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The Market for Fresh Organic Strawberries in Germany and the United States

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List of abbreviations

AMI	Agrarmarkt Informations-Gesellschaft mbH
AV	Ad valorem
b	billion
B2B	Business-to-Business
B2C	Business-to-Consumer
BLE	Bundesanstalt für Landwirtschaft und Ernährung (Germany)
BMEL	Bundesministerium für Ernährung und Landwirtschaft (Germany)
CBI	Centrum Bevordering Import (Netherlands)
CIF	Cost Insurance Freight
cm	centimeter
CO2	Carbon Dioxide
EU	European Union
€	Euro
FDA	Food and Drug Organization
FiBL	Forschungsinstitut für biologischen Landbau
FOB	Free on board
GSP	General System of Preferences
IFOAM	International Foundation for Organic Agriculture
IMF	International Monetary Fund
HS	Harmonized Commodity Description and Coding System
k	thousand
kg	kilogram
lb	pounds
m	million

MFN	Most Favored Nation
NAICS	North American Industry Classification System
NOP	National Organic Program
Oz	ounce
PYO	Pick-Your-Own
SITC	Standard International Trade Classification
SPS	Sanitary and phytosanitary
t	ton
TBT	Technical Barrier to Trade
UAE	United Arab Emirates
US	The United States of America
USDA	United States Department of Agriculture
US$	United States Dollar
WITS	World Integrated Trade Solution
WTO	World Trade Organization
WTP	Willingness to pay
VAT	Value Added Tax

Executive Summary

This EOS covers the markets for organic fresh strawberries in Germany and the United States.

The US is the world's largest producer and exporter of organic strawberries. Germany has a much lower production capacity and does not export any organic strawberries as consumer demand exceeds domestic production.

Both countries utilize similar organic certification standards and regulations. Currently, these standards are mutually recognized. However, there are ongoing negotiations regarding the EU organic standards that might present a challenge for potential exporters. In addition to existing production and labeling regulations, Germany places a strong emphasis on recyclability of materials.

Consumers' growing awareness of environmental, health, and economic benefits of organic practices drives up demand for organic strawberries in the US. This trend is expected to continue into the future. The price gap in the US between organic and non-organic products is slowly narrowing as a result of rapidly increasing supply.

Organic fresh strawberries in Germany are mainly consumed during spring and summer. Availability of organic strawberries in Germany is limited during the off-season. German consumers strongly prefer local and regional products over imported products. In the US, organic strawberries are consumed throughout the year. Supply is available year-round as a result of domestic production and imports combined.

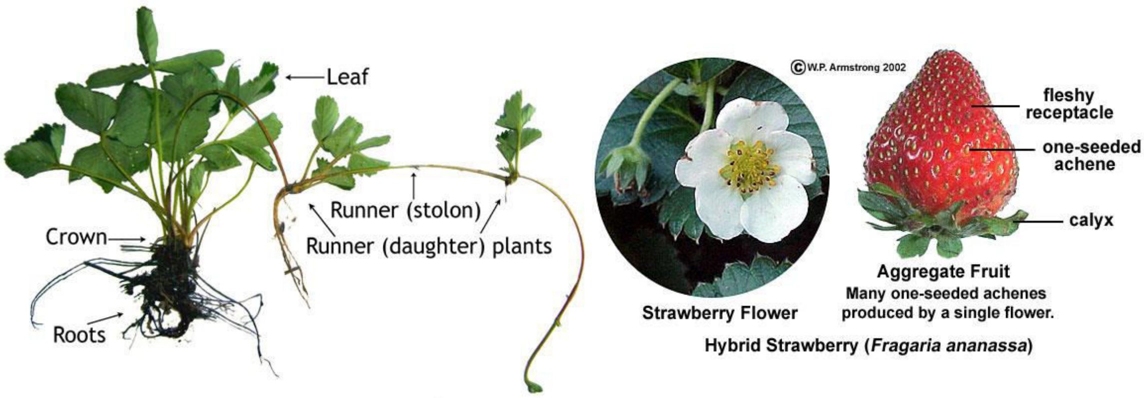
Due to short transportation distances, tariff advantages, and regulation-complying production standards among members of the EU and NAFTA, the majority of organic strawberries in the US and Germany are traded within their respective free trade areas.

Organic fresh strawberries from non-EU countries may have a chance to succeed in Germany since retailers offer both and leave the final choice to consumers. In the US, unless the exporter is priced competitively or a current member of NAFTA, it is recommended to wait until further favorable changes occur.

1. Product description

This export opportunity survey covers the market for organic strawberries in the United States and Germany. Organic strawberries are classified under the following codes:

- HS: 0810100010 Strawberries, Certified Organic, Fresh - KG;
- HS: 081010 Fresh Strawberries (used in place of the 10-digit code when no information can be found.)
- SITC: 058.31 Strawberries
- NAICS: 111333 Strawberry Farming
- ISIC: 0113 Strawberry Farms
- NACE: 0125 Strawberries Growing



Source: waynesworld.palomar.edu; sarahssweeties.files.wordpress.com

Strawberries are one of the most widely consumed berry fruits in the world. The garden strawberry, *Fragaria X ananassa*, originated in France and belongs in the Rose (*Rosaceae)* family. Strawberry plants are characterized by runners that form new plants at the tip, allowing them to reproduce (California Strawberry Commission, 2012).

Strawberries are grown in various regions around the world, as they tolerate different soil types. A well-drained site that is close to an irrigation source and receives adequate air and sunlight is ideal for growing strawberries (Production Guide for Commercial Strawberries, n.d.).

Strawberries are often grouped into three main varieties based on the harvest season; June-bearing strawberry varieties, the most popular varieties in commercial production; everbearing strawberry varieties, which can produce up to three harvests per year; day-neutral strawberries, which produce smaller strawberries than the June-bearing and everbearing strawberry varieties do (Production Guide for Commercial Strawberries, n.d.).

Strawberries vary in size, color and shape. A well-developed strawberry fruit, regardless of variety, is conical shaped, fully red-colored without white or green tips and with the calyx still attached. The texture is firm to the touch, but not crunchy (Bordelon, 2012).

Strawberry flavor correlates to the degree of ripeness - the riper the fruit, the higher the sugar content and the sweeter the flavor. Strawberries are normally harvested prior to full ripeness to ensure sufficient firmness for transportation. However, recent developments in new strawberry varieties and improvements in post-harvest handling and shipping conditions have allowed for shipping even before they reach full ripeness (Bordelon, 2012).

Strawberries are harvested by hand at least three times a week when they reach ripeness. They must be harvested and hand-picked at the right time and handled properly in order to remain in good condition for several days. Proper post-harvest handling of strawberries is also important. Cooling down the fruits removes field heat and extends their shelf life. Harvesting while temperatures are cool and then pre-cooling the fruits increases shelf life significantly (University of Illinois – Extension, n.d).

Strawberries are low in calories and an excellent source of vitamins C and K as well as antioxidant and anti-inflammatory nutrients. They also contain phytonutrients and flavonoids, which give them the bright red color. The nutritional information is indicated below (Figure 2). Strawberries are consumed fresh and also processed into preserves and jams, juice, and various baked goods. Strawberries are also

Strawberries, fresh 1.00 cup 144.00 grams				**Calories: 46 GI: low**
Nutrient	**Amount**	**DRI/DV (%)**	**Nutrient Density**	**World's Healthiest Foods Rating**
vitamin C	84.67 mg	113	44.1	excellent
manganese	0.56 mg	28	10.9	excellent
fiber	2.88 g	12	4.5	very good
iodine	12.96 mcg	9	3.4	very good
folate	34.56 mcg	9	3.4	very good
copper	0.07 mg	8	3.0	good
potassium	220.32 mg	6	2.5	good
biotin	1.58 mcg	5	2.1	good
phosphorus	34.56 mg	5	1.9	good
magnesium	18.72 mg	5	1.8	good
vitamin B6	0.07 mg	4	1.6	good
omega-3 fats	0.09 g	4	1.5	good
Source: WH Foods				

fermented into wine or liqueur (University of Illinois – Extension, n.d).

The main difference between organic and non-organic strawberries lies in the production methods. The use of synthetic chemical inputs, irradiation and genetically modified seeds is prohibited in organic production. Organic strawberries are produced in compliance with strict environmental regulations with additional control on labelling (USDA,2016).

2.Production, foreign trade & consumption

Major Trading Nations

The following tables show the import and export values of the world's leading strawberry traders.

Table 1: Top 5 Exporters worldwide					
in thousand t	2011	2012	2013	2014	2015
World	786	929	901	895	876
US	110	159	150	161	142
Canada	124	127	123	103	100
Germany	99	117	113	105	100
France	91	105	94	86	77
UK	47	49	46	49	54
Source: ITC Trade Map, 2016					

Table 2: Top 5 Importers worldwide					
in thousand t	2011	2012	2013	2014	2015
World total	787	862	845	902	877
Spain	230	285	266	294	283
US	140	151	154	139	134
Mexico	77	114	108	113	92
Netherlands	56	69	6	70	59
Belgium	39	43	44	43	53
Source: ITC Trade Map, 2016					

Imports

Germany

Over 96% of Germany's strawberry imports come from other European countries with the majority coming from Spain. The amount of imports from Egypt has substantially increased in the past few years.

Table 3: Imports Germany															
	2011			2012			2013			2014			2015		
	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg
Total	103.4		2.55	116.5		2.49	113		2.62	104.9		2.36	100.0		2.28
of which organic	n.a.			0.7	0.56%		1	0.55%		0.5	0.48%		0.6	0.56%	
Spain	75.9	73.4%	2.41	92.9	79.7%	2.36	88.8	78.4%	2.38	81.7	77.9%	2.12	79.0	79.0%	2.07
Netherlands	7.9	7.7%	3.83	7.8	6.7%	3.66	8.6	7.5%	4.77	7.1	6.7%	4.38	8.9	8.9%	3.35
Italy	6.1	5.9%	2.64	6.4	5.5%	2.81	6.7	5.9%	3.04	5.5	5.2%	2.53	5.7	5.7%	2.48
Egypt	0.7	0.7%	5.89	1.3	1.2%	5.16	1.2	1.1%	4.82	2.2	2.1%	5.08	2.6	2.6%	4.33
Belgium	1.7	1.6%	3.56	1.5	1.3%	2.73	1.3	1.2%	4.07	1.4	1.3%	3.68	1.2	1.2%	3.19
Source: ITC Trade Map, 2016; GfK															

Import trends are seasonal. Spain and Italy produce strawberries from January to June (Saisonkalender, n.d.). Imports from the Netherlands and Belgium take place from March/April to September/October (BMEL, 2016). Spain has a price advantage due to cheap labor and specialized production. Other countries with low prices are Poland and the Czech Republic (BMEL, 2016).

The United States

The US imports fresh strawberries from Mexico, Canada, Peru, New Zealand and Netherlands. Over 99% of annual fresh strawberry imports come from Mexico, whose production season overlaps with Florida's. Most of the strawberries from both regions are produced during winter (Florida Strawberry Growers Association, 2014).

Table 4: Imports US															
	2011			2012			2013			2014			2015		
	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg
Total	110.4		2.20	159.3		2.26	149.9		2.20	161.5		2.42	142.4		2.90
Mexico	110.1	99.7%	2.19	158.9	99.7%	2.25	149.7	100%	2.20	161.2	99.8%	2.41	141.7	99.5%	2.90
Canada	0.24	0.2%	4.65	0.35	0.2%	4.46	0.23	0%	5.18	0.28	0.2%	5.51	0.61	0.4%	2.66
Peru	0.03	0.0%	4.15	0.06	0.0%	2.58	0.00	0%	6.25	0.02	0.0%	5.80	0.09	0.1%	2.90
New Zealand	0.00	0.0%	5.00	0.00	0.0%		0.00	0%		0.00	0.0%		0.02	0.0%	9.94
Netherlands	0.00	0.0%	8.00	0.00	0.0%	10.33	0.00	0%		0.00	0.0%	11.00	0.01	0.0%	7.79
Source: ITC Trade Map, 2016															

The market share of organic strawberries, although relatively low compared to its conventional counterparts, is steadily growing in both markets. Similarly, both countries import strawberries mostly from nearby countries.

Export

Germany

Germany only exports conventional strawberries, according to the industry expert. Germany mainly exports its strawberries to nearby countries such as Austria, France, and the UK. The amount exported to the UK had the strongest growth in 2015 (Table 5).

Table 5: Exports Germany

	2011			2012			2013			2014			2015		
	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg
Total	12.0		3.44	16.5		2.93	13		2.84	14.3		2.91	18.8		2.75
Austria	2.5	20.6%	3.44	3.9	23.7%	2.93	3.1	23.0%	2.84	3.1	21.7%	2.91	5.4	28.6%	2.75
France	2.6	21.5%	3.72	3.4	20.6%	3.29	2.8	20.7%	3.38	3.0	21.3%	3.64	3.0	15.8%	2.81
UK	0.1	1.1%	3.36	0.7	4.3%	2.68	0.4	3.1%	2.65	0.7	5.1%	2.63	2.1	11.1%	2.27
Netherlands	1.1	8.9%	6.84	0.5	3.0%	6.40	0.7	5.3%	5.85	0.7	5.0%	5.61	1.8	9.8%	5.60
Czech Republic	1.8	15.0%	3.42	2.5	15.2%	3.30	1.9	14.3%	2.50	1.8	12.6%	3.52	1.8	9.5%	2.33

Source: ITC Trade Map, 2016

Export plays a bigger role for the US than Germany as it has a large production capacity due to suitable conditions.

The United States

The value of exported organic strawberries has increased in the past years (USDA, 2015). Canada dominates as the primary destination for both conventional and organic strawberry exports. Exports of organic strawberries to the UK also grew noticeably over the past years (Jaenicke, et al, 2015).

The estimated annual growth rate for organic strawberry exports is 25%, substantially higher than the 3% estimated growth rate for conventional strawberry exports. Especially the second quarter of each year shows high exports of organic strawberries. The share of organic strawberry exports increases reasonably throughout the years (Jaenicke, et al, 2015).

Table 6: Exports US															
	2011			2012			2013			2014			2015		
	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg	t'000	share	$/kg
Total	140.0		2.92	150.8		2.85	153.8		3.04	138.9		3.37	134.3		3.25
total organic	14.2	10.2%		15.7	10.4%		25.4	16.5%		29.7	21.37%				
Canada	122.0	87.1%	2.81	128.2	85.0%	2.76	125.6	81.6%	2.96	105.1	75.6%	3.39	101.2	75.4%	3.25
Mexico	6.0	4.3%	2.11	9.1	6.0%	1.69	14.0	9.1%	1.93	18.1	13.0%	1.64	18.5	13.8%	1.75
Japan	4.2	3.0%	5.86	4.0	2.6%	6.53	3.9	2.6%	6.48	3.9	2.8%	6.36	3.4	2.5%	5.57
UAE	1.0	0.7%	4.16	1.9	1.3%	4.73	2.7	1.8%	4.53	4.4	3.2%	4.90	3.0	2.2%	4.81
Saudi Arabia	0.8	0.6%	3.34	1.0	0.7%	3.86	1.2	0.8%	5.14	1.8	1.3%	5.62	2.4	1.8%	5.96
Source: ITC Trade Map; USDA															

Production

Germany

Domestic production in Germany has increased over the past four years while the amount of organically produced strawberries has declined. In 2015, organic strawberries accounted for 1.7% of Germany's total fresh strawberry production. With only 30% imports, the share of domestic production is high (GfK, 2015).

Table 7: Production Germany				
thousand t	2012	2013	2014	2015
strawberries, total	156	157	169	173
strawberries, organic	6.7	6.7	4.2	3.0
share of organic strawberries	4.3%	4.3%	2.5%	1.7%
Source: Eurostat				

The United States

The US is the world's leading strawberry producing country, followed by Turkey, Spain, and Egypt. (Wu, et al, 2012). California is the largest producing state for both organic and non-organic strawberries. (AgMRC, 2015). Organic strawberry acreage in California grew 62% between 2009 and 2012 indicating that organic strawberry production is a fast-growing sector of US agriculture (OFRF, 2015).

Table 8: Production US					
In thousand t	2011	2012	2013	2014	2015
total strawberries	1,452	1,526	1,524	1,512	1,543
Source: US Department of Agriculture; National Agricultural Statistics Service					

Consumption

Germany

Per capita annual consumption of strawberries in Germany has consistently been around 3.5 kg. (BMEL, 2014). The consumption of organic strawberries is much lower.

Table 9: Consumption Germany				
In thousand t	2012	2013	2014	2015
strawberries, total	180	180	182	171
strawberries, organic	1.9	2.7	1.6	1.7
strawberries, organic domestic	1.2	2.1	1.1	1.1
strawberries, organic from Imports	0.7	0.6	0.5	0.6
share of organic strawberries	1.06%	1.48%	0.87%	0.99%
share of imports	34.34%	23.26%	31.74%	33.36%
per capita consumption (kg)	0.024	0.033	0.020	0.021
Source: GfK				

The United States

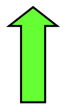
Annual per person consumption of fresh strawberries in the US reached a new record at 3.60 kg in 2013 (ERS, 2014); the estimated per capita consumption of organic strawberries is much lower.

Table 10: Consumption US					
thousand t	2011	2012	2013	2014	2015
import	110	159	150	161	142
export	140	151	154	139	134
production	1,452	1,526	1,524	1,512	1,543
consumption	1,422	1,535	1,520	1,534	1,552
share of organic strawberries	10%	10%	17%	21%	n.a.
consumption of organic strawberries	145	160	251	328	n.a.
per capita consumption organic (kg)	0.465	0.509	0.793	1.028	n.a.
Source: ITC Trade Map; USDA					

Comparison

The US is the world's largest producer and exporter of organic strawberries due to suitable conditions and a large production capacity. Germany has a much lower production capacity and does not export any organic strawberries as consumer demand exceeds domestic production. Annual consumption per person is comparable in both countries.

Outlook: Organic production in the US is expected to continue growing as more producers are switching to organic production methods despite the high initial costs. Organic production in Germany will remain stable as substantial growth is not expected (Behr, 2016).

US	**Germany**
	

3. Market characteristics

Germany

Consumer Preferences

Germans buy fresh strawberries in spring and summer. Consumers prefer medium sized, red, ripe berries with a wedge or cone shape and moderate hardness. Being health conscious, the Germans value high vitamin C content.

Customers (55%) purchase strawberries from street vendors because it is perceived that the strawberries are fresh and come directly from the farm. Forty-nine percent of consumers buy strawberries from the supermarket because of more affordable prices.

For most consumers, farming practices are not important. However, 35% buy organic strawberries. Forty-four percent of consumers prefer local berries and less than one percent prefer imported ones (Bhat, Geppert, Funken, & Stamminger, 2015). Large organic supermarket chains adjust their offering accordingly (Annex 1).

Market Segments

The German market for organic strawberries can be divided as follows (ÖLN, 2016, pp.26-29; AMI, 2016; Bhat, Geppert, Funken, & Stamminger, 2015):

The main customers in the B2C (Business-to-Consumer) segment are environmentally conscious women who like to support local producers. They have a high level of education and high income.

According to the industry expert from AMI, organic strawberries have a small share in organic food production. In the B2B environment (Business-to-Business), organic food retailers and wholesalers represent a bigger segment than producers of organic fruit preparation and concentrated juices (Annex 1).

Conditions of Acceptance

Consumers value freshness, quality and natural taste over appearance (BÖLN, 2016, p. 11). They accept berries with cuts, frost and minor insect damage because they believe such strawberries are locally produced (Bhat, Geppert, Funken, & Stamminger, 2015).

Competition

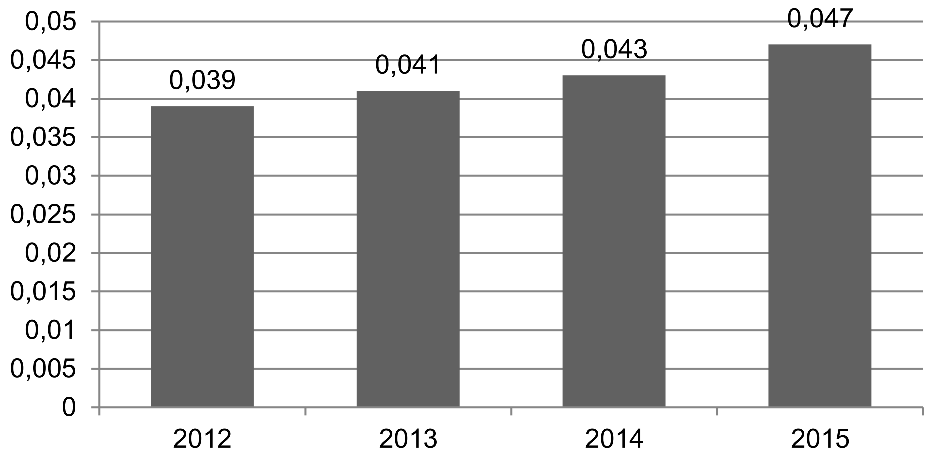
Over 70% of the strawberries consumed in Germany are grown in the country (GfK, 2015). However, domestic producers cannot offer competitive prices for strawberries used in the food processing industry; imported strawberries dominate this segment.

The largest competitor is “Agrana”, an Austria-based company, which cultivates organic fruits in East-European countries (AMI, 2016). Conventionally grown strawberries are substitutes for organic ones. Local and foreign non-organic producers are strong competitors.

Demand Trends

Germans are health conscious (Forschungsgruppe gdp, 2016). The German market for organic food is the largest in Europe (FiBL; IFOAM, 2016). The share of organic food in the food market has been growing during the last 5 years (Figure 3).

Figure 3: Share of organic products in the revenue of the German food industry



Source: Spiegel, n.d.

Organic supermarket chains report that the “regional” trend (increasing consumption of locally produced products) is on the rise (Annex 1).

The industry expert from AMI reports that locally grown organic strawberries are not exported. Income elasticity of demand in 2015 and 2013 shows that organic strawberries are income elastic. A significantly lower local production volume of organic strawberries explains the consumption decrease in 2014.

The United States

Consumer Preferences

Consumers value red-colored, fresh, intense-in-taste strawberries with firm texture. The production origin, container size, shape, variety and brand are important in their decision making. They also pay close attention to organic certification, presence of GMO, fertilizer and pesticide usage (Zhang, Gao, & Vassalos, 2016).

Market Segments

The B2C segment represents 18% of the market. Most consumers are young (18-34), mostly single women who earn more than $25,000 a year. They buy organic fresh strawberries most frequently and are not price sensitive (Wang et. al., 2016).

The B2B segment includes wholesale markets and direct-to-retail markets. Based on the statistics for organic farming, wholesales markets obtain the largest share of the B2B sector followed by the retail markets (USDA, 2015).

Conditions of Acceptance

Strawberries sold in the U.S. are categorized into three grades: No.1, No.2 and combination (USDA, 2004). Annex 2 defines these three categories.

For No.1, 80% or more of the surface must be pink or red in color and over 50% for No.2. If the strawberry calyx is not attached, the strawberry is considered damaged for No. 1. The brightness of strawberries is not a grade requirement but an important marketing factor; consumers prefer bright red strawberries as they associate brightness with freshness. All grades require each strawberry to be completely free from mold (USDA, 2004).

Competition

The US relies on production from Mexico to meet its demand, especially in the winter. The strongest competitor is Driscoll's. This company has farms in California and Central Mexico, enabling year-round supply (Driscoll Strawberry Associates, Inc., 2016). If the price exceeds the willingness-to-pay (WTP) for the premiums, consumers may switch to the conventional counterparts, both domestic and imported.

Demand Trends

Demand for organic produce is on the rise. According to the USDA, 2015 organic food sales increased 13% from 2014 to 2015. Consumers are willing to pay a substantial premium, as they perceive that organic produce is of superior quality (UC Davis, 2012). The consumption of strawberries in the US correlates with changes in income (Table 12).

Table 11: Income elasticity US			
	2012, t	2013, t	2014, t
Apparent consumption, K	160	251	328
Change in quantity	-	36.25%	23.48%
GDP per capita, US$	51433.00	52660.00	54398.00
Change in income	-	2.33%	3.19%
Income elasticity of demand	-	15.56	7.35
Source: USDA ERS; Worldbank			

Comparison

German consumption is considerably higher during warmer seasons, whereas US consumption stays relatively stable year-round. German consumers do not place as much value on the physical attributes, but rather the nutritional content and product origin. Both markets have common characteristics such as growing demand for organic produce and strong domestic players.

Outlook

The German organic supermarkets (Alnatura and Basic) predict that demand for locally grown strawberries will increase further. Imported organic strawberries do not fit in the mindset of the environmentally conscious consumers because of the pollution and energy waste caused by transportation. However, big food retailers will still purchase them to cover the demand, especially around Christmas due to the unavailability of local strawberries.

Demand for organic strawberries is expected to continue to grow in the US as the number of households and the dollar amount spent on organic produce are steadily increasing. Organic fruits have seen an increase of 123% in sales in the past 5 years (Product Deep Dive, 2016). This can be attributed to growing health concerns.

US	Germany
↑	↓

4. Market Access

Tariffs

Germany

Germany does not impose tariffs on imports from European countries (Zoll, n.d.). The MFN applied/bound AV (ad valorem) tariff for fresh strawberry imports is 11.2%. Israel and GSP countries pay a tariff of 4.4 % and 7.7 % respectively (WTO, 2016). Annex 3 provides a list of special agreements between the EU and third countries that enable tariff-free access to the European market. Local customs authorities oversee the control over the import of goods.

The United States

The US imposes different tariffs depending on the season (Table 13).

- 0810.10.20 imported during the time period of June 15th through September 15th
- 0810.10.40 imported during all other times

Table 12: US Import Tarriffs for Strawberries 2016		
Heading/ Subheading	Article Description	Rate of Duty
0810.10.20	If entering during the period from June 15 to September 15	0.2¢/kg
0810.10.40	If entered any other time	1.1¢/kg
0810.10.20/ 0810.10.40	Special agreements (all year round)	
	Generalized System of Preference (GPS)	0.0¢/kg
	Africa Growth and Opportunity Act (AGOA)	0.0¢/kg
	Caribbean Basin Initiative (CBI) includes 18 countries	0.0¢/kg
	Dominican Republic - Central America Free Trade Agreement (CAFTA)	0.0¢/kg
Source: United States International Trade Commission (USITC)2016		

Standards and regulations

Germany

Besides the food safety standards and organic standards, strawberries are subject to specific market standards (Table 14). Conformity to the European standards

(Commission Regulation (EC) No 1235/2008) is controlled by the local food inspection authorities (Federal Ministry for Food and Agriculture, 2015).

Table 13: Overview of standards and regulations in the EU	
Food safety and health control	Regulation (EC) No 178/2002 (General Food Law) Regulation (EC) No 852/200 (hygene of food stuffs) Regulation (EC) 669/2009 (control of imports)
Marketing standards	Regulation (EU) No 543/2011
Contamination	Regulation (EC) No 1881/2006 (maximum level of contamination) Regulation (EC) No 396/2005 (pesticides residues)
Labelling	Regulation (EU) No 1169/2011 (general labelling rules)
Organic	Regulation (EC) No 834/2007 (production and labelling) Regulation (EC) No 889/2008 (use of the organic label and control) Regulation (EC) No 1235/2008 (imports from the third countries)
Source: EC, 2016	

The United States

The National Organic Program (NOP) develops and enforces the rules and regulations of all organic products in the US. The main regulations applicable to organic strawberries are summarized in Table 15. The EU and the US have had a mutual recognition of organic standards in place since 2012 (USDA, 2015).

Table 14: Overview of standards and regulations in the US	
Product safety	The U.S. Federal Food, Drug and Cosmetic Act
Transportation	Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for such Carriage
Legal disputes	The perishable Agricultural Commodities Act
Labeling	Country of Origin Labeling
Organic regulations	7 CFR Part 205 National Organic Program Organic Foods Production Act of 1990
Source: USDA, 2016	

Non-tariff barriers

Neither Germany nor the US impose regulations on the purchase or sale of foreign exchange (Export.gov, 2016; IMF, 2014).

Germany

Many Technical Barriers to Trade and Sanitary and Phytosanitary measures apply to both conventional and organic strawberries (Table 16).

Table 15: Overview of NTMs in the EU		
	NTM Code	
Technical barriers to trade	B14	Authorization requirement for TBT reasons
	A84	Inspection requirement
	B7	Product Quality or performance requirement
	B32	Marking requirements
	B31	Labelling requirements
Sanitary and Phytosanitary measures	A83	Certification requirement
	A853	Distribution and localiyation of products after delivery
	A63	Food and feed processing
	A12	Geographical restrictions on eligibility
	A42	Hygenic practicies during production
	A41	Microbiological criteria of the final product
	A851	Origin of materials and parts
	A852	Processing history
	A15	Registration requirements for importers
	A22	Restricted use of certain substances in food and feeds and their contact materials
	A14	Special Authorization requirement for SPS reasons
	A85	Traceability requirements
	A21	Tolerance limits for residues of or contamination by certain (non-biological) substances
	A13	Systems approach
Source: ITC, 2016		

The United States

Table 17 shows the overview of TBTs and SPSs applicable to strawberries.

Table 16: Overview of NTMs in the US

	NTM Code	
Technical barriers to trade	B210	Tolerance limits for residues of or contamination by certain substances
	B310	Labelling requirements
	B330	Packaging requirements
	B700	Product quality or performance requirement
	B800	Conformity assessment related to TBT
	B820	Testing requirement
Sanitary and Phytosanitary measures	A150	Registration requirements for importers
	A190	Prohibitions/restrictions of importsfor SPS reasons n.e.s.
	A210	Tolerance limits for residues of or contamination by certain (non-microbiological) substances
	A220	Restricted use of certain substances in foods and feeds and their contact materials
	A310	Labelling requirements
	A330	Packaging requirements
	A410	Microbiological criteria of the final product
	A420	Hygienic practices during production
	A510	Cold/heat treatment
	A530	Fumigation
	A630	Food and feed processing
	A820	Testing requirement
	A840	Inspection requirement
	A850	Traceability requirements
Source: WITS, 2016		

Comparison

Both countries have special agreements with other countries that result in lower or no tariffs. The organic standards are similar and mutually recognized.

Outlook

The ongoing negotiations on the reform of the EC No 834/2007 organic regulations present a potential concern. The implementation of the EC proposal will result in stricter standards for organic farming and, therefore, restrict imports from developing countries (IFOAM, 2015). The changes in the EU regulations may cause changes in the US legislation due to the mutual recognition of organic standards. Significant changes in NTBs and tariffs are not expected.

US	**Germany**
↓	↓

5. Prices

Prices at Producer Level

Germany:

Producer prices depend mainly on the production method. Open-land production is cheaper than closed-land production, especially in heated greenhouses (Linnemannstöns, 2016).

Fixed costs make up a significant share of the overall costs, which means that the actual harvest influences the prices.

The average producer prices for strawberries can be seen in the Table 18. The actual production costs are approximately 10% lower than these prices (Ökologischer Landbau Und Verbraucherforschung, 2016).

Table 17: Strawberry prices at the production level						
€/kg	2010	2011	2012	2013	2014	2015
average	1.74	1.93	1.70	1.61	1.69	1.75
regular	1.73	1.92	1.69	1.60	1.68	1.74
organic	3.16	3.49	2.93	3.30	3.43	3.29
Source: Ökologischer Landbau Und Verbraucherforschung, 2016						

The United States:

Producer prices vary according to the size of the strawberries and season. The average prices can be seen in Table 19. The yield per acre of regular strawberries is higher than for organic ones making the production cheaper (ofrf, 2015).

Table 18: Strawberry prices at the production level US					
USD/kg	2011	2012	2013	2014	2015
regular	1.83	1.79	1.90	2.07	1.60
organic	n.a.	n.a.	n.a.	n.a.	2.41
Source: USDA					

Import Prices

Germany

Spain is a major exporter of strawberries to Germany due to its price advantage. The comparison of import prices and respective wholesale prices for regular strawberries can be seen below:

Table 19: Import & Whole Sale Prices Germany

Imports	2011		2012		2013		2014		2015		2016	
€/kg	import value	whole sale price	import value	whole sale price	import value	whole sale price	import value	whole sale price	import value	whole sale price	import value	whole sale price
Spain	1.73	n.a.	1.83	3.04	1.79	3.21	1.60	2.72	1.86	3.23	n.a.	2.79
Netherlands	2.75	n.a.	2.85	5.40	3.59	5.38	3.29	4.46	3.02	4.48	n.a.	4.79
Belgium	2.56	n.a.	2.12	2.75	3.06	4.46	2.77	4.47	2.87	4.07	n.a.	4.75
Poland	1.25	n.a.	1.55	2.30	1.07	n.a.	0.98	n.a.	2.10	3.86	n.a.	4.18
Greece	1.51	n.a.	1.51	n.a.	1.58	n.a.	1.68	n.a.	2.85	n.a.	n.a.	2.31
Italy	1.89	n.a.	2.19	3.57	2.29	3.48	1.90	3.38	2.23	4.23	n.a.	3.61
Austria	1.52	n.a.	2.45	n.a.	2.43	n.a.	2.17	n.a.	2.15	n.a.	n.a.	3.99

Source: ITC Trade Map, BLE

USA

The biggest exporter to the US is Mexico. Prices of strawberries from Canada decreased sharply in 2015 making it competitive among other exporting countries. Mexico and Peru also provide cheap strawberries while New Zealand and the Netherlands have comparably higher prices (Table 21).

Table 20: Import Value USA

$/kg	2011	2012	2013	2014	2015
Mexico	2.19	2.25	2.20	2.41	2.90
Canada	4.65	4.46	5.18	5.51	2.66
Peru	4.15	2.58	6.25	5.80	2.90
New Zealand	5.00	n.a.	n.a.	n.a.	9.94
Netherlands	8.00	10.33	n.a.	11.00	7.79

Source: ITC Trade Map

Prices at Wholesale Level

Germany:

Wholesale prices for regular strawberries range from 2.30 €/kg to 4.80 €/kg depending on the country of origin. Prices from domestic strawberries can be seen in the following table.

Table 21: Whole Sale Market - Domestic Strawberries Germany

€/kg	2012	2013	2014	2015	2016
regular	3.90	4.11	4.18	4.49	4.50
organic	n.a.	6.20	7.26	4.48	6.68

Source: BLE

The prices for organic strawberries increase at this point of the value chain by 75%, looking at the average of the past years (Ökologischer Landbau Und Verbraucherforschung, 2016). Transportation costs, packaging costs and profits for wholesale companies contribute to this increase.

The United States

Wholesale prices can be seen in the table below.

Table 22: Whole Sale Prices US

€/kg	2011	2012	2013	2014	2015
regular	4.23	4.34	4.36	n.a.	n.a.
organic	6.69	6.11	7.50	7.66	7.16

Source: USDA; ERS

Prices at Retail Level

Germany:

Retail prices can be seen in the following table:

Table 23: Retail Prices Germany					
€/kg	2012	2013	2014	2015	2016
total	3.35	3.37	3.30	3.66	3.92
organic	6.15	6.33	6.54	6.82	6.72
organic from Germany	6.23	6.49	6.85	7.12	7.02
Source: GfK					

Prices peak in the beginning and the end of the respective season which is March/April to September for Germany, Belgium and the Netherlands and January to June for Spain, Italy and Greece.

Organic strawberries cost 70-100% more compared to regular strawberries (Ökologischer Landbau Und Verbraucherforschung, 2016).

The United States:

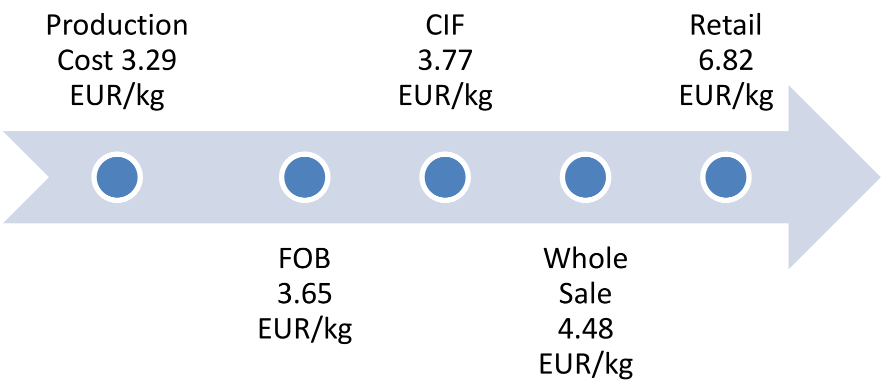
Based on recent data from the USDA, organic strawberries consistently cost 40-60% more than regular ones. The WTP for organic strawberries ($3.14/lbs) is higher than for conventional ones ($2.75/lbs). Prices peak around January-February as a result of less domestic supply.

Table 24: Retail prices US						
USD/kg	2011	2012	2013	2014	2015	2016
regular	6.60	6.44	6.71	5.93	5.82	5.44
organic	7.02	7.44	7.64	8.44	8.73	8.62
Source: USDA						

Value Chain

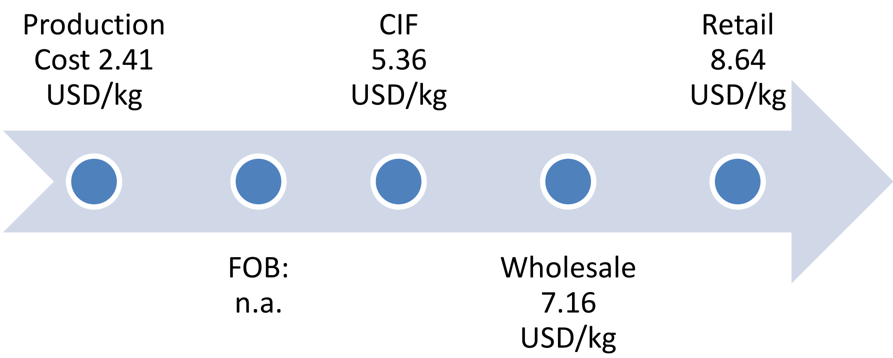
Germany

The following graph shows the value chain for domestic organic strawberries in Germany which applies to 1% of strawberries (Ökologischer Landbau Und Verbraucherforschung, 2016). EUR/kg (BLE, 2016).



The United States

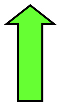
Figure 5 shows the value chain for domestic organic strawberries



Comparison: Producer prices are similar in Germany and the US depending on the current exchange rate. The difference in price between organic to non-organic strawberries is higher in Germany than in the US.

Outlook

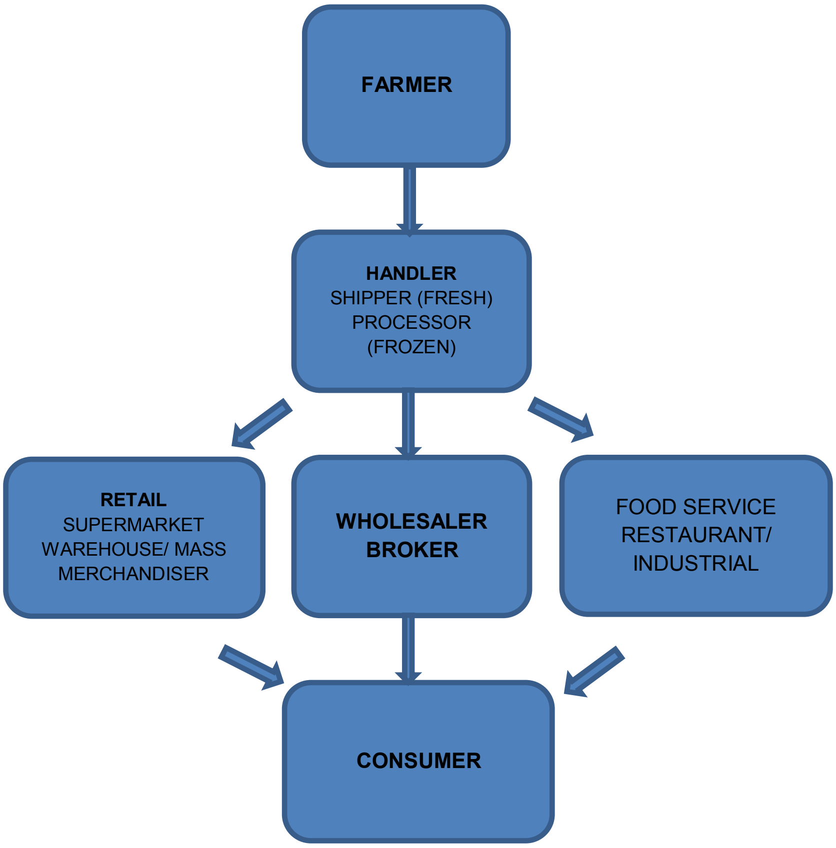
Producer prices have been increasing for the past years. The trend is likely to continue, especially in Germany as the minimum wage has been introduced.

US	**Germany**
	

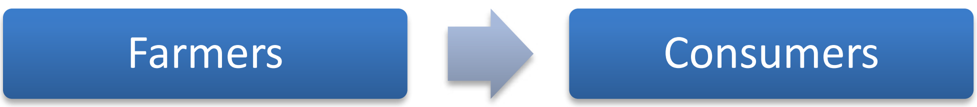
6. Distribution channels

Supply chain

The distribution channel for large production of strawberries is similar in both countries. The handler picks up and pack fresh strawberries then distribute them to wholesale markets in Germany and US or overseas (Figure 6).



For smaller operations such as Pick-Your-Own (PYO) farms in the US or farm shops and local farmer's markets in Germany, the product flows directly from producers to end consumers eliminating the need for intermediaries (Figure 7). Around 35% of the strawberry production is sold directly to customers via farm shops and roadside stand.



Production and Storage

Organic strawberries are produced and certified according to the standards regulated by the National Organic Program (NOP) in the US and the EU Organic Program in Germany.

Strawberries should be protected from direct sun exposure, precooled within 1 hour of harvest, and cooled to 0°C before loading. The most common precooling methods used in commercial production are forced-air cooling, in which cold air is forced to move through the container, and room cooling, in which cold air circulates around the containers. Pallets of strawberries are covered with a tarp and positioned to allow cold air to pass through and around each berry (DeEll, 2005).

A CO_2 enriched environment can significantly extend shelf life. This is done by using a pallet bag filled with CO_2 of up to 20% concentration sealed to an airtight base built into the pallet. Higher concentrations should be avoided due to potential undesirable color and flavor development (Kader, 2008). Optimal transportation and storage conditions are summarized in the Table 26.

Table 25: Optimum Storage Conditions	
Temperature	32°F (0°C)
Relative Humidity	90-95%
Postharvest Life	5-10 days in air, 10-21 days in air + 15 % CO_2
Freezing Point	30.6°F (-0.8°C)
Source: University of California, n.d.	

Transportation and Distribution

Strawberries are transported by refrigerated trucks set at 0°C with two options of centerline loading (Annex 4). Load spacers (Annex 4) are required during transportation to create space between the pallets and the walls allowing for maximum cold airflow and minimum transit damage. After arriving at the storage facility, the tarp is removed (Annex 4) and the strawberries are stored at 0°C and 9095% relative humidity ready to be sold for fresh consumption or further processing (DeEll-, 2005).

Competition in the Supply Chain

Germany

Imported products are highly price competitive due to high domestic production costs. Rewe, a big retailer, also competes with wholesale retailers by buying in huge volumes and resell the products to the smaller supermarket chains.

US

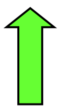
There is a rapidly growing number of organic producers in the US. The increase in demand results in increased competition on all levels in the supply chain.

Comparison

The supply chain is similar in both the US and Germany for both large- and small-scale operations. The production, storage, and transportation standards are also similar in both countries.

Outlook

The recent NAFTA renegotiations could affect the import regulations and quantity of organic produce, especially from Mexico. In both the US and Germany, the production volume of organic strawberries is expected to increase to satisfy the rise in demand.

US	Germany
	

7. Commercial practices

Germany

According to the employee of one big retail chain, strawberry producers should contact food retailers directly. Retailers use price as a main decision criterion and want to avoid middlemen in their supply chains. The first contact with the potential supplier is established via e-mail. Afterwards, telephone communication is preferred to compare the prices. After the best offer is chosen, the grower send product samples for tasting, which affects the final decision. The bigger the supplier, the less personal contact the partners have. Usually big retailers do not agree to minimal order quantities. They provide producers with historical data, so that the grower can plan accordingly. Trucks transport the strawberries from Germany. For transport from Morocco air or ocean freight is used. The retailer is granted 35-45 days for payment, which is made through holding company. Check is the common payment method.

The commercial practices in the food retail segment differ from those in the wholesale segment (Figure 8). Wholesale retailers distribute them to smaller retail chains, restaurants and organic supermarkets.

Case study "Naturkost Weber"

The importers find new business contacts on trade fairs (e.g. Biofach in Nürnberg, Sana in Bologna). To ensure the conformity of import requirements, Naturkost Weber's representative visit a potential partner before the collaboration starts. The company performs the audit, checks the documents, takes soil and product samples and analyse them in German laboratory. In addition, the partner should have organic certification and permission for labelling.

*At the beginning of every week the producer of strawberries informs about the supply amount, which importer calls up depending on its customers' demand. The minimum order is one pallet, which has 192 boxes with 8*250 g packages inside. The importer order by phone, e-mail of fax. The strawberries from Europe are transported by trucks and need to pass quality control in the German warehouse. Within 30 days after delivery the importer is obliged to transfer the money to the exporter's banking account.*

The United States

Suppliers of organic fresh strawberries can sell their products through wholesalers, distributors, and direct sales to retailers or consumers. Suppliers can contact major retailers and distributors such as Costco or Sysco directly through available platforms such as website, email, or phone. Wholesalers and distributors are more likely to contract with large-acreage growers with substantial production capacity.

However, Whole Foods, a major retailer that emphasizes local organic products, also deals with local, small-scale suppliers with less production capacity.

Ordering procedures and payment terms for organic fresh strawberries are similar to those of other products (Josh Hill, November 7, 2016). An order begins with a quotation that contains pricing, quantity, insurance, and other relevant sales information. After agreeing on terms, a pro forma invoice is then issued which the importer can use to obtain a letter of credit from the bank, if required. Once obtained, the buyer sends a purchase order to the supplier and the delivery begins. Product is then distributed via refrigerated trucks. (Josh Hill, November 7, 2016).

The methods and payment terms are negotiable and vary on a case-by-case basis. The maximum payment period is normally 30 days after the receipt and acceptance of the goods (Josh Hill, November 7, 2016).

Comparison

In Germany, the size of the strawberry supplier does not play a role in establishing a partnership with retailers. The retailer usually has one locally grown product and one from abroad to cover the demand. In the US the bigger players are more likely to enter long-term contracts with major distributors and retailers. The payment terms in Germany are longer. The US retailers are more flexible regarding the payment methods.

Outlook

In both countries the ordering procedure follows a commonly used practice. The existing habits are not going to change in the future.

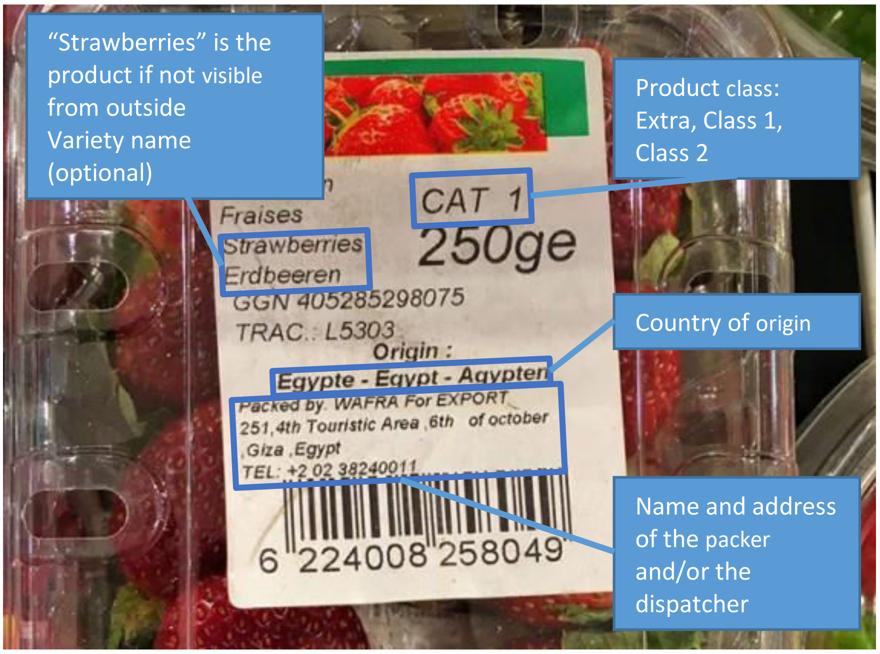
US	**Germany**
→	→

8. Packaging and labeling

Germany

If a big retailer sells strawberries under its own brand (e.g. REWE), it sends to the growers its own packaging materials. Different packaging materials such as plastic (Polyethylene terephthalate), carton or wooden cups with several size options, e.g. 250 grams, 500 grams, and 1000 grams are used (Obst-, Gemüse- & Kräuterverpackungen, 2016). The German Packaging and Waste Avoidance Law (Verordnung über die Vermeidung und Verwertung von Verpackungsabfällen, or VerpackV) establishes recyclability requirements (Der Grüne Punkt or the Green Dot) for packaging materials. Although not legally required, it is virtually impossible to market a product in Germany without the Green Dot sign (USDA, 2015).

Organic strawberries imported from outside of the EU may carry the EU organic seal if they comply with the EU production standards.



Production information in German is required and must be indicated on the label of each package and be visible from the outside (Figure 9).

Strawberries must be packaged properly to minimize damage. The packaging materials must be clean and free of foreign matter. The use of materials, particularly of paper or stamps bearing trade specifications, must be done using toxic-free ink or glue (EU, 2016). In addition, suppliers may be asked to comply with other requirements on packaging reduction or preferred recycled packaging materials (CBI Market Information Database, 2016).

United States

Strawberries are commonly sold in open containers, such as pulp, wooden, or plastic baskets (Demshak, Harper, Kaime, Lantz, 2010). Strawberries sold through wholesalers and retailers are normally packaged in clear clamshell containers in various sizes. Clamshell containers provide better protection during handling and often contain holes for sufficient air circulation, which is crucial for maintaining freshness and marketability. Most fresh strawberries are sold in 16 oz. packages. The baskets or clamshells are put in a corrugated fiberboard tray holding about 4 to 5 kg (USDA, 2016) (Figure AA).

For labeling, the following three categories of labels are used (Annex 5).

- Packaged retail products

  The organic certifier must be identified in the information panel, right below the information identifying the producer, manufacturer, or distributor.

- Unpackaged and retail products

  Unpackaged organic products on display at farmers' markets or retail stores are not required to display any specific information, but the farmer or retailer may choose to utilize the USDA organic seal or the certifier seal. These items are not typically packaged in a farmer's market or in a fresh produce section of a retailer.

- Wholesale products

  Only the production lot number is required on wholesale product labels, although the distributor may choose to display organic labeling information on the outside of the non-retail container. This may help ensure that the organic strawberries receive specific handling.

Comparison and Outlook

Germany places more emphasis on the recyclability of materials. No immediate changes in packaging and labeling regulations are expected in both countries.

US	Germany

9. Sales promotion

Germany

Sales promotions depend on the target group. Trade fairs are used to promote products and find trade partners. There are trade fairs in Germany that specifically focus on the organic industry and special fairs for strawberries. As direct sales are also common local producers have the advantage for local promotions to their customers.

United States

Organic strawberry suppliers use a variety of methods to promote their product. Trade fairs, exhibitions, trade magazines, industry conferences and joining associations are all ways for suppliers to connect with manufactures/farmers. Networking is an important tactic to promote products and programs.

Trade fairs and exhibitions

Germany

expoSE – Leading trade fair for asparagus and strawberry production
Messe Karlsruhe
Messealle 1
76287 Rheinstetten
Tel.: +49 7251 3032080
E-Mail: info@vsse.de
http://www.expo-se.de/

Interaspa – the trade fair for asparagus and berries
Deutsche Messe Hannover
Messegelände
30521 Hannover
Tel.: +49 4251 7050
E-Mail: info@interaspa.de

Anuga
Koelnmesse GmbH
Messeplatz 1
50679 Cologne
Tel.: +49 221 8212240
Fax: +49 221 821993410
E-Mail: anuga@koelnmesse.de
http://www.anuga.de/anuga/index.php

Biofach – Leading trade fair for organic food
NürnbergMesse GmbH
Messezentrum
90471 Nuremburg
Tel.: +49 911 86068998
Fax: +49 911 8606120086
https://www.biofach.de/

Food & Life
GHM Gesellschaft für Handwerksmessen mbH
Willy-Brandt-Allee 1
81829 Munich
Tel.: +49 89 1891490
Fax: +49 89 189149239
http://www.food-life.de/

Fruitlogistica
Messe Berlin GmbH
Messedamm 22
D-14055 Berlin
Tel.: +49 30 30380
Fax: +49 30 30382020
E-Mail: fruitlogistica@messe-berlin.de
http://www.fruitlogistica.de/

The United States

Georgia Organics Conference Expo
Georgia International Convention Center
2000 Convention Ct Concrse
College Park, GA 30337

SOHO EXPO
Southeast Natural Products Association
5946 Main Street
New Port Richey, FL 34652
Tel: +1 727 8460320

Associations

The United States

Organic Trade Association
The Hall of the States
444 N Capitol Street NW
Suite 445A
Washington DC 20001 USA

Tel: +1 202 403 8520

National Organic Program - USDA
E-mail: joan.avila@ams.usda.gov
Tel: +1 202 7203252
Fax: +1 202 2057805

Driscoll's Strawberry Associates Inc
P.O. Box 50045
Watsonville, CA 95077
Tel: +1 831 7635100

Trade magazines

Germany

Hofdirekt
Magazine for farmer to customer direct sales
http://www.hofdirekt.com/

Agrarmanager
Magazine for production, market and finances
http://www.agrarheute.com/agrarmanager?redid=1710

The United States

CCOF Certified Organic Magazine
CCOF Certification Services LLC
2155 Delaware Avenue
Ste 150
Santa Cruz, CA 95060
Tel: +1 831 4232263
Fax: +1 831 4234528
E-mail: ccof@ccof.org

Natural Industry Jobs. com
Natural Industry Jobs dot Com
21 Locust Street
Woodland, CA 95695
Tel: +1 530 6665674

US	Germany
→	→

10. Market prospects

Germany

A significant portion of domestically produced strawberries will continue to be traded within the EU. German producers are likely to retain market leadership in the domestic market due to strong consumer preference in local and regional products. Nevertheless, producers from non-EU countries offering quality strawberries at a competitive price will able to compete with local producers especially during off-seasons. Higher prices should not be an obstacle to further consumption as income per capita is expected to rise in the next four years (Trading Economics, 2016). Demand for imported organic strawberries will rise only slightly due to market saturation. The growth will be higher in the food manufacturing sector rather than in the consumer market due strong local product preference and high domestic production costs resulting in higher prices.

In April 2017, the EU will introduce a new electronic system for tracking movements of imported food called TRACE (Trade Control & Expert System), which will reduce the administrative burden put on traders (European Commission, 2016). Exporters from developing countries should pay special attention to the ongoing negotiations on the EU organic regulations. The EU might limit imports of organic products. Exporting countries should have a trade agreement with the EU or fully comply with EU regulations (IFOAM, 2016, p. 3).

The supply chain flow is expected to remain unchanged in Germany for both large and small operations. Importers will continue to be selective in choosing new suppliers. Commercial practices and labeling and packaging terms will change based on the results of the aforementioned negotiations.

Trade fairs will continue to play an important role in the establishment of contacts among players in the organic strawberry industry

The United States

In the US, domestic production of organic strawberries is a fast-growing segment. This trend is expected to continue as a response to the continuous rise in demand. Market access is likely to be volatile as the majority of imports come from other NAFTA countries and the NAFTA agreement renegotiations might cause an impact on organic strawberry imports. A potential modification to the NAFTA agreement could also lead to a limit in the import quota and, therefore, cause a price increase.

The established steps in the supply chain are expected to remain unchanged in the US for both large and small operations but with more product availability at every level, as a growing number of producers are switching to organic production. The increased availability of organic products means that organic strawberries should appear in more stores nationwide.

Commercial practices are unlikely to change as major distributors and retailers usually engage in long-term contracts with suppliers, both domestic and international. No major changes in packaging and labeling regulations are expected in the US. However, there may be future changes in organic certification standards in the EU which will affect the similarities and mutual standard recognition between the two. Organic strawberry industry players will continue to use the same platforms to establish contacts and promote their products.

The market prospects are summarized in the Table 27.

	Market Prospect Summary US		**Market Prospect Summary Germany**	
Chapter	Increasingly/ decreasingly attractive	One sentence explanation based on analysis in report	Increasingly/ decreasingly attractive	One sentence explanation based on analysis in report
Production, Foreign Trade and Consumption	↑	Increasingly attractive due to growing demand and production capacity.	→	Unchanged due to relatively stable demand and limited production capacity.
Market Characteristics	↑	Increasingly attractive due to growing demand.	↓	Less attractive due to strong preference in local products.
Market Access	↓	Less attractive due to uncertainties regarding changes in the NAFTA agreement.	↓	Less attractive due to future changes in organic standards and regulations
Prices	↑	Increasingly attractive due to increased competition, which drives prices down.	→	Unchanged due to expected price stability.
Distribution Channels	↑	Increasingly attractive due to expected increased product availability in the supply chain	→	Unchanged due to no foreseeable significant changes in the supply chain
Commercial Practices	→	Unchanged due to no foreseeable changes in commercial practices.	→	Unchanged due to no foreseeable changes in commercial practices.

Packaging and Regulations	→	Less attractive due to potential impact from changes in EU organic standards and regulations.	→	Less attractive due to expected changes in organic standards and regulations
Sales Promotion	→	Unchanged due to relatively stable demand and limited production capacity.	→	Unchanged due to relatively stable demand and limited production capacity.

Table 26: Outlook

Comparison

The US market for organic strawberries will continue to grow with increasing supply at each level of the supply chain, whereas the German market will remain small and stable. In Germany, there may be an increase in demand in the B2B-sector. The US market is stable in this respect. Market access is at a critical point for the German market due to ongoing negotiations regarding changes in the organic regulations.

Outlook

Overall, the current conditions in both markets will continue to be challenging for exporters outside of the EU and NAFTA regions. In Germany, strict regulations are in place and consumers primarily purchase locally or regionally produced products. However, there are good prospects for exporters outside the EU, especially in the winter season. The market for organic strawberries in the US seems appealing due to its size and continuous growth in demand. Exporters outside of the NAFTA region, however, will find it difficult to compete due to sufficient supply from within the region and the presence of high trade barriers. Changes in the EU organic regulations and NAFTA agreement will be a key factor for potential exporters to determine the attractiveness of these markets.

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Annex 1

Industry Insights (Germany)

Organic supermarket chain

Status quo

Organic strawberries grown outside Germany are packed in 500g plastic shells. The German products have boxes made of paper. Regional suppliers are preferred. If the order is not possible, an organic supermarket looks for another German supplier. At the beginning of the strawberry season organic retailers buy from European farmers (Spain, Italy) due to unavailability of local strawberries. The non-EU suppliers come into question only shortly before Christmas, when there is a temporary market demand. The sales volume is very small. The reason for the small volume is that delivery of organic products from abroad does not fit to the mindset of the German organic consumers. They have concerns about the environmental friendliness of a long transportation as well as about freshness of the products. From the perspective of two big organic chain supermarkets organic strawberries of non-EU origin have far less chances to become successful In Germany. Wholesale retailers are responsible for the conformity to organic quality requirements and check certificates provided by the farmer. In the stores, the purchasing department only has to check, if there is an organic label on the box. The prices depend on weather conditions, since organic production is usually an open-land production.

Future development

The German market for organic strawberries will be still dominated by locally grown strawberries. The expected price increase is not going to be significant (less than one euro).

Organic Yogurt Producer

All ingredients of the products should have organic quality. Fresh strawberries are not used in the production. The company buys organic food preparation for further processing. There are suppliers in Germany, but their location and name remained a commercial secret.

Fruit preparation producer

The main customers for fruit preparation are marmalade producers (e.g. Zentis). In the last 2-3 years the strawberry food preparation was almost neglected by the company due to high competition. Big East European companies (Poland) have lower production cost and offer competitive price. Accessibility of raw materials plays a very important role, therefore, 95% of the company’s production is represented by apple fruit preparation and concentrated juices. The demand for strawberry products was very low and organic quality was not requested.

Industry Insights (US)

Phone Interview with Josh Hill, Sysco Regional Sales Manager

Ordering procedures and payment terms are the same for organic fresh strawberries as for other products. An order begins with a quotation containing pricing, quantity, insurance, and other relevant sales information. A pro forma invoice is issued after the sales terms are agreed upon. The importer/buyer can then request a letter of credit from the bank using this pro forma invoice. The buyer then sends a purchase order to the supplier and the sales process begins. Sysco, as well as other major distributors, normally enter in long-term contracts with suppliers.

The methods and payment terms vary. The maximum payment period is normally 30 days after the receipt and acceptance of the goods.

Annex 2

Grades of Strawberries

U.S. No. 1 consists of strawberries of one variety or similar varietal characteristics with the cap (calyx) attached, which are firm, not overripe or undeveloped, and which are free from mold or decay and free from damage caused by dirt, moisture, foreign matter, disease, insects, or mechanical or other means. Each strawberry has not less than three-fourths of its surface showing a pink or red color.

a. Size. Unless otherwise specified, the minimum diameter of each strawberry is not less than three-fourths inch.

b. Tolerances. In order to allow for variations incident to proper grading and handling the following tolerances, by count, are provided as specified:

1) For defects. Not more than 10 percent for strawberries in any lot which fail to meet the requirements of this grade, but not more than one-half of this tolerance, or 5 percent, shall be allowed for defects causing serious damage, including therein not more than two-fifths of this latter amount, or 2 percent, for strawberries affected by decay.

2) For off-size. Not more than 5 percent for strawberries in any lot which are below the specified minimum size.

U.S. Combination consists of a combination of U.S. No. 1 and U.S. No. 2 strawberries, except for size: Provided, That at least 80 percent, by count, of the strawberries meet the requirements of U.S. No. 1 grade.

a. Size. Unless otherwise specified, the minimum diameter of each strawberry is not less than three-fourths inch.

b. Tolerances. In order to allow for variations incident to proper grading and handling the following tolerances, by count, are provided as specified:

1) For defects. Not more than 10 percent for strawberries in any lot which are seriously damaged, including therein not more than one-fifth of this tolerance, or 2 percent, for strawberries affected by decay. No part of any tolerance shall be allowed to reduce for the lot as a whole, the percentage of U.S. No. 1 strawberries required in the combination, and individual containers (cups or baskets) may have not less than 65 percent U.S. No. 1 strawberries: Provided, That the entire lot averages within the required percentage.

2) For off-size. Not more than 5 percent of the strawberries in any lot may be below the specified minimum size.

U.S. No. 2 consists of strawberries which are free from decay and free from serious damage caused by dirt, disease, insects, mechanical or other means. Each strawberry has not less than one-half of its surface showing a pink or red color.

a. Size. Unless otherwise specified, the minimum diameter of each strawberry is not less than five-eighths inch.

b. Tolerances. In order to allow for variations incident to proper grading and handling the following tolerances, by count, are provided as specified:

1) For defects. Not more than 10 percent for strawberries in any lot which are seriously damaged, including therein not more than three-tenths of this tolerance, or 3 percent, for strawberries affected by decay.

2) For off-size. Not more than 5 percent for strawberries in any lot which are below the specified minimum size.

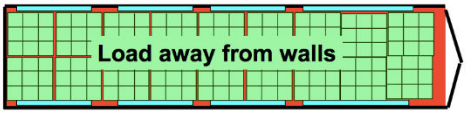
Source: USDA – Agricultural Marketing Service

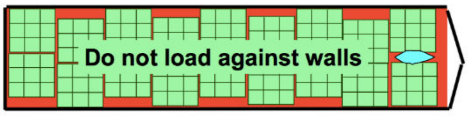
Annex 3

Duty-free import of organic strawberries , 2016	
Tariff Regimes Granted by the EU	AV duty, %
EU/Andorra agreement	0.00
EU/Albania agreement	0.00
EU/Bosnia and Herzegovina agreement	0.00
EU/Chile agreement	0.00
EU/Iceland agreement	0.00
EU/Korea agreement	0.00
EU/Jordan agreement	0.00
EU/Lebanon agreement	0.00
EU/Morocco agreement	0.00
EU/Montenegro agreement	0.00
EU/Former Yugoslav Republic of Macedonia agreement	0.00
EU/Mexico agreement	0.00
EU/Occupied Palestinian Territory agreement	0.00
EU/Peru agreement	0.00
EU/Tunisia agreement	0.00
EU/Turkey agreement	0.00
EU/San Marino	0.00
EU/Serbia agreement	0.00
EU/South Africa agreement	0.00
EU/Papua New Guinea agreement	0.00
EU/Colombia agreement	0.00
Overseas Countries & Territories Agreement	0.00
EU-Eastern and Southern Africa States agreement	0.00
Economic Partnership Agreements	0.00
Economic Partnership Agreements CARIFORUM	0.00
Central America Agreement	0.00
EU/Cameroon agreement	0.00
EU/Ecuador agreement	0.00
EU/Fiji agreement	0.00
EU/Georgia agreement	0.00
EU/Ukraine agreement	0.00
EU/Kosovo agreement	0.00
EU/Republic of Moldova agreement	0.00
Generalized System of Preferences (GSP+) plus scheme	0.00
Least Developed Countries (LDC) duties	0.00
Source: WTO, 2016	

Annex 4

Refrigerated Truck Loading





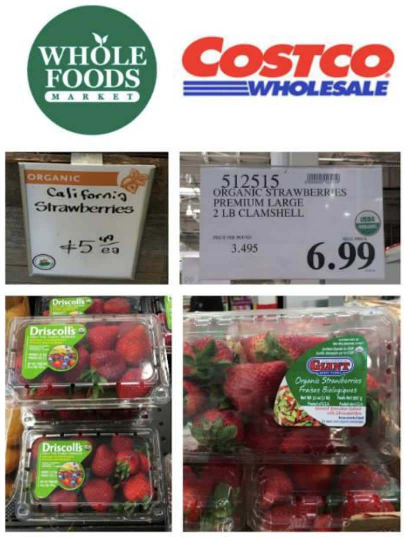
Load spacers

Stacked Pallet and Tarp Removal

Annex 5

Fiberboard tray

Packaged retail products



Unpackaged and retail products