
<td>4,28</td>
<td>37</td>
<td>25</td>
<td>25</td>
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<tr>
<td>5</td>
<td>China, Hong Kong SAR</td>
<td>41,509</td>
<td>6</td>
<td>19,982</td>
<td>2,077</td>
<td>97</td>
<td>101</td>
<td>101</td>
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<td>6</td>
<td>Ukraine</td>
<td>19,258</td>
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<td>11,116</td>
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<td>-7</td>
<td>-7</td>
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<td>3,78</td>
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<td>-7</td>
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<tr>
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<td>Argentina</td>
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<td>1,015</td>
<td>4,582</td>
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<td>14</td>
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<td>Netherlands</td>
<td>4,430</td>
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<td>3,242</td>
<td>1,366</td>
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<td>10</td>
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<tr>
<td>10</td>
<td>Italy</td>
<td>3,409</td>
<td>1</td>
<td>732</td>
<td>4,655</td>
<td>12</td>
<td>-1</td>
<td>-1</td>
</tr>
</tbody>
</table>

Source: Comtrade database

*World exports of shelled walnuts*

In 2010, global exports of shelled walnuts amounted to 196,944 MT or US$1.1 bil. From 2006 onwards, total exports have been rising in both value (+15.3% p.a.) and quantity (+12.6% p.a.). The average unit value shows an annual increase of 2.4%. The values per MT vastly differ between US$2,911 (Ukraine) and US$12,272 (Chile).

The US is the world’s main exporter. In 2010, it exported 71,945 MT for US$463.2 mil. eventually resulting in an average unit price of US$6,438, which is about US$1,000 above the world level. Together with Mexico (US$108.4 mil.), Chile (US$103.0 mil.), Ukraine (US$82.2 mil.), and the Republic of Moldova (US$59.3 mil.) this amounts to 76% of the world exports. Germany’s share of world exports is 2.1%, which equals US$22,384 or 2,647 MT with an average unit price of US$8,457 (Comtrade, 2011).
Table 5: Top World Exporters of Shelled Walnuts in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value exported (in US$)</th>
<th>Share of world exports (value in %)</th>
<th>Quantity exported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Export trend: Annual growth rates 2006-2010 (in %)</th>
</tr>
</thead>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Value</td>
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<td>USA</td>
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<td>71,946</td>
<td>6,438</td>
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<td>33,424</td>
<td>3,245</td>
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<td>Chile</td>
<td>103,061</td>
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<td>8,398</td>
<td>12,272</td>
<td>21.9</td>
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<td>Ukraine</td>
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<td>28,249</td>
<td>2,911</td>
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<td>5</td>
<td>Republic of Moldova</td>
<td>59,296</td>
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<td>9,472</td>
<td>6,260</td>
<td>12.3</td>
</tr>
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<td>6</td>
<td>India</td>
<td>39,109</td>
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<td>7,133</td>
<td>5,483</td>
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<td>7</td>
<td>Romania</td>
<td>32,456</td>
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<td>6,615</td>
<td>4,907</td>
<td>8.9</td>
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<tr>
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<td>France</td>
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<td>2,872</td>
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<td>3,171</td>
<td>7,410</td>
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<td>China</td>
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<td>4,606</td>
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<tr>
<td>11</td>
<td>Germany</td>
<td>22,384</td>
<td>2</td>
<td>2,647</td>
<td>8,457</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Source: Comtrade database

**German exports of walnuts in shell**

As shown in Table 6, exports of in-shell walnuts from Germany are very small with a total of 1,289 MT shipped in 2010. This represents 0.6% of the global exports (Comtrade, 2011).

Table 6: Top 10 German Exports of Walnuts in Shell in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value exported (in US$)</th>
<th>Share of exports (value in %)</th>
<th>Quantity exported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Export trend: Annual growth rates 2006-2010 (in %)</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Value</td>
</tr>
<tr>
<td>1</td>
<td>Italy</td>
<td>1,067</td>
<td>22</td>
<td>282</td>
<td>3,786</td>
<td>18</td>
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<tr>
<td>2</td>
<td>Netherlands</td>
<td>533</td>
<td>11</td>
<td>151</td>
<td>3,535</td>
<td>-13</td>
</tr>
<tr>
<td>3</td>
<td>Spain</td>
<td>505</td>
<td>10</td>
<td>135</td>
<td>3,739</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>United Kingdom</td>
<td>384</td>
<td>8</td>
<td>100</td>
<td>3,850</td>
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</tr>
<tr>
<td>5</td>
<td>Austria</td>
<td>335</td>
<td>7</td>
<td>85</td>
<td>3,953</td>
<td>-24</td>
</tr>
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<td>6</td>
<td>Slovakia</td>
<td>333</td>
<td>7</td>
<td>92</td>
<td>3,627</td>
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<tr>
<td>7</td>
<td>Poland</td>
<td>310</td>
<td>6</td>
<td>92</td>
<td>3,381</td>
<td>130</td>
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<tr>
<td>8</td>
<td>Greece</td>
<td>252</td>
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<td>63</td>
<td>3,971</td>
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</tr>
<tr>
<td>9</td>
<td>Belgium</td>
<td>236</td>
<td>5</td>
<td>65</td>
<td>3,645</td>
<td>77</td>
</tr>
<tr>
<td>10</td>
<td>France</td>
<td>231</td>
<td>5</td>
<td>43</td>
<td>5,399</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Comtrade database

**German exports of shelled walnuts**

As seen in Table 7, Germany exported 2,647 MT (1.3% of global exports) of shelled walnuts in 2010 with the largest exports being to the United Kingdom (334 MT), Austria (293 MT), and Sweden (304 MT) (Comtrade, 2011).
Table 7: Top 10 German Exports of Shelled Walnuts in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value exported (in US$)</th>
<th>Share of exports (value in %)</th>
<th>Quantity exported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Export trend: Annual growth rates 2006-2010 (in %)</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Value</td>
</tr>
<tr>
<td>1</td>
<td>United Kingdom</td>
<td>2,034</td>
<td>100</td>
<td>2,647</td>
<td>8,457</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Austria</td>
<td>1,454</td>
<td>6</td>
<td>164</td>
<td>8,890</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>Sweden</td>
<td>2,374</td>
<td>11</td>
<td>304</td>
<td>7,808</td>
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</tr>
<tr>
<td>4</td>
<td>Netherlands</td>
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<td>Spain</td>
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<td>10</td>
<td>250</td>
<td>8,549</td>
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</tr>
<tr>
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<td>Denmark</td>
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<td>6</td>
<td>164</td>
<td>8,890</td>
<td>24</td>
</tr>
<tr>
<td>7</td>
<td>France</td>
<td>1,280</td>
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<td>132</td>
<td>9,711</td>
<td>13</td>
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<td>8</td>
<td>Poland</td>
<td>1,077</td>
<td>5</td>
<td>150</td>
<td>7,182</td>
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</tr>
<tr>
<td>9</td>
<td>Italy</td>
<td>1,034</td>
<td>5</td>
<td>112</td>
<td>9,244</td>
<td>69</td>
</tr>
<tr>
<td>10</td>
<td>Luxemburg</td>
<td>963</td>
<td>4</td>
<td>129</td>
<td>7,485</td>
<td>74</td>
</tr>
</tbody>
</table>

Source: Comtrade database

US exports of walnuts in shell

Table 8 shows that the US exported 116,183 MT of in-shell walnuts to the world including the following major destinations: Hong Kong (29,608 MT), Turkey (22,652 MT), and Italy (14,386 MT). Between 2006 and 2010, exports rose by 22% per year on average in quantity, while the total value rose by 32% – which in turn indicates a rising unit value (US$3,092 per MT in 2010) (Comtrade, 2011).

Table 8: Top 10 US Exports of Walnuts in Shell in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value exported (in US$)</th>
<th>Share of exports (value in %)</th>
<th>Quantity exported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Export trend: Annual growth rates 2006-2010 (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Value</td>
</tr>
<tr>
<td>1</td>
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<td>88,463</td>
<td>25</td>
<td>29,608</td>
<td>2,988</td>
<td>148</td>
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<tr>
<td>2</td>
<td>Turkey</td>
<td>75,795</td>
<td>21</td>
<td>22,652</td>
<td>3,346</td>
<td>71</td>
</tr>
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<td>3</td>
<td>Italy</td>
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<td>14,386</td>
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<td>14</td>
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<td>4</td>
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<td>25,410</td>
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<td>United Arab Emirates</td>
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<td>4,938</td>
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<td>6,721</td>
<td>2</td>
<td>2,289</td>
<td>2,937</td>
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<td>2,105</td>
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</tr>
<tr>
<td>10</td>
<td>Vietnam</td>
<td>5,643</td>
<td>2</td>
<td>1,977</td>
<td>2,855</td>
<td>58*</td>
</tr>
</tbody>
</table>

Source: Comtrade database

US exports of shelled walnuts

Table 9 shows that the US exported 71,946 MT of shelled walnuts in 2010 with the leading destinations being Japan (10,930 MT), Republic of Korea (9,262 MT), and Germany (8,748 MT). While the average unit value was US$6,438 per MT (+10% since 2006), China has the
lowest price level (unit value of US$5,307 per MT). The Republic of Korea imports shelled nuts from the US for US$7,137 per MT on average (Comtrade, 2011).

Table 9: Top 10 US Exports of Shelled Walnuts in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value exported (in US$)</th>
<th>Share of exports (value in %)</th>
<th>Quantity exported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Export trend: Annual growth rates 2006-2010 (in %)</th>
<th>Quantity</th>
<th>Quantity</th>
</tr>
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<tbody>
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<td>12,683</td>
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<td>1,947</td>
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<td>22</td>
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<td>6,833</td>
<td></td>
<td>49</td>
<td>22</td>
</tr>
</tbody>
</table>

Source: Comtrade database

Apparent consumption

The world consumption of walnuts in shell and shelled walnuts has increased from 965,620 MT to 1,274,250 MT since 2006. Table 10 shows that in 2010 China led the world by consuming 404,100 MT of walnuts, the US was second and Germany fourth (not considering the EU-27 in aggregate). Other major consumers of walnuts are Turkey (132,000 MT), Japan (35,000 MT), and the Russian Federation (25,000 MT).

Table 10: Top World Consumption of Walnuts in Metric Tons

<table>
<thead>
<tr>
<th>Rank</th>
<th>Consumer</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>World</td>
<td>965,620</td>
<td>1,012,335</td>
<td>1,115,650</td>
<td>1,249,104</td>
<td>1,274,250</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
<td>404,100</td>
<td>433,600</td>
<td>492,100</td>
<td>568,100</td>
<td>590,500</td>
</tr>
<tr>
<td>3</td>
<td>EU-27</td>
<td>143,500</td>
<td>151,000</td>
<td>158,200</td>
<td>157,700</td>
<td>165,000</td>
</tr>
<tr>
<td>4</td>
<td>USA</td>
<td>206,669</td>
<td>181,124</td>
<td>276,063</td>
<td>208,600</td>
<td>269,491</td>
</tr>
<tr>
<td>5</td>
<td>Turkey</td>
<td>85,800</td>
<td>108,300</td>
<td>115,100</td>
<td>121,654</td>
<td>132,000</td>
</tr>
<tr>
<td>6</td>
<td>Germany</td>
<td>44,350</td>
<td>37,030</td>
<td>39,468</td>
<td>41,014</td>
<td>42,304</td>
</tr>
<tr>
<td>7</td>
<td>Japan</td>
<td>38,200</td>
<td>28,400</td>
<td>22,200</td>
<td>30,300</td>
<td>35,000</td>
</tr>
<tr>
<td>8</td>
<td>Russia</td>
<td>18,200</td>
<td>14,800</td>
<td>20,500</td>
<td>22,000</td>
<td>25,000</td>
</tr>
<tr>
<td>9</td>
<td>India</td>
<td>15,500</td>
<td>16,000</td>
<td>16,000</td>
<td>18,600</td>
<td>19,500</td>
</tr>
<tr>
<td>10</td>
<td>Vietnam</td>
<td>6,200</td>
<td>4,200</td>
<td>8,900</td>
<td>10,900</td>
<td>18,300</td>
</tr>
<tr>
<td>11</td>
<td>South Korea</td>
<td>18,200</td>
<td>14,800</td>
<td>20,500</td>
<td>22,000</td>
<td>22,100</td>
</tr>
</tbody>
</table>

Source: Based on USDA (2011), Food and Agriculture of the United Nations (2011)

Table 11 shows that US consumption of walnuts in 2010 was 269,013 MT with the consumption peaking in 2008 when the production increased faster than exports. With the increase of exports after 2008 there has been a steady increase of consumption in the US. Consumption is nearing its peak this year in 2010. Consumption per capita was 0.31 kg of walnuts in 2010.
up from 0.24 kg in 2006; a gradual increase over that time period (converted to kg by the authors) (USDA, 2011b). German consumption peaked in 2006 with 44,349 MT, followed by a drop in 2007 to 37,029 MT, and then steady increase to 42,304 MT in 2010. This equals about 0.53 kg per capita.

Table 11: Comparison of German and US Consumption²

<table>
<thead>
<tr>
<th>Value in Metric Tons</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany Production</td>
<td>19,754</td>
<td>17,000</td>
<td>18,374</td>
<td>19,778</td>
<td>19,778</td>
</tr>
<tr>
<td>Germany Imports</td>
<td>28,346</td>
<td>23,937</td>
<td>24,343</td>
<td>25,230</td>
<td>26,462</td>
</tr>
<tr>
<td>Germany Exports</td>
<td>3,751</td>
<td>3,908</td>
<td>3,249</td>
<td>3,994</td>
<td>3,936</td>
</tr>
<tr>
<td>Germany Consumption</td>
<td>44,349</td>
<td>37,029</td>
<td>39,468</td>
<td>41,014</td>
<td>42,304</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value in Metric Tons</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA Production</td>
<td>313,890</td>
<td>297,560</td>
<td>395,530</td>
<td>396,440</td>
<td>456,300</td>
</tr>
<tr>
<td>USA Imports</td>
<td>663</td>
<td>1,233</td>
<td>4,239</td>
<td>964</td>
<td>1,320</td>
</tr>
<tr>
<td>USA Exports</td>
<td>107,884</td>
<td>117,669</td>
<td>123,706</td>
<td>188,804</td>
<td>188,129</td>
</tr>
<tr>
<td>USA Consumption</td>
<td>206,669</td>
<td>181,124</td>
<td>276,063</td>
<td>208,600</td>
<td>269,491</td>
</tr>
</tbody>
</table>

Source: Based on USDA (2011), Food and Agriculture of the United Nations (2011)

² The estimation is based on the following assumption: apparent consumption of tomato juice in both countries equals the local production of plus the total imports to that particular country from the world minus the total exports from that country to the world.
3 Market characteristics

Market demand is increasing in both Germany and the US due to an increased awareness about walnuts and their health benefits. Both markets already enjoyed a traditional appreciation for the walnut in association with seasonal and religious holidays, but are rediscovering the walnut for its health benefits and diverse food applications. Walnuts are commonly used in healthy salads, cereals, and trail mixes as well as pastries, ice creams, and candies. This broad range of uses appeals to multiple market segments and consumer demographics (Ibrahim, Florkowski, 2007). It is difficult to identify a demographic segment that is not represented somewhere in the range of foods where walnuts are used.

Shelled walnuts are purchased by food service providers such as restaurants and bakeries as well as industrial food producers for a large variety of processed foods. In addition to being used as an ingredient, walnuts are increasingly demanded through retail channels purely as a snack food (Perez and Pollack, 2005).

In-shell walnuts are primarily sold through retail channels for direct consumption. Sales are much stronger in winter holiday seasons and many retailers only sell in-shell walnuts during those months (Euromonitor International, 2011).

Figure 6: Typical Walnut Users

Consumers are increasingly demanding locally grown products, provided the local alternative is less expensive and is of good quality. The reality is that both retail and commercial consumers are primarily concerned with price and quality, and are usually not aware of the origin.
of the product. This, in turn, presents an opportunity for globally sourced walnuts (Euromonitor International, 2011).

Consumers typically prefer a less bitter walnut and the industrial food production sector has particularly selective quality standards. Chinese walnuts are primarily consumed domestically due to the lower quality and bitterness of the nuts, while US walnuts are exported to the world market because of its higher quality and sweeter taste (Liu, 2010). Any exporter interested in entering these markets needs to meet or surpass the quality and price standards set by US producers to meet established market demands. Demand for lower to mid-level quality walnuts are supplied through bulk food or discount markets as well as in high-production food items such as breads and cereals. Premium walnuts are marketed through specialty shops, independent food stores, open markets, finer bakeries, and high-end candy, fruit, and nut products. Mid-grade walnuts are typically marketed through supermarkets, hypermarkets, and grocery stores (Euromonitor International, 2011).

Niche market differentiators in both countries include organic and pesticide free walnuts. In response to this demand, the US produced organic walnuts worth US$11.1 mil. in 2008 (Boriss, Burnke, Kreith, 2011).

**Competitive environment**

Walnuts in the US and German markets compete primarily on quality and cost, particularly at the wholesaler level. As long as the product meets minimum standards, competition at the wholesale, retail, food service, and food processing levels are almost exclusively based on low cost (Euromonitor International, 2011).

Given its high production levels, the US presents significant challenges to exporters interested in competing in the market. California produces 99% of the domestic supply with imports in 2009 at a paltry US$2.8 mil. (Boriss, Burnke, Kreith, 2011).

Germany does have walnut production but it is inconsequential and almost exclusively in-shell. Germany is one of the largest importers in the world with the largest competitor being the US who ship directly or through the Netherlands (USDA, 2011a).

The primary suppliers are China and the Republic of Moldova who import in-shell walnuts, shell them, and re-export them (New Rural Industries Australia, 2011). To encourage walnut processing, China does not impose tariffs or value-added taxes to walnuts that are imported for this purpose (Branson, 2004). Shelling walnuts nearly doubles the unit price and reduces the product volume, which, in turn, decreases freight costs (Perez and Pollack, 2005). This option may be advantageous to compete in the German and US markets from a cost perspective. Australia and other Southern Hemisphere producers are growing competitively due to their ability to produce fresh walnuts when the US and Germany are not able to grow (New Rural Industries Australia, 2011).
Demand trends
As indicated in Chapter 2, market demand for walnuts has been steadily growing in recent years both in Germany and the US. Growing production in China has increased the global walnut supply. However, China primarily serves domestic demand so the net effect on global supply and demand is negligible (USDA, 2011b). World supply, however, is significantly impacted by weather conditions in the US. Cool springs typically cause a decrease in US production and exportable products, providing market opportunities to newcomers that are capable of meeting the world’s growing demand (USDA, 2011b).
4 Market access

German market access

Import tariff
The base tariff rate for importing shelled and in-shelled walnuts into the EU is around 8% on average. The bound rate of duty for in-shelled and shelled walnuts is 4.0% and 5.1% respectively (WTO, 2011). The primary difference between the two rates is that the base rate is charged on walnuts coming from countries without trade agreements with the EU, while the bound rate represents the rate that is charged on walnuts from countries that have a trade agreement. Since the US has a trade agreement with the EU, exporters of walnuts into Germany will be charged with a bound tariff rate. It should be noted that interested exporters can obtain further information on the tariff situation from the office of European Union and Regional Affairs at the US Department of Commerce (Export.Gov, 2011). The department’s primary responsibility is to provide up-to-date tariff information for US-German trade.

Regulations, sanitary, and phytosanitary measures
Walnuts imported into Germany are subject to phytosanitary controls and are checked for compliance with the quality standards and labeling requirements of the EU. The safety standards are complex. Such regulatory situations may further complicate exports to the German market (USDA GAIN Report, 2009).

The Commission Regulation 1221/2008, first implemented in July 2009, clearly defines the phytosanitary controls for goods imported into the EU. The regulation includes a general marketing standard and specific standards for certain products. The general marketing standards apply to in-shell walnuts as well as 15 other fresh fruits and vegetables. Shelled walnuts are exempted from the general marketing standard (EC 1221/2008, 2009).

The general marketing standards include minimum quality and maturity requirements. The product must be:

- Intact;
- Clean;
- Free from any pest and damages;
- Free from external moisture;
- Free from any external smell or taste;
- In such condition that it can withstand transportation and handling and arrives in good order and condition at the final destination.
The latter minimum maturity requirement is that the products must be sufficiently developed and shall display satisfactory ripeness (EC 1221/2008, 2009).

There are two main agencies responsible for walnut imports into Germany: the Federal Ministry of Food, Agriculture and Consumer Protection and the Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (Spring, 2010). Importers of walnuts into Germany can contact these agencies for up-to-date information on the import regulations.

**Quotas**
Walnut import into Germany is not subject to any quota (see EU Council Regulation 7/2010).

**Import Certificates**
A certificate of conformity is to be issued at the point of entry. Moreover, the phytosanitary certificate PPQ577 issued by the Animal and Plant Health Inspection Service (APHIS) of the US Department of Agriculture is required for all walnuts shipped to Germany (USDA Germany, 2009). Additionally, some exporters of walnuts to Germany may need an additional certificate of origin. It should be further mentioned that the Modernized Customs Code (MCC), which was introduced in the first half of 2008, provides an opportunity to use simplified importing procedures such as paperless documentation or centralized clearance (Export.Gov, 2011).

**US market access**

**Import tariff**
The tariff rate in the US for in-shell walnuts is 7 cents per kg and 26.5 cents per kg for shelled walnuts. These rates are charged on walnuts coming from countries that have trade agreements with the US (Agriculture Issue Center, 2004).

**Import requirements**
The quality of in-shell walnuts must meet or exceed the quality grades produced in the US. Shelled walnuts must meet or exceed USA Commercial Grade quality standards detailed in the USA Standard for Shelled Walnuts. The only exception is the minimum size where not more than 5% may pass through a round opening 6/64 inch in diameter (USDA Agriculture Marketing Service, n.d.).

**Import certificates**
All walnuts imported into the US must have inspection certifications prior to importation. They can be obtained from the Federal or Federal-State Inspection Service, Fruit and Vegetable Programs, Agricultural Marketing Service, USDA. The agency is designated as the governmental inspection agency for the purpose of certifying the grade and size of walnuts prior to importation into the US and will issue the official inspection certificates required on all walnut imports (USDA Agriculture Marketing Service, n.d.).
5 Prices

US and German walnut pricing

*US walnut pricing*

The price for shelled walnuts has significantly decreased since the 1980s when the price peaked at US$2.50 per pound. The wholesale market price in 2010 was around US$2.11 per pound. In the same year, the average grower was receiving US$2,110 per ton or US$1.05 per pound (AGMRC, n.d.).

*German walnut pricing*

The producer price for shelled walnuts in 2009 was US$2,067/MT or US$0.94 per pound. The producers in 2008 received approximately US$0.67 per pound (FOASTAT, 2009). Distributors sell in-shell walnuts for US$1.25 per pound (FOB) for 220-pound bags (Alibaba, n.d.).

Price-determining factors

Price development at the producer level has two main influencing factors. The first is the natural supply of walnuts. Typically, the crop for walnuts alternates each year with a larger crop one year followed by a lower yielding crop the next year. The second determining factor is the weather. Like many agricultural products, temperature and moisture level affect the yield of walnut trees (USDA, 2011a). The level of production influences the price or total value. As seen in Figure 7, continued price increases may be expected if demand and/or value stays above production levels.

![Figure 7: Walnut total Production and Value](image)

*F = forecast*

Source: USDA; National Agricultural Statistics; Noncitrus Fruits and Nuts Summary (various issues)
6 Distribution channels

The US accounts for the highest share of imported walnuts into Germany, while the US consumes almost exclusively domestically produced walnuts. Therefore, their respective distribution channels tend to be overlapping. Because the US has virtually no import market for walnuts, the details of how it might be done are open to speculation.

The overall supply chain is technically similar for both markets. It starts with the harvester who typically also dries and Hulls the walnuts. The walnuts are then shipped to a processor or handler who stores them in facilities at 55-65% relative humidity and 32-38 degrees Fahrenheit or 0-3.3 degrees Celsius away from odors and light (California Walnuts, 2008).

High-production areas such as California have an extensive network of processors and handlers. There are over 52 handlers listed by the California Walnut Commission alone with Diamond Foods being the largest in the US. The processors shell (if necessary), package, ship, and market the walnuts (Perez and Pollack, 2005). The packaging depends on the customers' needs and can vary significantly (see chapter 8 for more information). Other harvest-
ers may ship the in-shell walnuts longer distances to processors in countries such as China or the Republic of Moldova (New Rural Industries Australia, 2011).

Walnuts imported into either Germany or the US, handle source selection, negotiate prices, and arrange shipment (Euromonitor International, 2011). The largest port of entry for walnuts in Germany is Hamburg. Walnuts are also imported into the Netherlands and then re-exported into Germany (Perez and Pollack, 2005).

When imported walnuts reach port, they are moved to a temporary port storage facility. From there, wholesalers, or large retail chains with the buying power to bypass wholesalers, pick up their shipment. In many cases, the importer and wholesaler are the same company. Wholesalers then distribute the walnuts to retailers, food service providers, and industrial food producers (Euromonitor International, 2011).
There are three major ways to locate walnuts available for import:

- Directly from the grower;
- Through wholesalers;
- Through buyer websites such as www.alibaba.com or www.21food.com.

Regular terms and conditions of purchase can include (as for any other product):

- Indemnity clause;
- Assignment-delegation clause;
- Delay remedies;
- Shipping charges;
- Shipment delivery dates;
- Defective goods remedies;
- Order cancellation remedies or notice period;
- Specification requirements;
- Applicable laws.
8 Packaging and labeling

To ensure food safety and avoid contamination of diseases and pests countries impose certain import regulations. For fresh fruits and vegetables, including walnuts, there is a set of established guidelines.

The WTO has set packaging and labeling standards, which are mainly covered in the Agreement on TBT and the Agreement on the Application of SPS. The agreements may cover different issues however. Specific guidelines are set by each country and have features that operate within the WTO overall agreements. Walnuts are considered a fresh fruit. Therefore, the relevant guidelines applying to walnuts are as follows:

- SPS measures deal with: additives in food or drink, contaminants in food or drink, poisonous substances in food or drink; certification: food safety, animal or plant health, processing methods with implications for food safety, labeling requirements directly related to food safe, plant/animal quarantine, declaring areas free from pests or disease, preventing disease or pests spreading to a country, other sanitary requirements for imports;
- TBT measures deal with: labeling of food, drink and drugs, grading and quality requirements for food, packaging requirements for food.

Although such guidelines are set and agreed to under the WTO, they are subject to further specification. Countries may set their own rules and regulations under these guidelines for the export/import of walnuts.

Typically, importing into countries requires an import license. For walnuts, as well as other fruits and vegetables, labels typically require the common name, net quantity declaration, business name and address, grade name, and country of origin as well as other information mandatory in a particular country such as letter size or placement.

Germany follows all EU directives, regulations, and obligations. Recycling of packaging waste requires a license agreement with a German national recycling company. Also, a green dot must be imprinted on the package indicating that the material used is recyclable. Jute bags are a natural product and are recommended for importing walnuts into Germany.

The Lebensmittel-Kennzeichnungs-Verordnung (Food Labeling Ordinance of December 1999) includes the labeling requirement for products in Germany. For walnuts, the requirements include the company name and address of seller and buyer (or importer), place and date of issue, number, kind of packages, precise description of the product, volume or quantity in normal commercial units, invoice price, terms of delivery, and payment (Europe, 2011). The language of the labeling must be in German, but could also have further languages on
the label. Walnuts are transported to a packing plant where they are graded into the two distinctive markets: in-shell and shelled.

**In-shell walnuts**
The sizing of the in-shell nuts follows the drying process. In-shell walnuts are sized as jumbo, large, medium, or baby according to USDA standards in the US. Walnuts are packaged by weight in giant sacks. Unshelled walnuts can be packaged in net bags (1.5-2.5 kg), poly sacks (5 or 10kg), cartons (10kg), and also flat jute fabric bags (55 kg) (Justia US Law, n.d.).

**Shelled walnuts**
Walnuts for both consumer and industrial use are sent to the shelling department where they are mechanically cracked. The shelled material is then screened. The products are categorized into a series of sizes, air-separated from shells, and moved through electronic color grader and shell sorters. Finally, they are hand-sorted by trained sorters and certified for quality before they are ready for packaging. Once shelled, the walnuts are physically inspected to ensure that the end-product is clean, well-dried, and of specified color, as determined by the official walnut color chart. Walnuts kernels are best transported with a water content of 2-3% in which water vapor cannot penetrate (TIS, n.d.). Vacuum packaging is not suitable as it promotes rancidity. The kernels can be packed in lined boxes with parchment paper to keep the nutmeat dry (TIS, n.d.).

**California walnuts meet strict quality control standards**
California walnuts are produced under stringent quality controls reputed to be the world’s toughest. Handlers also meet individual customers’ standards and specifications. In the US, walnuts are grown and processed under the strict regulation of the California Walnut Board, USDA/DFA and the US Food and Drug Administration (FDA). A food safety control program and quality control regime (HAACP) is in place that meets the standards imposed by all regulatory authorities.
9 Sales promotion

Trade fairs and exhibitions

Trade shows and trade fairs are commonplace where importers and exporters make contracts in Germany. The following list provides the most relevant trade fairs for companies that deal with walnuts.

**Germany**

*International Green Week*
Berlin, Germany
Organizer: Messe Berlin GmbH
Messedamm 22
14055 Berlin, Germany
Tel.: +49 30 30380
Fax: +49 30 30382325
E-mail: central@messe-berlin.de
Web: http://www.gruenewoche.de/en

*Fruit Logistica*
Berlin, Germany
Organizer: Messe Berlin GmbH
Messedamm 22
14055 Berlin, Germany
Tel.: +49 30 30380
Fax: +49 30 30382325
E-mail: central@messe-berlin.de
Web: http://www.fruitlogistica.de/en

*Biofach*
Nürnberg, Germany
NürnbergMesse GmbH
Messezentrum
90471 Nürnberg, Germany
Tel.: +49 911 86060
Fax: +49 911 86068228
E-mail: info@nuernbergmesse.de
http://www.biofach.de/en

Anuga
Cologne Germany
Koelnmesse GmbH
Messeplatz 1
50679 Köln, Germany
Tel.: +49 221 8210
Fax: +49 221 8212574
E-mail: info@koelnmesse.de
Web: http://www.anuga.de/de/anuga/diemesse/index.php

The United States

IFE Americas
Miami Beach, USA
Organizer: World Trade Center Miami
1007 N. America Way, Suite 500
Miami, FL 33132, USA
Tel.: +1 305 8717910
Fax: +1 305 8717904
E-mail: info@worldtrade.org
Web: http://www.worldtrade.org

BioFach America
Baltimore, USA
Organizer: NürnbergMesse GmbH
Messezentrum
90471 Nürnberg, Germany
Tel.: +49 911 86060
Fax: +49 911 86068228
E-mail: info@nuernbergmesse.de
Web: http://www.biofach.de/en
Trade magazines

*Fruchthandel Magazin*

The German publication *Fruchthandel Magazine* is a journal specialized in fruit trade. Readers of this publication include:

- Importers, exporters, direct mail sellers, trading agencies;
- Wholesale and distribution agents;
- Nutrition retailers and specialized retailers;
- Food-service and convenience-producers;
- Producers and associations of producers;
- Packaging companies and delivering companies;
- Marketing associations and agencies;
- Scientific institutions and government agencies.

Publisher contact information:

Dr. Rolf M. Wolf Media GmbH
Lindemannstrasse 12
40237 Düsseldorf
Germany
Tel.: +49 211 991040
Fax: +49 211 6911746
E-mail: info@fruchthandel.de
http://www.fruchthandel.de

Associations

*Germany*

*Deutsche Fruchthandelsverband e. V.*

The German fruit trade association (DFHV) is the national association for fruit and vegetable trade in Germany.

Deutscher Fruchthandelsverband e.V.
Bergweg 6
53225 Bonn, Germany
Tel.: +49 228 911450
Fax: +49 228 9114545
E-mail: info@dfhv.de
Web: http://www.dfhv.de
Bundesverband des Deutschen Lebensmittelhandels e. V. (BVL)
The National Association of the Nutrition Traders is responsible for nutrition trading. The assignment of the BVL is especially the protection of interests of nutrition trading companies in terms of legislation, public authorities, and the community.
Bundesverband des Deutschen Lebensmittelhandels e. V.
Am Weidendamm 1A
10117 Berlin, Germany
Tel.: +49 30 72625080
Fax: +49 30 72625085
E-mail: bvl@einzehandel.de
Web: http://www.lebensmittelhandel-bvl.de

The United States

California Walnut Board
The California Walnut Board represents the walnut growers and handlers of California. The board promotes usage of walnuts in the US through publicity and educational programs. The California Walnut Board provides information about relevant domestic agencies.

Public Relations
Torme Lauricella
847 Sansome Street
San Francisco, CA 94111-1539, USA
Tel.: +1 415 9561791

Media and Creative
Evans Hardy + Young, Inc
829 De La Vina Street
Santa Barbara, CA 93101, USA
Tel.: +1 805 9635841

Tradeshows
East-West Promotions
120 Alpine Terrace
Oakland, CA 94618, USA
Tel.: +1 510 6016063

The California Walnut Commission (CWC)
The California Walnut Commission is an agency of the State of California that works in concurrence with the Secretary of the California Department of Food and Agriculture (CDFA).
California Walnut Commission
The California Walnut Commission founded marketing and advertising agencies overseas. 
The contact address of the German office is:

Press office California Walnut Commission  
c/o Fleishman-Hillard Germany GmbH  
Hanauer Landstraße 182c  
60314 Frankfurt, Germany  
Contact person: Carolin Herrmann  
Tel.: +49 69 4057020  
E-mail: walnuss@fleishmaneurope.com  
Web: http://www.walnuss.de

California Department of Food and Agriculture  
1220 N Street  
Sacramento, California, USA 95814  
Tel.: +1 916 6540466 (Sacramento): General Information  
Tel.: +1 916 6540462 (Sacramento): Public Affairs  
Fax: +1 916 6574240 (Sacramento)  
E-mail: info@state.ca.gov  
Web: http://www.cdfa.ca.gov
10 Market prospects

Shelled walnut imports have grown worldwide over the last four years. On average, the increase has been 12.5% per year as regards value and 5.8% per year as regards quantity. This indicates a robust market and a strong price increase of almost 7%.

The US market has always had a strong production capacity and high consumption of more than 175,000 MT per year. As the world’s second largest producer, the US exceeds its consumption by more than 150%. Only small quantities of walnuts have been imported as a consequence. However recently, the US market for shelled walnuts has experienced an increase in imports of 46% in value and 19% in quantity. This development presents a good opportunity for exporters, but only under the precondition that they are able to match a unit value less than half of the world market price (US$3633/MT). In-shell walnuts have been declining by 20% in quantity. Due to the very small amount it does not seem to be a viable option for export. Although the market price is high, the market demand of 3 tons does not make it particularly attractive.

In contrast, Germany has a small production capacity for walnuts (19,778 MT in 2010) and comparatively high consumption (42,304 MT in 2010) – so it has always been a large and consistent importer. In 2010, Germany was the 6th largest importer of in-shell walnuts and even the biggest when it comes to shelled walnuts worldwide. Both types have been sold in Germany and the demand for both products has been constantly high. Consumption has increased by 4% on average for the last 5 years, and is still rising.

In terms of shelled walnuts, a quantity increase of roughly 4% (to a total volume of 13,667 MT in 2010) and a value increase of 3% for the last four years appears reasonable for further exports from new suppliers. However, the data suggests that there was also a slight price decline in said period. Nevertheless, there are opportunities for new suppliers to fill the widening gap of more than 541 MT per year. This may amount to a potential sales volume of US$3.5 mil., not counting the already existing market demand with its volume of US$90 mil. which is open to competition. Against this background, Germany is one of the best and most lucrative markets to be targeted for walnut trade worldwide.
Annex

Annex 1: Selected potential importers

Bedemko Inc. Worldwide
200 Hamilton Avenue
White Plains, New York 10601
USA
Tel.: +1 914 6831119
Fax: +1 914 6831482
Web: http://www.bedemco.com

Bösch Boden Spies GmbH
Heidenkampsweg 73
20097 Hamburg
Germany
Tel.: +49 40 3330160
Fax: +49 40 33301666
Web: http://www.boesch-boden-spies.com

Diamond Foods
P.O. Box 1727
Stockton, CA 95201
USA
Tel: +1 209 4676000
Fax: +1 209 4676714
Web: http://www.diamondfoods.com

Herbert Kluth GmbH &Co.KG
Heidekoppel 31
24558 Henstedt-Ulzburg
Germany
Tel.: +49 4193 96620
Web: www.kluth.de
H. PICKERD GMBH & CO. KG
Raiffeisenstraße 19
30938 Burgwedel
Germany
Tel.: +49 5139 8976
Fax: +49 5139 8976
Web: www pickerd.de

Michael Priestoph GmbH
Friedensallee 120
22763 Hamburg
Germany
Tel.: +49 40 3070130
Fax: +49 40 307013760
Web: www.priestoph.net

Nutwork Handelsgesellschaft mbH
Banksstraße 28
20097 Hamburg
Germany
Tel.: +49 40 60090600
Fax: +49 40 60090690
Web: www.nutwork.de

Richard Janssen
Industriestrasse 180
50999 Köln
Germany
Tel.: +49 2236 962360
Fax: +49 2236 962363
Web: http://richardjanssen.com

Seeberger KG
Hans-Lorenser Straße 36
89079 Ulm
Germany
Tel.: +49 731 40930
Fax: +49 731 4093665000
Web: www.seeberger.de

Turkhan Foods
17641 French Camp Road
Ripon, CA 95366
USA
Tel.: +1 209 9829933
Fax: +1 209 2547192
Web: http://turkhanfoods.com

Univeg Deutschland GmbH
Breitenweg 29-33
28195 Bremen
Germany
Tel.: +49 421 30921
Fax: +49 421 13617
Web: www.univeg.de

Zieler & Co
Liebigstraße 101
22113 Hamburg
Germany
Tel.: +49 40 41928680
Fax: +49 40 419286820
Web: www.zieler.de
Annex 2: Additional import data

Top 10 German Imports of Walnuts with Shell in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value imported (in US$)</th>
<th>Share of world imports (value in %)</th>
<th>Quantity imported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Import trend: Annual growth rates 2006-2010 (in %)</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Quantity</td>
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<td>32</td>
<td>3,405</td>
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</table>

Source: Comtrade database

* First imports stated in 2010
** 2009-2010

Top 10 German Imports of Shelled Walnuts in 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value imported (in US$)</th>
<th>Share of imports (value in %)</th>
<th>Quantity imported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Import trend: Annual growth rates 2006-2010 (in %)</th>
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<td>Quantity</td>
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Source: Comtrade database
## Top 10 US Imports of Shelled Walnuts in 2010

<table>
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<tr>
<th>Rank</th>
<th>Exporter</th>
<th>Value imported (in US$)</th>
<th>Share of imports (value in %)</th>
<th>Quantity imported (in tons)</th>
<th>Unit value (US$/ton)</th>
<th>Import trend: Annual growth rates 2006-2010 (in %)</th>
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<td>-21</td>
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</tbody>
</table>

Source: Comtrade database

* 2007-2010, ** 2010 only, *** 2008 and 2008 only
References


