

# ***EOS Series***

## ***EXPORT OPPORTUNITY SURVEYS***



---

# **The Market for Organic Tofu in Germany and the United States**

EOS Research Paper 2/2017  
June 2017



**Technology**  
**Arts Sciences**  
**TH Köln**

# Table of Content

- Table of Content ..... I
- Authors and contact persons ..... III
- List of figures ..... IV
- List of tables ..... V
- List of abbreviations ..... VI
- Executive summary ..... VIII
- 1. Product description ..... 1
- 2. Production, foreign trade & consumption ..... 3
  - Production..... 3
  - Foreign trade ..... 4
  - German and US trade ..... 5
  - Apparent consumption ..... 7
  - Comparison and outlook ..... 7
- 3. Market characteristics ..... 8
  - Germany..... 8
  - The United States..... 9
  - Comparison and outlook ..... 11
- 4. Market access ..... 12
  - Tariffs ..... 12
  - Standards and regulations ..... 14
  - Non-tariff barriers..... 15
  - Comparison and outlook ..... 15
- 5. Prices..... 16
  - Prices at Producer Level ..... 16
  - World market prices..... 18
  - Prices at Wholesale Level ..... 20
  - Prices at Retail Level..... 20

Value chain .....	23
Comparison and outlook .....	23
6. Distribution channels .....	24
Comparison and outlook .....	25
7. Commercial practices.....	26
Germany .....	26
United States .....	26
Comparison and outlook .....	27
8. Packaging and labeling .....	28
Packaging .....	28
Labeling .....	28
Organic production standards .....	30
Comparison and outlook .....	31
9. Sales promotion .....	32
Trade fairs and exhibitions .....	32
Trade magazines .....	33
Associations.....	34
Comparison and Outlook.....	36
10. Market prospects.....	37
Germany .....	37
US .....	37
Comparison and Outlook.....	38
References .....	41

# Authors and contact persons

This market research paper has been prepared under the supervision of Prof. Dr. Wolfgang Veit of Cologne University of Applied Sciences and Prof. Dr. Carol Scovotti of University of Wisconsin-Whitewater in the course of the inter-university cross-border collaboration student research project “Export Opportunity Surveys (EOS)”. The respective authors are responsible for the content of their own texts.

## **Authors**

Matthew Boelter, University of Wisconsin-Whitewater

Ho-Yu Hsu, Cologne University of Applied Sciences

Kerstin Morawietz, Cologne University of Applied Sciences

Adéla Sobotková, Cologne University of Applied Sciences

Iakov Tankhilevich, Cologne University of Applied Sciences

## **Contact persons**

Prof. Dr. Wolfgang Veit

Cologne University of Applied Sciences

Schmalenbach School of Business and Economics

Phone: +49 221 8275 3420

E-Mail: [wolfgang.veit@th-koeln.de](mailto:wolfgang.veit@th-koeln.de)

Prof. Dr. Carol Scovotti

University of Wisconsin-Whitewater

Department of Marketing

Phone: +1 262 472 5469

E-Mail: [scovottc@uww.edu](mailto:scovottc@uww.edu)

# List of figures

Figure 1: Organic Tofu	1
Figure 2: Sales Value of Organic Refrigerated Foods in the US in 2016	11
Figure 3: US Market Soybean Meal Price (2006-2016)	17
Figure 4: Soybean Producer Prices in Argentina, Brazil, China, US	17
Figure 5: Value Chain of Organic Tofu in US	23
Figure 6: Soybean and Tofu Supply Chain	24
Figure 7: EU Bio-logo	28
Figure 8: Voluntary German Bio-seal	29
Figure 9: The 'Green Dot'	29
Figure 10: USDA Organic Seal	30
Figure 11: Market Prospects Synopsis	39

# List of tables

Table 1: Tofu Production in Germany	3
Table 2: Organic Tofu Manufacturers in the US and Germany	3
Table 3: Top Ten Exporting Countries of HS 210690	4
Table 4: Top Ten Importing Countries of HS 210690	5
Table 5: Germany's Export Partners for HS 210690 Products	5
Table 6: Germany's Import Sources for HS 210690 Products	6
Table 7: US Export Partners for HS 210690 Products	6
Table 8: US Import Sources for HS 210690 Products	7
Table 9: USDA's Organic Food Classification System	10
Table 10: EU Import Tariffs for HS 21069092	12
Table 11: US Import Tariffs for HS 21069099	13
Table 12: Producer Prices per Country for Organic Soybeans €/t	16
Table 13: Switzerland's Export to Germany (FOB Prices) between 2011 and 2015	18
Table 14: Germany's Import Prices from the World (CIF) between 2011 and 2015	19
Table 15: Canada's Export to US (FOB Prices) between 2011 and 2015	19
Table 16: America's Import Prices from the World (CIF) between 2011 and 2015	20
Table 17: German Retail Prices of Organic Tofu in €	21
Table 18: Retail Price in US	22

# List of abbreviations

ave	average
b	billion
C & F	Cost & Freight
°C	Celsius
CBI	Centrum Bevoordering Import (Netherlands)
CBP	US Customs and Border Protection
CFR	Code of Federal Regulations
CIF	Cost insurance freight
cm	centimeter
COAs	Certificates of Analysis
EPA	Economic Partnership Agreements
EORI	Economic Operator Registration and Identification
Est	Estimated
EC	European Commission
EU	European Union
€	Euro
FAO	Food and Agricultural Organization
FCE	Food Canning Establishment
FDA	Food and Drug Administration
FOB	Free on board
g	gram
Ha	Hectare
GDL	Glucono delta-lactone
GM	Genetically modified
GSP	General System of Preferences
HS	Harmonized Commodity Description and Coding System
k	thousand
kcal	kilocalories
kg	kilogram

m	million
MFN	Most Favored Nation
MT	metric ton
NAFTA	North American Free Trade Agreement
NOP	National Organic Program
%	percent
SAD	Single Administrative Document
SITC	Standard International Trade Classification
SPS	Sanitary and phytosanitary
t	ton
US	United States
USDA	United States Department of Agriculture
US\$	United States Dollar
V	Trade Value
WTO	World Trade Organization

# Executive summary

This Export Opportunity Survey examines the markets for organic tofu in both Germany and the United States (US). Organic tofu is a processed product made from organic soybeans. The two main types, silken and regular, can be found in soft, firm, and extra firm varieties. Organic tofu is considered an excellent source of protein primarily preferred by vegetarians and vegans in Germany and the US, but is also preferred by health-conscious consumers interested in healthier diets.

The US is the world's largest exporter of organic tofu with roughly 15% of world exports, followed by Germany with 9%. The US is also the world's largest importer of organic tofu with 7% of world imports. Consumption is growing in both markets, but consumers prefer regional varieties, especially in Germany where 83% of consumers prefer to support local farmers. To better serve consumer preferences for regional products, a few large multinational corporations dominate the organic tofu market in both countries. Both markets also have strict and costly regulations for becoming certified, making exporting organic tofu even more challenging.

Exporting organic tofu is profitable in both markets. Consumers are willing to pay higher prices for organic tofu, especially in the US where the price of organic tofu at the retail level is 3 times higher than in Germany. Imports and exports of organic tofu continue to increase despite rising retail prices.

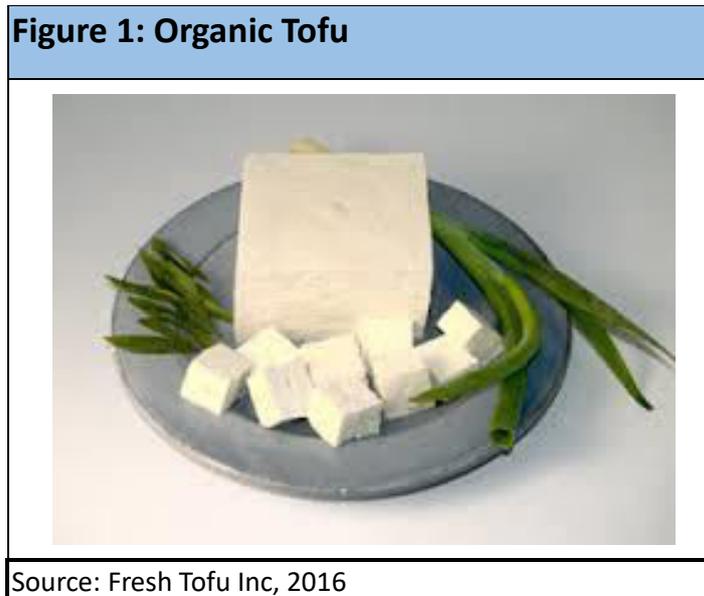
The large multinational organic tofu producers have vertically integrated the supply of organic soybeans, presenting another significant challenge to exporters. Life Food GmbH in Germany acquires organic soybeans from North America, Europe, and Asia. A few Asian multinational companies (Nasoya, House Foods, Pulmuone Foods) have established US subsidiaries to serve the US market directly. Research shows organic tofu is processed within the destination country. The following EOS discusses these factors in detail.

# 1. Product description

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

- HS: 210690 Preparations not elsewhere specified
  - EU: 21069092  
Containing no milk fats, sucrose, isoglucose, glucose or starch or containing, by weight, less than 1.5% milkfat, 5% sucrose or isoglucose, 5% glucose or starch
  - US: 21069099  
Food preparations not elsewhere specified or included, not canned or frozen
- SITC: 0989 Food preparations not elsewhere specified
- ISIC: 1030 Processing and preserving of fruit and vegetables
- NAICS: 311991 Tofu manufacturing
- NACE: 1039 Other processing and preserving of fruit and vegetables

Tofu, or bean curd, is a white, soft, compact packaged food preparation processed from soy which resembles the shape of a cake. Tofu is processed from soybeans by curdling soymilk with a small variety of additives known as coagulants. After the soymilk curdles, the curds are pressed into a cake (George Mateljan Foundation, 2016).



Processing soybeans into firmly pressed tofu involves several steps:

- *Soaking, grinding, and cooking soybeans.* Soybeans are soaked for four to six hours at a high temperature (32°C), or nine to ten hours at a low temperature (22°C). Grinding the beans before soaking them reduces the soaking time.

Soybeans are ground into a slurry which is then cooked for three to ten minutes at 100°C to 110°C.

- *Separating the soymilk.* Soy milk is separated from the solid soy pulp using centrifugation or filtration. The solid content of the soy milk before coagulation determines the texture of the final tofu product. The solid content should range between 10% and 22%.
- *Coagulating soymilk.* The most important step in processing tofu is the coagulation of the protein and oil in the soymilk. Magnesium chloride or calcium sulfate ('salt' coagulants), or an 'acid' coagulant called glucono delta-lactone (GDL) are the most common coagulants added to soymilk. Enzyme coagulants such as papains and proteases can also be used. Each coagulant can be used alone or in combination to produce different types of tofu. The coagulants are typically added in a range of 1.5 to 5 g/kg concentrations while stirring the soymilk at temperatures between 60°C and 90°C for up to one hour.
- *Pressing the tofu.* For standard firm and extra firm tofu, the soy curd is pressed to release the excess liquid. For greater levels of firmness, higher loads will be used when pressing the tofu. Soft and silken tofus are not pressed, but coagulated directly in the final package (McHugh, 2016).

The two main varieties of tofu, silken tofu and regular tofu, each come in soft, firm, or extra firm consistencies. Silken tofu is unpressed, has the highest level of water content, and features a custardy texture. Regular tofu is pressed and features a spongy texture (Han, 2014).

Tofu is considered an excellent source of protein along with iron, calcium, and many minerals such as manganese, selenium, and phosphorus. Tofu is a good source of magnesium, copper, zinc, and vitamin B1 (Lewin, 2016). A portion of 100g of firm organic tofu contains 9.41g protein, 5.88g fat, 1.18g carbohydrates and just 94 kcal (USDA Agricultural Research Service, 2016).

## 2. Production, foreign trade & consumption

### Production

There are no separate production data for organic tofu. Table 1 shows production data for “Other food preparations” which also include organic tofu. The production was increasing over the past five years.

US tofu production data or data for solely organic tofu are not available.

Table 1: Tofu* Production in Germany			
Year	Value (b€)	Weight (1,000t)	Price (€/kg)
2015	1.39	392	3.54
2014	1.25	378	3.31
2013	1.19	385	3.10
2012	1.11	361	3.08
2011	0.99	312	3.18

Source: Statistisches Bundesamt (2016)\* incl. “Other food preparations”

The following table lists the main organic tofu manufacturers in the US and Germany.

Table 2: Organic Tofu Manufacturers in the US and Germany	
USA	Germany
<u>House Foods America Corporation</u>	<u>Life Food GmbH</u>
<u>Nasoya, Inc.</u>	<u>TOFU Manufaktur Christian Nagel GmbH</u>
<u>Morinaga Nutritional Foods, Inc.</u>	<u>Svadesha Naturkost</u>
<u>Pulmuone Foods USA, Inc.</u>	<u>Terra Naturkost Handels KG</u>
<u>Amy's Kitchen, Inc</u>	<u>Lord of Tofu - Die Bioland-Tofurei</u>
<u>Tofu Shop Specialty Foods, Inc</u>	<u>MaxTofu</u>
<u>Fresh Tofu Inc.</u>	<u>Tofurei Sojafarm</u>
<u>Northern Soy, Inc.</u>	<u>TofuTussis GmbH</u>
<u>Eden Foods, Inc.</u>	<u>Denree GmbH</u>
<u>Small Planet Organics</u>	<u>Purvegan GmbH</u>

Source: Primary Research

The largest organic tofu producer in Germany is Life Food GmbH with production of approximately 5,200 t/year (Life Food GmbH, 2016). House Foods America Corporation manufactures about 275,000 pieces of tofu per day (House Foods America Corporation, 2016). That equals to approximately 30,000 t/year. Primary research shows that while German manufacturers are purely German firms, some of the biggest US manufacturers are subsidiaries of bigger companies in Asia. This applies specifically to House Foods America Corporation (Japan), Nasoya, Inc. (Hong Kong) and Pulmuone Foods USA, Inc. (South Korea).

## Foreign trade

Data provided in the following tables represent the whole HS category 210690 and might include other products. Therefore, it is more useful to look at trends rather than exact numbers.

### World exports

The trade data in table 3 show the export values of HS 210690 products from various countries. The leader in world exports was the US with approximately 15% of the total world exports, followed by Germany (UN Comtrade, 2016a).

**Table 3: Top Ten Exporting Countries of HS 210690**

Table 3: Top Ten Exporting Countries of HS 210690											
Country	2011		2012		2013		2014		2015		
	V (b US\$)	Price (US\$/kg)									
USA	3.8	5.3	4.3	6.0	4.7	6.3	4.8	6.6	4.7	6.6	
Germany	2.8	4.9	2.9	4.8	3.2	5.2	3.4	5.4	2.9	4.5	
Netherlands	2.8	5.3	2.6	4.6	2.9	4.4	3.0	4.3	2.8	3.9	
France	1.5	5.6	1.5	5.2	1.7	5.3	1.8	5.6	1.5	4.6	
Singapore	0.5	5.0	0.4	4.4	1.1	8.8	1.6	10.2	1.4	9.7	
United Kingdom	1.0	6.7	0.9	6.0	1.0	6.2	1.2	7.2	1.2	7.1	
China	0.8	2.9	0.9	3.0	1.0	3.2	1.1	3.1	1.1	3.5	
Thailand	0.9	1.9	0.9	1.8	1.0	2.0	1.1	2.0	1.1	1.9	
Denmark	1.3	5.1	1.3	4.8	1.5	5.1	1.4	5.1	1.0	4.8	
Canada	0.8	4.8	0.8	5.1	0.9	5.3	0.9	5.3	0.9	5.2	
World	27.9		28.5		32.5		34.3		31.4		

Source: UN Comtrade (2016)

### World Imports

The trade data in table 4 show the import value and prices of HS code 210690 from various countries. The leader in world imports in 2015 was the US with 6.8% of world imports, followed by the United Kingdom with 6.3%.

**Table 4: Top Ten Importing Countries of HS 210690**

Table 4: Top Ten Importing Countries of HS 210690											
Country	2011		2012		2013		2014		2015		
	V (b US\$)	Price (US\$/kg)									
USA	1.8	4.7	1.9	5.0	2.0	5.0	2.0	5.0	2.1	4.9	
United Kingdom	1.4	5.7	1.5	5.2	1.6	4.9	1.8	5.7	1.9	5.8	
Germany	1.4	5.2	1.4	4.6	1.5	5.0	1.7	5.4	1.4	4.5	
China	0.6	7.8	0.7	7.8	0.9	8.1	1.0	7.4	1.3	8.3	
Canada	1.1	4.8	1.2	5.0	1.3	5.3	1.2	5.0	1.2	4.8	
Australia	1.1	9.5	1.2	9.5	1.3	8.7	1.2	8.2	1.2	7.2	
Saudi Arabia	0.8	7.8	1.0	8.2	1.0	8.3	1.0	8.7	1.1	8.0	
Netherlands	0.9	4.0	1.0	3.7	1.2	4.0	1.2	3.4	1.1	2.8	
Japan	1.1	2.9	1.2	2.9	1.1	2.7	1.1	2.6	0.9	2.3	
Rep. Of Korea	0.8	7.8	0.7	8.5	0.8	9.1	0.9	9.9	0.9	10.1	
World	29.3		30.4		33.5		34.2		30.6		

Source: UN Comtrade (2016)

## German and US trade

### Germany

The biggest export market for German products of the HS code 210690 is the Netherlands followed by other close neighbors and the Russian Federation.

**Table 5: Germany's Export Partners for HS 210690 Products**

Table 5: Germany's Export Partners for HS 210690 Products											
Country	2011		2012		2013		2014		2015		
	V (m US\$)	Price (US\$/kg)									
Netherlands	221	3.9	220	3.9	242	4.3	275	4.2	247	3.6	
United Kingdom	174	4.3	193	4.3	233	4.5	257	5.1	238	4.9	
Austria	230	4.9	213	4.6	233	4.8	223	4.7	196	3.9	
France	177	4.0	172	3.9	215	4.8	228	5.1	180	4.1	
Italy	121	5.1	117	5.9	151	6.7	161	7.2	142	5.9	
Poland	137	4.4	132	4.0	153	4.1	156	3.9	128	3.5	
Russian Federation	166	6.5	189	7.1	210	7.5	200	7.7	125	6.4	
Belgium	116	2.9	114	2.9	129	4.0	140	4.2	117	3.4	
Switzerland	142	7.3	130	7.1	138	8.2	127	8.3	115	7.3	
Spain	132	4.6	121	4.5	126	5.1	137	4.8	113	4.0	
World	2,832	4.9	2,873	4.8	3,191	5.2	3,368	5.4	2,865	4.5	

Source: UN Comtrade (2016)

Table 6 shows that all of Germany's top 10 importing sources are geographically close, except for the United States. Switzerland and the Netherlands have been the leading import sources for the last 5 years.

**Table 6: Germany's Import Sources for HS 210690 Products**

Table 6: Germany's Import Sources for HS 210690 Products											
Country	2011		2012		2013		2014		2015		
	V (m US\$)	Price (US\$/kg)									
Switzerland	206	9.4	228	4.7	259	6.0	261	11.7	217	10.4	
Netherlands	208	3.7	200	3.7	212	4.0	224	4.1	203	3.5	
France	181	5.7	170	5.6	162	6.1	173	6.4	130	5.0	
Austria	89	4.7	105	4.4	124	4.6	145	4.2	121	3.4	
Poland	72	5.9	76	5.3	92	5.3	98	5.5	107	5.6	
Belgium	62	2.4	60	2.3	77	2.4	80	2.1	71	1.7	
Denmark	128	5.8	138	5.4	158	5.3	163	5.5	70	4.4	
United Kingdom	45	5.6	43	5.2	47	7.8	55	9.0	60	8.4	
Italy	61	7.8	58	6.9	64	7.2	70	7.2	60	6.3	
USA	53	8.3	56	9.7	66	10.9	84	9.8	49	10.1	
World	1,384	5.2	1,405	4.6	1,548	5.0	1,696	5.4	1,380	4.5	

Source: UN Comtrade (2016)

### ***The United States***

Table 7 shows the biggest export partner of the US is Canada. Other export partner countries are situated in different parts of the world such as Asia and South America. There is not much variation in trade partnerships with the US.

**Table 7: US Export Partners for HS 210690 Products**

Table 7: US Export Partners for HS 210690 Products											
Country	2011		2012		2013		2014		2015		
	V (m US\$)	Price (US\$/kg)									
Canada	966	4.5	1,125	4.8	1,168	5.1	1,108	5.1	1,083	5.1	
Mexico	383	4.6	407	5.0	412	5.0	476	5.3	485	5.5	
Rep. Of Korea	215	10.1	209	10.3	247	11.3	255	16.2	290	16.2	
Netherlands	140	7.3	137	9.8	193	7.8	209	9.0	210	8.3	
Japan	176	6.9	208	8.1	215	8.5	191	11.6	190	15.0	
China, Hong Kong SA	130	7.1	172	7.9	163	6.3	120	8.5	178	8.8	
United Kingdom	138	7.5	103	8.1	112	8.7	165	11.7	158	10.9	
Other Asia, nes	112	6.6	130	7.6	153	7.6	148	8.8	156	9.2	
Australia	72	8.5	97	9.0	122	9.6	154	10.5	138	9.6	
China	96	12.2	118	8.9	183	9.9	161	9.5	114	11.5	
World	3,752	5.3	4,269	6.0	4,730	6.3	4,805	6.6	4,690	6.6	

Source: UN Comtrade (2016)

As table 8 shows, Canada exported the majority of HS 210690 products to the US.

**Table 8: US Import Sources for HS 210690 Products**

Table 8: US Import Sources for HS 210690 Products											
Country	2011		2012		2013		2014		2015		
	V (m US\$)	Price (US\$/kg)									
Canada	591	4.3	626	4.7	655	4.8	685	4.7	693	4.7	
Thailand	150	2.2	140	2.1	153	2.0	163	2.1	154	1.9	
China	84	4.3	87	5.4	92	4.7	101	5.2	109	5.2	
Germany	74	11.4	90	12.7	102	9.8	115	10.2	107	9.2	
United Kingdom	89	15.9	75	12.3	80	14.9	95	15.7	92	14.3	
Mexico	158	5.0	134	4.6	142	5.1	105	4.2	87	3.8	
Denmark	11	22.2	29	33.5	74	49.5	71	42.0	80	43.6	
Japan	56	30.0	51	30.2	55	32.8	51	22.7	58	22.3	
Sweden	4	5.2	47	29.7	53	28.3	64	36.0	53	31.1	
Turkey	58	13.0	43	11.4	32	10.9	44	11.4	49	9.5	
World	1,771	4.7	1,890	5.0	1,995	5.0	2,047	5.0	2,084	4.9	

Source: UN Comtrade (2016)

## Apparent consumption

Due to different data sources, a numerical estimate of consumption would not be reliable. However, according to market participants, the organic tofu market is growing in the US (Vitasoy, 2016; Pulmuone, 2015) and has been growing in Germany, although there has been a slight decrease in 2016 (bioVista GmbH, 2016).

## Comparison and outlook

Trade has been increasing in both countries over the previous years. However, there has been a significant decrease in trading volumes in Germany in 2015. In spite of growing German production, the consumption has also experienced a slight decrease in 2016. However, trends cannot be drawn based on one year. Further decreases are therefore not expected. The trade volume and consumption will probably stay on the same levels in the next years. On the contrary, as US experiences continuous increases in trade and consumption, the situation is becoming more attractive for potential importers.

## 3. Market characteristics

### Germany

#### ***Consumer preferences***

Consumers increasingly prefer non-GMO and high quality tofu (bio verlag gmbh, 2013). Domestic soybean farmers cultivating resilient kinds such as the “Vinton” soybean try to ensure non-GMO production (Hansen, 2012). Natural tofu should have an aromatic taste with a sweet note, a soft texture, and contain about 45% protein (bio verlag gmbh, 2013). Consumers expect spiced and smoked tofu, tofu sausages, and cutlets (The Organic & Non-GMO Report, 2006). They buy these products in organic food stores, organic and commercial supermarkets, and via online organic retailers (Sywottek, 2009; Life Food GmbH, 2013a).

#### ***Market segments***

Main consumers are vegetarians, vegans, and health and animal welfare conscious people, mostly women (bio verlag gmbh, 2013; Amerland, 2015; Euromonitor, 2011). They eat tofu as a substitute for meat or to cover their protein requirement (Ulrich & Ulrich, 2015). Latest available numbers reveal about 900,000 vegans and 5.31 m vegetarians starting at the age of fourteen. So-called flexitarians, who eat as little meat as possible, are an increasing target group (Amerland, 2015).

Restaurants or caterers as B2B customers play a minor role (Indiegogo, 2016). The majority of restaurants cooking with tofu are Asian. Based on field research, they purchase non-organic tofu at Asian wholesalers. Since organic tofu producers also manufacture further tofu products, there are no following business customers.

#### ***Conditions of Acceptance***

Consumers require several attributes when buying organic tofu:

- Regionality
- Sustainability
- Social fairness for farmers (organic-market.info, 2013).

This transparency makes customers willing to pay higher prices than for commercial tofu (Miersch, 2014b). To convince new customers, fairs and tastings help to provide this information (Life Food GmbH, 2013c). EU-organic regulations assure customers that at least 90% of all ingredients are from controlled organic farming with a maximum of 0.9% GM proportions (Life Food GmbH, 2013b). Such controls are verified by the EU bio label (Grünstempel, 2010).

### ***Price elasticity of demand***

Regular buyers of organic tofu show a price-inelastic reaction of between -0.4 and -1.0. Occasional buyers and buyers of conventional alternatives are more price elastic (Schröck, 2014).

### ***Competition***

The leading producer of organic tofu is Life Food. Its strongest competitors are Tofutown, Dennree, and competitors from the Netherlands, France, and Great Britain (Sywottek, 2009). The strongest substitute of organic tofu is conventional tofu. Other competitive products are flax, sunflower, and tempeh (Hansen, 2012; Euromonitor, 2011).

### ***Demand trends***

Meat scandals and commercial tofu production's bad reputation towards the environment and labor practices have led to a rising interest in organic tofu (taz, 2009). Most growth potential is in big cities where people tend to focus on sensible and meatless nutrition (organic-market.info, 2013). In 2016, the organic food market turnover rose to about € 8 b, but new organic products led to a 2.8% sales decrease of organic tofu (bioVista GmbH, 2016). German subsidies increased local soy fields to more than 17000 ha up until 2015 (Miersch & Recknagel, 2014).

## **The United States**

### ***Consumer Preferences***

Consumers expect organic natural and spiced tofu as well as substitutes for burgers, chicken, and frozen entrees (Nasoya 2016; United Soybean Board, 2016a). They buy these substitutes at natural food stores or conventional supermarkets (United Soybean Board, 2016b). Nowadays, 41% of Americans consume soy foods or beverages once a week or more. Tofu is the fourth most popular soy food and is mostly integrated in dinner (United Soybean Board 2014; United Soybean Board 2016c).

### ***Market Segments***

Vegetarians, vegans, and health conscious customers are the primary market segments for organic tofu (United Soybean Board, 2016b). Out of the 75 m millennials, parents aged eighteen to thirty-five are the biggest consumers (McNeil, 2016). The increasing number of Asian citizens seeking for a healthy version of their traditional food further increases the demand for organic tofu (United Soybean Board, 2016c). The growing number of vegetarian and vegan restaurants, which use organic tofu leads to an increasing business segment of this soy food (HappyCow's Healthy Eating Guide, 2016).

### ***Conditions of Acceptance***

Organic tofu buyers look for:

- Silken, firm or baked variations (United Soybean Board, 2016a)

- Health benefits: high protein, low fat, low cholesterol
- Environmental friendly production
- Regionality: 83% of consumers want to support domestic farmers (United Soybean Board, 2016c)

In 2002, the USDA’s National Organic Program (NOP) established four classification categories to provide customers with the exact organic content of their food (see table 9) (USDA, 2016). 67% of consumers are willing to pay more for organic classified than for commercial tofu (United Soybean Board, 2016c).

<b>Table 9: USDA's Organic Food Classification System</b>		
Category name	Definition	Display of USDA organic seal
100% Organic	Food made with 100% organic ingredients	Maybe
Organic	Products with at least 95-99% organic ingredients (by weight) Remaining ingredients are not available organically but have been approved by the NOP	Maybe
Made with organic ingredients	Food must contain 70-94% organic ingredients	No
Other	Products with less than 70% organic ingredients	No
Source: USDA, 2016		

**Price elasticity of demand**

Americans are willing to pay up to twice the price of conventional food for organic alternatives. Target customers value health effects over pricing. This suggests an inelastic demand for organic products (Nath, 2015).

**Competition**

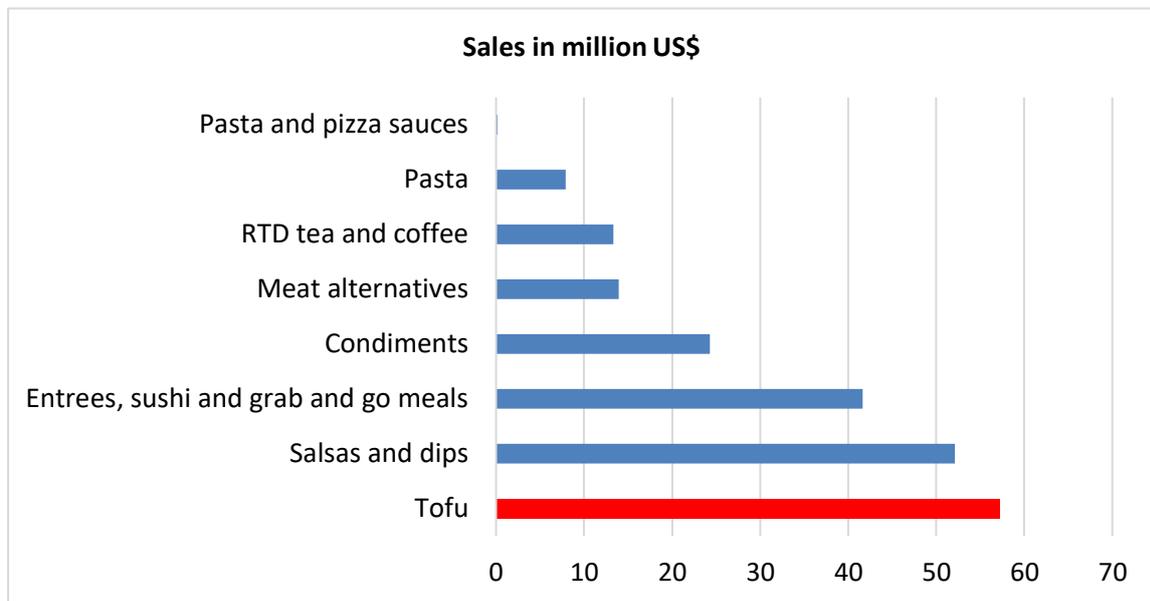
Nasoya is the leading organic tofu brand among competitors such as Mori-Nu and Trader Joe’s private label brand (United Soybean Board, 2016c). Based on their identical nutritional values, conventional and organic tofu are the strongest competitors. Further substitutes are other organic oilseed products and tempeh (Hansen, 2012; United Soybean Board, 2016a).

**Demand Trends**

The organic food industry reached new records in 2015, with total sales of \$ 39.7 b (McNeil, 2016). Since 2012, the number of organic food stores has increased by 15% per year. Organic tofu is the most popular organic refrigerated food (see figure

2) (Organic Trade Association, 2016). To serve the demand for regional tofu, there are about 125,000 acres of organic soybeans (Hansen, 2012).

**Figure 2: Sales Value of Organic Refrigerated Foods in the US in 2016, by Category (in million U.S. dollars)**



Source: Statista, 2016

## Comparison and outlook

In the US and Germany, main consumers are vegetarians and vegans. Business consumers are less relevant. Buyers prefer regional and sustainable non-GMO tofu variations. They are willing to pay price premiums for their favorite tofu brands. Both markets grow due to the trend for healthy diets. This will also increase the future demand. Exporters see a potential in the small domestic production which cannot yet serve those preferences.

## 4. Market access

### Tariffs

#### Germany

Germany is part of the EU and does not impose tariffs on imports from other EU members. Table 10 summarizes the tariffs imposed on other countries.

Table 10: EU Import Tariffs for HS 21069092	
Type/Country	Ad valorem duty
MFN applied duty rates	12.8%
Economic Partnership Agreements CARIFORUM	12.8%
EU-Eastern and Southern Africa States agreement	0.0%
European Economic Area Agreement	0.0%
Generalized System of Preferences (GPS) scheme	8.9%
Least Developed Countries (LDC) duties	0.0%
Overseas Countries & Territories Agreement	0.0%
Andorra	0.0%
Albania	0.0%
Algeria	0.0%
Bosnia and Herzegovina	0.0%
Cameroon	0.0%
Ceuta-Melilla	0.0%
Colombia	0.0%
Ecuador	0.0%
Egypt	0.0%
Faroe Islands	0.0%
Fiji	0.0%
Former Yugoslav Republic of Macedonia	0.0%
Georgia	0.0%
Chile	8.9%
Israel	0.0%
Jordan	0.0%
Kosovo	0.0%
Lebanon	0.0%
Mexico	0.0%
Montenegro	0.0%
Morocco	0.0%
Occupied Palestinian Territory	0.0%
Papua New Guinea	0.0%
Peru	0.0%

Republic of Moldova	0.0%
San Marino	0.0%
Serbia	0.0%
South Africa	0.0%
South Korea	0.0%
Switzerland	0.0%
Syrian Arab Republic	0.0%
Tunisia	0.0%
Turkey	0.0%
Source: World Trade Organization - TAO (2016)	

### ***The United States***

<b>Table 11: US Import Tariffs for HS 21069099</b>	
<b>Type/Country</b>	<b>Ad valorem duty</b>
MFN applied duty rates	6.0%
Caribbean Basin Economic Recovery Act (CBERA)	0.0%
General duty	20.0%
Generalized System of Preferences (GSP) scheme	0.0%
Australia	0.0%
Bahrain	0.0%
Canada	0.0%
Colombia	0.0%
Dominican Rep. and Central America	0.0%
Chile	0.0%
Israel	0.0%
Jordan	0.0%
Mexico	0.0%
Morocco	0.0%
Oman	0.0%
Panama	0.0%
Peru	0.0%
Singapore	0.0%
South Korea	0.0%
Source: World Trade Organization - TAO (2016)	

# Standards and regulations

## **Germany**

EU applies the Regulation (EU) No 1169/2011 on food information to consumers. It requires transparent and harmonized information on allergens including soy and precise nutrition information on prepackaged processed foods (EC, 2016a). Imports of food of non-animal origin must comply with (EC) No 852/2004, No 178/2002, and No 882/2004 (EC, 2014). Products labelled organic must comply with (EC) No 834/2007. Non-EU countries may import only if the product is produced and inspected under equivalent conditions that apply to EU organic producers. Organic tofu importers in Germany must be registered with the competent authority in the respective Federal State and be certified by a control body accredited in Germany (BLE, 2014).

EU countries require that shipments include:

- A certificate issued by the competent authority of the exporting country.
- SPS certificates
- Single Administrative Document (SAD) for trade outside the EU, or of non-EU goods. SAD contains company name and address of seller and buyer, number and kind of packages, precise description of articles as well as terms of delivery and payment.
- A certificate of origin may be required in some cases (USDC ITA, 2016).

Companies established outside of the EU must have an Economic Operator Registration and Identification (EORI) number to lodge a customs declaration or an Entry/Exit Summary declaration. An EORI number can be used for exports to any of the 28 EU member states (USDC ITA, 2016).

## **The United States**

Companies importing non-meat food to the US must be registered with the US FDA and comply with safety, sanitary and labeling requirements specified in the US Federal Food, Drug and Cosmetic Act. The US FDA inspects the imported food for compliance. Before any food can enter the US, a prior notice is required (US FDA, 2015). Tofu importers must register in the FCE category, file scheduled processes and follow CFR Title 21, Sections 113 and 114 (Registrar Corp, 2016).

Organic products must comply with the US Organic Food Production Act and CFR Title 7, Section 205 (USDA AMS, 2016a). Producers must be certified by an agent accredited by the USDA. The certification includes several fees that may be reimbursed once the producer is certified organic (USDA AMS, 2016b).

## **Non-tariff barriers**

The German market for organic tofu is dominated by Life Food GmbH. Similarly, the US market is dominated by a few large multinational companies. Other companies sell only locally or have a small share. Therefore, the German and US market both experience strong concentration. This competitive barrier might make it difficult for a new exporter to enter.

## **Comparison and outlook**

Germany has a high number of preferential tariff agreements which may facilitate future imports from many countries. Although the US has less of these agreements, they impose a lower MFN rate than Germany. Both countries have similarly strong regulations when it comes to importing organic tofu. The process of getting certified might be expensive and time consuming. The regulations are fixed and are not likely to change in the coming years.

## 5. Prices

### Prices at Producer Level

#### *Germany*

First level producers of organic tofu are soybean farmers. In Germany, soybeans are traded according to Rotterdam prices. According to table 12, there is an average price of € 401 per ton. Surcharges for organic labeling may exceed € 120 per ton (Recknagel, 2014).

Germany imports the majority of soybeans used for organic tofu from five countries. Table 12 shows the decreasing commodity prices since 2012. In 2016, prices increased by about 4% compared with the previous year. The current average price is € 416 per ton.

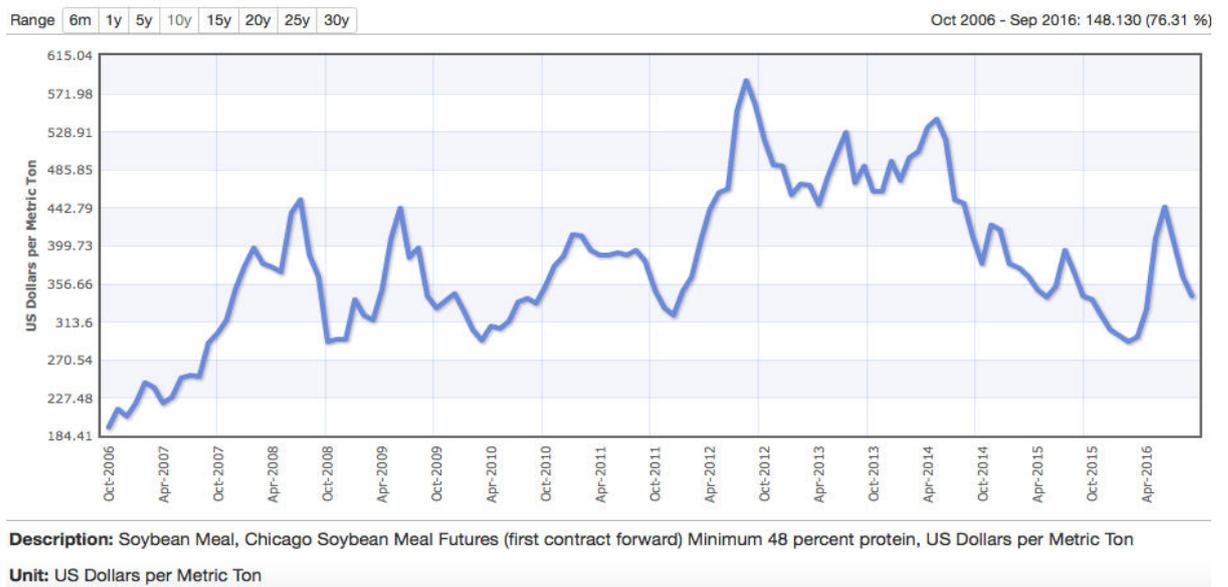
<b>Table 12: Producer Prices per Country for Organic Soybeans €/t</b>									
Country	2012	2013	Development 2012/13	2014	Development 2013/14	2015	Development 2014/15	2016	Development 2015/16
Germany				297,250		360,000	-9.38%	445,625	23.78%
Switzerland	647,555	624,503	-3.56%	555,114	-11.11%	485,725	-12.50%	508,005	4.59%
France	463,750	435,170	-6.16%	391,620	-10.01%	347,943	-11.15%	361,699	3.95%
Austria	540,128	472,084	-12.60%	415,984	-11.88%	369,589	-11.15%	384,201	3.95%
United Kingdom	417,732	385,602	-7.69%	334,385	-13.28%	301,595	-9.81%	313,519	3.95%
USA	419,178	389,850	-7.00%	343,155	-11.98%	313,155	-8.74%	323,552	3.32%

Source: Knoema, 2015; FAOSTAT, 2015; Schweizerischer Getreideproduzentenverband, 2016; FAO, 2016; Swiss granum, 2016; IndexMundi, 2016 ; Recknagel, n.d.; Agrarmarkt Informations-Gesellschaft, 2016

#### *United States*

Figure 3 shows the US market price for regular soybean meal from 2006 to 2016. After strong price fluctuations caused by seasonality and weather, current prices decrease.

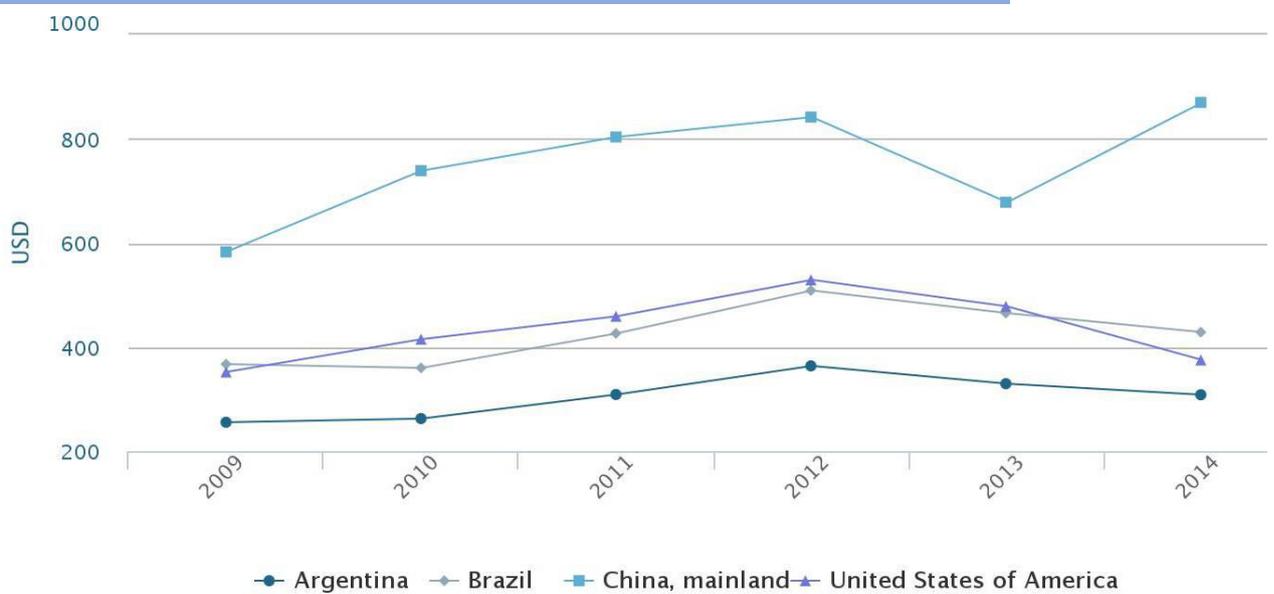
**Figure 3: US Market Soybean Meal Price (2006-2016)**



Source: CBOT

Figure 4 presents the producer prices for regular soybeans in Argentina, Brazil, China, and the US. Between 2012 and 2014, the American production price decreased.

**Figure 4: Soybean Producer Prices in Argentina, Brazil, China, US**



Source: FAO

## World market prices

### Germany

As table 13 shows, the German FOB price for HS code 21069092 fluctuated between 2011 and 2015. Since 2011, export prices have increased by 26% while current prices remain constant (UN Comtrade, 2016b).

**Table 13: Switzerland's Export to Germany (FOB Prices) between 2011 and 2015**

Year (export)	Trade value (m US\$)	Net weight (in thousand tons)	Trade unit value (US\$/kg)	Annual changes	Development 2011 - 2015
2011	US\$121	15,970	US\$7.60		
2012	US\$129	39,752	US\$3.25	-57.17%	
2013	US\$128	32,673	US\$3.93	20.96%	
2014	US\$111	10,945	US\$10.17	158.36%	
2015	US\$102	10,653	US\$9.58	-5.78%	26.11%

Source: UN Comtrade, 2016b

Since 2013, Germany benefits from cheaper and less varying CIF prices (see table 14) (UN Comtrade, 2016b).

**Table 14: Germany's Import Prices from the World (CIF) between 2011 and 2015**

Year (export)	Trade value (b US\$)	Net weight (in thousand tons)	Trade value in 1 kg(US\$/kg)	Annual changes	Development 2011 - 2015
2011	US\$1.4	264,060	US\$5.24		
2012	US\$1.4	302,667	US\$4.64	-11.38%	
2013	US\$1.5	308,039	US\$5.03	8.23%	
2014	US\$1.7	313,206	US\$5.41	7.74%	
2015	US\$1.4	315,292	US\$4.55	-15.99%	-13.19%

Source: UN Comtrade, 2016b

### **United States**

As table 15 shows, the US FOB price for HS code 21069092 went up in 2011, but decreased in 2014. Export prices have increased by 6% while current prices remain stable (UN Comtrade, 2016b).

**Table 15: Canada's Export to US (FOB Prices) between 2011 and 2015**

Year (export)	Trade value (m US\$)	Net weight (in thousand tons)	Trade value in 1 kg(US\$/kg)	Annual changes	Development 2011 - 2015
2011	US\$599	142,909	US\$4.19		
2012	US\$638	142,011	US\$4.49	US\$0.07	
2013	US\$666	144,152	US\$4.62	US\$0.03	
2014	US\$695	151,509	US\$4.59	-US\$0.01	
2015	US\$705	158,385	US\$4.45	-US\$0.03	6.14%

Source: UN Comtrade, 2016b

The CIF price increased by 3% since 2011. In 2012, it increased by 6% and decreased by 3% in 2015 (see table 16) (UN Comtrade, 2016b).

**Table 16: America's Import Prices from the World (CIF) between 2011 and 2015**

Year (export)	Trade value (b US\$)	Net weight (in thousand tons)	Trade value in 1 kg(US\$/kg)	Annual changes	Development 2011 - 2015
2011	US\$1.7	374,575	US\$4.73		
2012	US\$1.8	377,668	US\$5.00	5.86%	
2013	US\$1.9	397,962	US\$5.01	0.18%	
2014	US\$2.04	407,454	US\$5.02	0.17%	
2015	US\$2.08	426,096	US\$4.89	-2.63%	3.44%

Source: UN Comtrade, 2016b

## Prices at Wholesale Level

### *Germany*

Wholesalers can buy organic tofu in kg units (Alibaba, 2016). Prices range from € 6.63 to € 15.82 per kg depending on added ingredients, the percentage of protein, and the region of origin (Smilefood, 2014; Agrarmarkt Informations-Gesellschaft, 2016). Information on price trends were not available due to wholesaler's privacy policies.

### *United States*

In the US, organic tofu is sold in lbs. units. One unit per kg costs around US\$ 6. Wholesalers have to buy at least four or five lbs. (around 2 kg).

## Prices at Retail Level

### *Germany*

Retail prices for organic tofu were assessed in November 2016. Visits to regular supermarkets (Rewe, Aldi Süd) and an organic supermarket (Alnatura) revealed the following brands:

- Alnatura
- Rewe bio
- Taifun

- Vegetarisch lecker

Table 17 shows the average shelf price of € 1.43 per 200 g of organic tofu. Vegetarian and vegan online shops sell at a similar price (allbio, 2016; alles-vegetarisch, 2016).

Table 17: German Retail Prices of Organic Tofu in €					
Time	Product	Quantity	Lowest price	Highest price	Average price
Nov 16	Organic tofu	200 g	1.29	1.56	1.43
Nov 16	Smoked, seasoned tofu	200 g	2.19	2.94	2.57
Source: Field research					

### **United States**

Retailers sell tofu in ounces (oz.). The retail price of organic tofu varies by brand, quality, quantity, and sales channel. Organic tofu is not available in many supermarkets. 1 kg of tofu costs around US\$ 7.4 (see table 18).

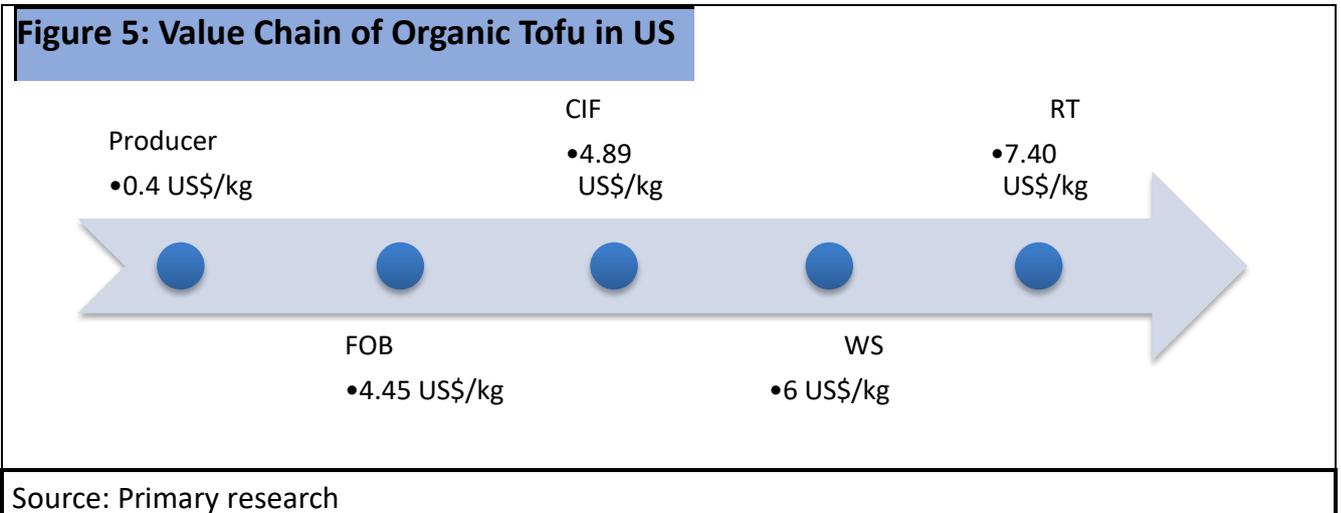
**Table 18: Retail Price in US**

Distributor	Company	Product's title	Package in oz.	Package in kg	Price	Price per unit (US\$/oz.)	Price per unit (US\$/kg)
Wegmans	Wegmans Organic	Firm Tofu	14	0.42	1.99	0.14	4.74
	SoyBoy	Tofu Lin, Organic, Asian Flavor	8	0.24	3.99	0.50	16.63
	Nasoya	Tofu, Organic, Extra Firm	42	1.26	5.99	0.14	4.75
Fairway Stores	SoyBoy	Tofu Lin, Organic, Asian Flavor	8	0.24	3.49	0.44	14.54
	SoyBoy	Tofu, Organic, Firm	16	0.48	2.49	0.16	5.19
	Nasoya	Tofu, firm	12	0.36	2.99	0.25	8.31
	Nasoya	Tofu, firm	14	0.42	2.69	0.19	6.40
	Nasoya	Tofu, firm	16	0.48	2.69	0.17	5.60
	Mori Nu	Tofu, firm	12.3	0.369	2.49	0.20	6.75
	Wildwood	Tofu, Organic, Extra	15.5	0.465	3.33	0.21	7.16
Amazon	Mori Nu	Tofu, firm	12.3	0.369	2.71	0.22	7.34
Festival Foods	Mori Nu	Tofu, firm	12.3	0.369	2.09	0.17	5.66
	Wildwood	High protein tofu	10	0.3	2.29	0.23	7.63
	Wildwood	High protein tofu	20	0.6	3.99	0.20	6.65
	Wildwood	High protein tofu	14	0.42	3.47	0.25	8.26
	West Soy	Tofu, firm	14	0.42	3.47	0.25	8.26
Woodman's	House Food	Organic tofu	8	0.24	1.89	0.24	7.88
	Wildwood	Tofu, Organic, Extra	15.5	0.465	2.96	0.19	6.37
	Wildwood	Tofu, Organic, Extra	14	0.42	3.49	0.25	8.31
	West Soy	Tofu, firm	14	0.42	2.19	0.16	5.21
	Nasoya	Tofu, firm	14	0.42	1.89	0.14	4.50
Basics Natural Foods Co-op	Woodstock	Organic tofu firm	14	0.42	2.8	0.20	6.67

Source: Field research

## Value chain

The following graph is an example of the value chain for organic tofu from Canada to the US. The highest increase in value happens on the FOB level.

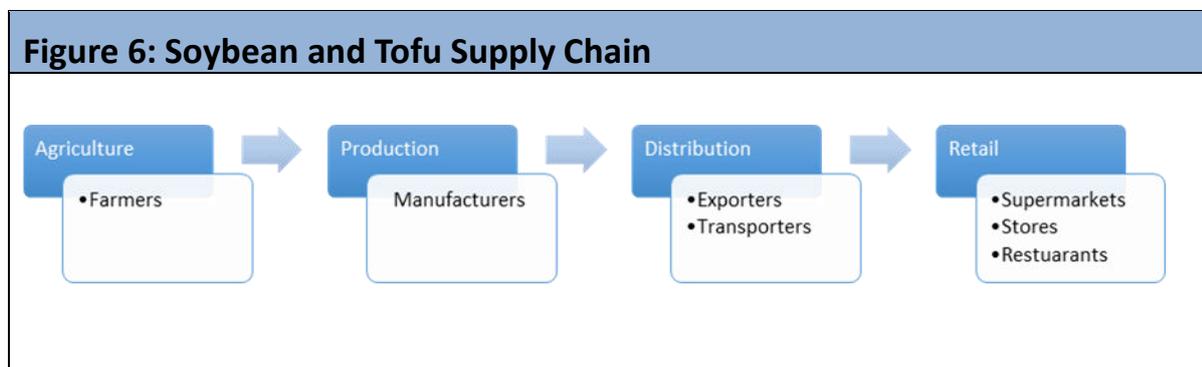


## Comparison and outlook

Organic soybean and tofu prices fluctuate while current producer prices increase. After recent years of differing FOB prices, German import cost have decreased. This leads to an increasing demand for imported organic soybeans and tofu in Germany. American retail prices are almost three times that of German prices. Both markets benefit from a growing demand for non-GMOs. Imports and exports increase despite increasing retail prices.

## 6. Distribution channels

The distribution channels are similar for the US and Germany, only with differences in sourcing. Figure 6 shows the supply chain for organic tofu.



Since organic tofu is derived from organic soybeans, the distribution network begins with soybean farmers. In Germany, organic soybeans are sourced from countries in southern Europe, China, Japan, Brazil, Argentina, and the US (TIS, 2016). For the US, despite being the largest producer of soybeans, the organic variety is generally used as feed for livestock, requiring food producers to look to China and India for supply of organic soybeans (Peters, 2013).

Soybeans are transported by ship, rail or truck as bulk cargo, but occasionally as break-bulk cargo in bags. Soybeans have a very good storage life, so are well-suited to being transported in bulk for long periods of time. When handling the cargo, transporters must keep the cargo dry, out of the sun, and cannot use hooks as noted on the cargo. Soybeans should be transported in ventilated cargo containers (TIS, 2016).

Soybeans require specific temperature, humidity, and ventilation requirements. The favorable temperature range is 5-25°C. Soybeans should not be stored above 30°C for an extended period of time and should be kept away from heat sources. Soybeans must be protected from all forms of moisture such as seawater, rain and condensation and should be ventilated at airing of 10-20 changes/hr (TIS, 2016).

Soybean wholesalers purchase and distribute soybeans to food processors (including tofu processors), exporters, and other buyers. Wholesalers are located near soybean farmers in order to save costs on transportation. The wholesaler adds the majority of value. Soybeans are a large wholesale category and it is easy to pass the prices on to manufacturers (IBISWorld, 2016b).

After organic soybeans are processed into tofu, the tofu may be purchased by grocery wholesalers to service smaller local retail grocers. If the grocery retailers are

large enough, they will purchase from producers directly (IBISWorld, 2016b). Organic tofu will be transported by truck with refrigeration capabilities.

## **Comparison and outlook**

In both the US and Germany, large producers are vertically integrating the wholesaling of organic soybeans. In Germany, Life Food GmbH uses seed from Canada, and contracts with growers in Germany, Austria and France (OTA, 2013). In the US, East Asian organic tofu producers Pulmuone Foods and House Foods have established subsidiaries in the US for processing organic soybeans from Asia into tofu and to sell directly to the US (ImportGenius, 2016). Little growth is expected in organic soybean production, and future sourcing constraints for organic soybeans are expected to be tighter due to higher demand for biofuels.

## **7. Commercial practices**

Organic tofu is processed domestically within the US or Germany, therefore commercial practices focuses on importing organic soybeans.

### **Germany**

There are many organic soybean importers in Germany as imports account for around 90% of soybean supply in the EU (USDA FAS, 2015). Soybean wholesalers are responsible for making purchases of organic soybeans to be delivered to organic tofu processors. Since the wholesalers also act as the distributors, wholesalers take ownership of the organic soybeans and resell them to organic tofu processors.

Imports by a German organic tofu processor can be made by phone, fax, or email to the wholesaler. The majority of import transactions, especially by large German distributors, are conducted directly between the soybean processors and wholesalers acting as export companies. Account terms are 30/60/90 days or sometimes require a payment against documents (USDC ITA, 2014). Letters of credit (L/C) are still used in Germany, but are becoming less common due to the cost and time requirements. Instead, the most popular method of payment is wire transfer via EFT or SWIFT. Cash-in-advance is atypical (USDC ITA, 2014).

After establishing contact, the wholesaler and organic tofu processor will negotiate terms and create a contract. The contractual order will include contact information, type of buyer, quantity (specific metric ton requirement), quality and specifications desired, shipment details (FOB, CIF, port of shipment/destination), date bids due and delivery (shipment) period, financing considerations and bank references (USSEC, 2015). Contracts also define consequences of payment default and dispute resolution methods (USSEC, 2015).

### **United States**

The import process in the US is similar to that of Germany. Organic tofu processors will contact soybean wholesalers directly. Orders can be placed with wholesalers via phone, fax, or online. The same 30/60/90 day account terms apply. In the US there are also multiple payment options including cash-in-advance, L/C, or wire transfer. Trade contracts include the same information as those in Germany. US importers can manage trade documentation using the US Customs and Border Protection (CBP) Automated Commercial Environment (ACE). ACE offers streamlined processes with other US agencies such as USDA, easing import declaration of goods (US CBP, 2016).

## **Comparison and outlook**

Both the US and Germany have made international trade of organic soybeans less risky and costly by implementing electronic payment systems and streamlined import documentation systems. This reduces transaction exposure in foreign exchange rates and risk associated with time at destination ports. This makes trade easier. Additionally, Germany implemented the Protein Strategy which aims to reduce German dependence on imported soybeans (USDA FAS, 2014), also impacting imports of organic soybeans.

## 8. Packaging and labeling

### Packaging

#### *Germany*

Organic tofu is mainly processed in the country of destination. Grocery stores sell organic tofu packed in vacuum foils to protect it from damage, contamination, and volume loss (Bewusst-sein, n.d.; BLE, 2016a). On average, 5 g foil cover 200 g organic tofu. Appropriate disposal enables the packaging to be burned without producing a residue. According to regulation (EC) No. 2023/2006, packaging must not contain any harmful plasticizers (Life Food GmbH, 2013d).

#### *United States*

The US FDA controls the food packaging regulations in the US (US FDA, 2016). The physical packaging itself differs depending on label and brand of the product; however, each type follows the US FDA regulations. Producers of organic tofu use the aseptic carton package of renewable materials and recyclable paperboard. It protects tofu from light and bacteria and allows for a long shelf life without refrigeration. Its net weight is 349 g (Morinaga, 2016).

### Labeling

#### *Germany*

Since July 2012, pre-packaged organic food must show the EU bio-logo (figure 7). This symbol requires at least 95% organic ingredients by weight. Together with the bio-code number, it has to appear on any organic food, which is at least partly processed in the EU (Grünstempel, 2010).

**Figure 7: EU Bio-logo**



Source: BMEL, n.d.

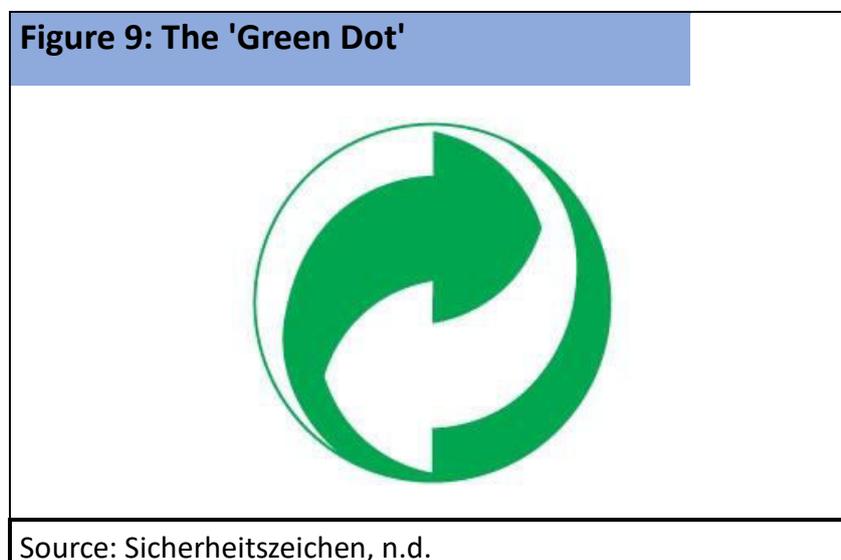
Producers may certify their organic food with the voluntary German bio-seal (see figure 8) (BLE, 2016b).



Since 2014, regulation (EU) No. 1169/2011 determines mandatory consumer information on food:

- Name of food
- List of ingredients
- Allergens
- Expiration date
- Name and address of food company
- Country of origin or place of production
- Nutrition declaration including calorific value per 100 g (EU, 2011)

A manufacturer may mark his packaging with the 'green dot' (see figure 9), which classifies recyclable packaging in Germany if he pays a license fee of at least € 140 per year, the "Duales System Holding GmbH & Co. KG" collects his packaging (Abfallguru, 2016).



## **United States**

The NOP establishes rules and regulations for the production, handling, and labeling of USDA organic products (USDA AMS, 2016c). These regulations need to be certified by an authorized certification body. Non-certified producers have to show the list of certified organic ingredients with percentage on the panel. A “100% organic” product has to consist of certified ingredients being processed with organic production aids. An “organic” product must contain 95% certified agricultural ingredients. “Made with organic” products include food with at least 70% certified ingredients, products made without excluded methods, and non-agricultural products allowed by the National List. Labeling opportunities are:

- Principal display panel: portion of the package
- Information panel: ingredient statement and other product information
- Identity statement: “tofu” (USDA AMS, 2012)

Any final product that is organic or contains organic ingredients must be certified. With no certification, it is neither allowed to make any organic claim on the display panel nor to use the USDA organic seal on the package.



## **Organic production standards**

American and German standards for organic food production are mutually accepted. Organic processing prohibits the usage of synthetic pesticides, sewage sludge, irradiation, and GM. Natural alternatives are crop rotation supported by ecological waste. The soil where soybeans grow must not have had contact with prohibited substances for at least three years before the organic cultivation. Organic products must not be mixed with non-organic versions throughout the entire supply chain (USDA AMS, 2016d).

## **Comparison and outlook**

In Germany, vacuum foils protect organic tofu from any external influences, while American producers put their products in aseptic carton package. Certified labels provide information on the ingredients and processing. Consumers can check the organic origin of their products. Future potential will be more environment-friendly packaging and uniform labeling categories.

## 9. Sales promotion

The main methods used to promote organic tofu are trade fairs, trade magazines, specialty internet portals and associations. The following chapter lists the main promotion methods by type.

### Trade fairs and exhibitions

#### **Germany**

Angua Köln - The world's leading food fair for the retail trade and the food service and catering market

Koelnmesse GmbH

Messeplatz 1

50679 Köln, Germany

Phone +49 2218 212240

Email: [anuga@koelnmesse.de](mailto:anuga@koelnmesse.de)

Website <http://www.anuga.com/anuga/index-2.php>

BIOFACH - World's Leading Trade Fair for Organic Food

NürnbergMesse GmbH

Exhibition Centre

90471 Nürnberg, Germany

Phone +49 9118 6068998

Website: <https://www.biofach.de/en>

FOOD & LIFE - Top-quality, exquisite and traditional artisan specialties from the whole of Europe

GHM Gesellschaft für Handwerksmessen mbH

Fairground Messe München

81823 München, Germany

Phone +49 8918 9149110

Email: [contact@ghm.de](mailto:contact@ghm.de)

Website: <http://www.food-life.de/>

#### **United States**

BIOFACH AMERICA - All Things Organic

NürnbergMesse GmbH

Baltimore Convention Center

One West Pratt Street

Baltimore, Maryland, USA

Phone: +49 9118 6068179

Website: <https://www.biofach-america.com/>

## NATURAL PRODUCTS EXPO

New Hope Network

Natural Products Expo East

Baltimore Convention Center

One West Pratt Street

Baltimore, Maryland, USA

Website: <http://www.expoeast.com/ee16/public/enter.aspx>

Natural Products Expo West

Anaheim Convention Center

800 West Katella Avenue

Anaheim, California, USA

Website: <http://www.expowest.com/ew17/Public/Enter.aspx>

SOHO EXPO - Annual Natural Products Industry Trade Show

SouthEast Natural Products Association

Gaylord Palms Hotel and Convention Center

6000 W. Osceola Parkway

Kissimmee, Florida, USA

Phone: +1 727 846 0320

Email: [info@SOHOexpo.net](mailto:info@SOHOexpo.net)

Website: <http://www.southeastnpa.org/soho-expo.html>

## Trade magazines

### **Germany**

BioHandel

Bio Verlag GmbH

Magnolienweg 23

63741 Aschaffenburg, Germany

Phone: +49 6021 44890

Email: [info@biohandel-online.de](mailto:info@biohandel-online.de)

Website: <http://www.biohandel-online.de/>

Bioland

Kaiserstraße 18

55116 Mainz, Germany

Phone: +49 6131 239790

Email: [info@bioland.de](mailto:info@bioland.de)

Website: <http://www.bioland.de/start.html>

BioNachrichten

Biokreis e.V.

Stelzlhof 1

94034 Passau, Germany  
Phone +49 8517 5650  
Email: [info@biokreis.de](mailto:info@biokreis.de)  
Website: [www.biokreis.de](http://www.biokreis.de)

Biowelt  
INGER Verlagsgesellschaft mbH  
Luisenstraße 34  
49074 Osnabrück, Germany  
Phone: +49 0541 58054447  
E-Mail: [hertling@ingerverlag.de](mailto:hertling@ingerverlag.de)  
Website: <http://www.biowelt-online.de/>

### ***United States***

Acres USA  
4029 Guadalupe St.  
Austin, Texas, USA  
Phone: +1 512 892 4400  
E-Mail: [info@acresusa.com](mailto:info@acresusa.com)  
Website: <http://www.acresusa.com/>

Food Business News  
4801 Main St., Suite 650  
Kansas City, Missouri, USA  
Phone: +1 816 756 1000  
Website: <http://www.foodbusinessnews.net/>

Green money e-journal  
Website: <http://www.greenmoneyjournal.com/june-2014/ota/>

### ***World***

Organic Standard  
E-Mail: [office@organicstandard.com](mailto:office@organicstandard.com)  
Website: <http://organicstandard.com>

## **Associations**

### ***Germany***

Bio Verlag GmbH

The organization cares for environment and sustainable consumption. It operates several websites and trade magazines focused on organic food. It also facilitates search for organic products and producers. Organic tofu providers can join the list or advertise through the organization.

Magnolienweg 23  
63741 Aschaffenburg, Germany  
Phone: Tel.: +49 6021 44890  
Website: <http://naturkost.de/>

Bundesverband Naturkost Naturwaren (BNN)  
Association of Organic Processors, Wholesalers and Retailers represents the interests of organic and natural food sectors. Its members include processors, wholesalers, importers and retailers of organic foods. The association provides a platform for communication and information sharing.

Michaelkirchstr. 17-18  
10179 Berlin, Germany  
Phone: +49 3084 7122444  
Email: [info@n-bnn.de](mailto:info@n-bnn.de)  
Website: <http://www.n-bnn.de/>

### ***The United States***

Organic Trade Association

The Organic Trade Association helps its members promote and protect the organic sector. It has over 8,500 businesses registered, including the whole value chain from farmer to retailer. It offers its members valuable resources and connections in order to achieve its goal of excellence in agriculture and commerce.

444 N. Capitol St. NW, Suite 445A  
Washington D.C., USA  
Phone: +1 202 403 8520  
Website: <https://www.ota.com/resources/market-analysis>

Soyatech

The *Soya & Oilseed Bluebook*, published by Soyatech, LLC. is the authoritative world-wide directory for the oilseed, soy and grain industry. It includes crushers, processors, refiners, buyers and marketers of soybean, palm, sunflower, canola, corn and other oilseeds and products for food, feed and energy.

HighQuest Partners  
300 Rosewood Drive, Ste. 30  
Danvers, Massachusetts, USA  
Phone: +1 978 887 8800  
Website: [http://www.soyatech.com/soyfoods\\_facts.htm](http://www.soyatech.com/soyfoods_facts.htm)

## **Comparison and Outlook**

In both US and Germany, exporters of organic tofu may get important contacts from associations promoting organic trade or soybean products. The best ways to promote organic tofu are similar in both countries - trade fairs, trade magazines and specialty internet portals. The situation has been the same over the past few years. Although online platforms are becoming more important, trade fairs are still an essential source of direct promotion. The number of organic trade fairs or tofu specific trade magazines is not growing.

# 10. Market prospects

## Germany

The German organic tofu market will stay dominated by one large domestic producer. Competitive barriers to enter will therefore remain high. Concerning trade, Germany will keep its strong ties with other European countries and close neighbors, making it more difficult for outside traders to gain large shares. However, the country is and will remain in the top ten world importers. This makes it a reasonable potential target.

The market for all organic products will grow. With the increasing variety of organic foods and meat substitutes, the market for organic tofu, which stagnated in 2015 and 2016, will remain stable in the next years. Potential new customers will emerge among end consumers with special diets rather than restaurants and other food businesses.

Regulations are strict and the process of being certified organic is complicated. However, once achieved, the companies will not experience any other issues in this area as regulations will not change in the future.

Increases of producer prices of organic soybeans will make exporting organic tofu more favorable for producers. With decreasing import prices, German importers will be willing to import more. Online channels will become more prominent for promotion but presence at trade fairs will remain crucial.

## US

The American market will be dominated by Asian-based US companies which have already much bigger volumes than other competitors. However, due to the large amount of smaller regional producers, it will be easier in the US to get a niche of the market than in Germany.

International trade is currently largest among NAFTA partners. If the current threat is realized and NAFTA will be modified, the up-to-now stable partnerships could change. However, the US is the world's largest importer of the product and due to its ever-increasing trade volumes, it will likely keep the position.

The market for organic products including organic tofu will grow. Organic tofu is already established in the country and its consumption will continue to increase with the growing popularity of organic foods. The increases in demand will come from end consumers as well as the increasing number of vegetarian restaurants.

Organic regulations are currently strict and will not change in the future. Tariffs, on the other hand, might change under the new US administration. Retail prices will continue to increase. Current producer prices will decrease and make organic soybeans a less favorable market for producers. FOB prices will remain stable, which will reduce unforeseeable risks for exporters. Trade fairs will be a crucial source of contact for business partners.

## **Comparison and Outlook**

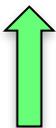
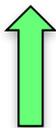
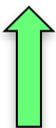
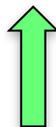
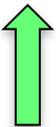
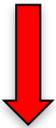
The popularity of organic products will grow in both countries. However, the US is more appealing for new exporters of organic tofu because of the growth of the organic tofu market and its more competitive environment. Germany is less appealing, as tofu is not widely recognized as part of normal diets and no popularity growth is expected. Moreover, the market will stay dominated by a large domestic producer that is preferred by the German population. Exporters to Germany would therefore have to consider a good marketing campaign or a special quality of their tofu to be successful.

Germany has more preferential trade agreements than the US. Countries that are part of such agreements will keep enjoying zero-tariff access to the markets. Exporters from outside of these areas should consider negotiating similar agreements themselves. Otherwise they would be strongly disadvantaged. Labelling and packaging requirements are already strict in both countries and will stay similar in the future.

In both countries, it is very common to import organic soybeans and process them into tofu internally, rather than importing tofu itself. New exporters to Germany and the US will therefore have to establish good contacts with wholesalers. However, this will be easy with internet and the electronic technologies that are already being used. Transaction costs will therefore continue to decrease.

Both countries will remain in the top ten importers of organic tofu in the future. They are therefore both a good target for potential exporters. The US market will be easier to enter.

**Figure 11: Market Prospects Synopsis**

Chapter		Germany Market Prospects		US Market Prospects
<b>2. Production, Trade, Consumption</b>		Expected to remain unchanged as the consumption and trade stagnated in the last year.		Increasingly attractive due to continuous increases in trade and consumption.
<b>3. Market characteristics</b>		Increasingly attractive due to increasing number of vegetarians and vegans and their price-inelastic behavior.		Increasingly attractive due to a rising trend in healthy diets and a gap between domestic supply and demand.
<b>4. Market Access</b>		Expected to remain unchanged due to fixed regulations and no recent changes in non-tariff barriers.		Expected to remain unchanged due to fixed regulations and no recent changes in non-tariff barriers.
<b>5. Prices</b>		Increasingly attractive due to a growing demand for soy products.		Increasingly attractive due to upward prices of organic food.
<b>6. Distribution</b>		Expected to remain unchanged. Little growth is expected in organic soybean production, and future sourcing constraints are expected to be tighter due to higher demand for biofuels.		Expected to remain unchanged. Little growth is expected in organic soybean production, and future sourcing constraints are expected to be tighter due to higher demand for biofuels.
<b>7. Commercial Practices</b>		Decreasingly attractive due to recent Protein Strategy which will reduce the dependence on imported soybeans.		Expected to remain unchanged due to already established electronic payment and documentation systems.
<b>8. Packaging and Labeling</b>		Expected to remain unchanged. No new regulations have been announced.		Expected to remain unchanged. Constant regulations require no adaptations and further controls.

<p><b>9. Trade Promotion</b></p>		<p>Expected to remain unchanged. Although online platforms are becoming more important, trade fairs are the most important source of direct promotion and their number is not increasing.</p>		<p>Expected to remain unchanged. Although online platforms are becoming more important, trade fairs are the most important source of direct promotion and their number is not increasing.</p>
----------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

# References

- Abfallguru. (2016). Der grüne punkt. *Abfallguru*. Retrieved December 8, 2016 from <http://abfallguru.de/gruener-punkt/>
- Agrarmarkt Informations-Gesellschaft. (2016, November 8). Preisliste. *Donau Soja*. Retrieved November 8, 2016 from <http://www.donausoja.org/de/dses-sojaschrot-preis/>
- Alibaba. (2016). *Wholesale tofu* [Data file]. Retrieved November 8, 2016 from [https://www.alibaba.com/products/F0/wholesale\\_tofu/-----G-----EU.html](https://www.alibaba.com/products/F0/wholesale_tofu/-----G-----EU.html)
- allbio. (2016). *Tofu* [Data file]. Retrieved November 8, 2016 from <http://www.allbio.de/Vegetarische-Kueche/Tofu/>
- alles-vegetarisch. (2016). Tofu & tempeh [Data file]. *alles-vegetarisch*. Retrieved November 8, 2016 from <https://www.alles-vegetarisch.de/lebensmittel/grundausstattung/tofu-und-tempeh/>
- Amerland, A. (2015, January 19). Weiblich, vegan und kritisch. *SpringerProfessional*. Retrieved December 8, 2016 from <https://www.springerprofessional.de/produktmanagement/weiblich-vegan-und-kritisch/6596090>
- von Beesten, F. (2014). Soja in der kulturlandschaft. *Sojaförderring*. Retrieved November 1, 2016 from <https://www.sojafoerderring.de/links-mehr/soja-in-der-kulturlandschaft/>
- Bewusst-sein. (n.d.). TOFU-ein qualitätsprodukt aus der sojabohne. *Bewusst-sein*. Retrieved November 16, 2016 from [http://www.bewusst-sein.net/themen/Gesundheitstips/sojabohne\\_tofu.html](http://www.bewusst-sein.net/themen/Gesundheitstips/sojabohne_tofu.html)
- bioVista GmbH. (2016). Wohin geht der vegan-trend? *bioVista GmbH*. Retrieved November 1, 2016 from <http://biovista.de/index.php/165-wohin-geht-der-vegan-trend>
- BLE. (2014). *Guidelines for Imports of Organic Products from Third Countries into the European Union*. Retrieved November 6, 2016 from [http://www.ble.de/SharedDocs/Downloads/EN/02\\_ControlLicensing/10\\_OrganicFarming/LeitlinienImporteureEN.pdf?\\_\\_blob=publicationFile](http://www.ble.de/SharedDocs/Downloads/EN/02_ControlLicensing/10_OrganicFarming/LeitlinienImporteureEN.pdf?__blob=publicationFile)
- BLE. (2016a). Verarbeiter. *Ökolandbau*. Retrieved November 16, 2016 from <https://www.oekolandbau.de/verarbeiter/verpackung-und-kennzeichnung/verpackung/anforderungen/>
- BLE. (2016b). Bio-siegel. *Ökolandbau*. Retrieved November 16, 2016 from <https://www.oekolandbau.de/bio-siegel/>

- BMEL. (n.d.). *BMEL*. Retrieved November 16, 2016 from [https://www.bmel.de/SharedDocs/Bilder/Fachbereiche/Landwirtschaft/NachhaltigkeitOekolandbau/EU-Bio-Logo.jpg?\\_\\_blob=poster&v=3](https://www.bmel.de/SharedDocs/Bilder/Fachbereiche/Landwirtschaft/NachhaltigkeitOekolandbau/EU-Bio-Logo.jpg?__blob=poster&v=3)
- BMEL. (2013, September 9). Anbau heimischer eiweißpflanzen stärken. *Bundesministerium für Ernährung und Landwirtschaft*. Retrieved November 1, 2016 from <https://www.bmel.de/SharedDocs/Pressemitteilungen/2013/254-Eiweisspflanzenstrategie-Sojanetzwerk.html>
- BMEL. (2015, February 10). Schmidt "der ökolandbau ist und bleibt eine wachstumsbranche". *Bundesministerium für Ernährung und Landwirtschaft*. Retrieved November 1, 2016 from <https://www.bmel.de/SharedDocs/Pressemitteilungen/2015/051-SC-Oekolandbau.html>
- BOELW. (2011). Zahlen, daten, fakten: Die Bio-Branche 2011. *Bund Ökologische Lebensmittelwirtschaft*. Retrieved November 3, 2016 from [http://boelw.de/uploads/media/pdf/Dokumentation/Zahlen\\_Daten\\_Fakten/ZDF2011.pdf](http://boelw.de/uploads/media/pdf/Dokumentation/Zahlen_Daten_Fakten/ZDF2011.pdf)
- EC. (2014). Guidance document: Key questions related to import requirements and the new rules on food hygiene and official food controls. *European Commission*. Retrieved November 6, 2016 from [https://ec.europa.eu/food/sites/food/files/safety/docs/ia\\_ic\\_guidance\\_import-requirements.pdf](https://ec.europa.eu/food/sites/food/files/safety/docs/ia_ic_guidance_import-requirements.pdf)
- EC. (2016a). Food information to consumers: legislation. *European Commission*. Retrieved November 6, 2016 from [http://ec.europa.eu/food/safety/labelling\\_nutrition/labelling\\_legislation\\_en](http://ec.europa.eu/food/safety/labelling_nutrition/labelling_legislation_en)
- EC. (2016b). EU law on organic production: An overview. *European Commission*. Retrieved November 6, 2016 from [https://ec.europa.eu/agriculture/organic/eu-policy/eu-legislation/brief-overview\\_en](https://ec.europa.eu/agriculture/organic/eu-policy/eu-legislation/brief-overview_en)
- EU. (2011, November 20). *Eur-Lex*. Retrieved November 16, 2016 from <http://eur-lex.europa.eu/legal-content/de/ALL/?uri=CELEX%3A32011R1169>
- Euromonitor. (2011). The war on meat: How low-meat and no-meat diets are impacting consumer markets. *Euromonitor International*. Retrieved November 1, 2016 from <http://www.euromonitor.com/the-war-on-meat-how-low-meat-and-no-meat-diets-are-impacting-consumer-markets/report>
- FAO. (2015). *Soybeans search data* [Data file]. Retrieved November 9, 2016 from <http://faostat3.fao.org/search/soybeans/E>
- FAO. (2016). *Production price* [Data file]. Retrieved November 9, 2016 from <http://faostat3.fao.org/browse/P/PP/E>

- George Mateljan Foundation. (2016). Tofu. *The World's Healthiest Foods*. Retrieved October 26, 2016 from <http://www.whfoods.com/genpage.php?tname=foodspice&dbid=111>
- Grünstempel. (2010, May 10). Verordnung (EU) Nr. 271/2010 vom 24.03.2010 zum EU-Bio-Logo und zur neuen Bio- Code- Nummer. *Grünstempel*. Retrieved November 16, 2016 from <http://www.gruenstempel.de/aktuelles/verordnung-gesetze/verordnung-eu-nr-2712010-vom-24032010-zum-eu-bio-logo-und-zur-neuen-bio-code-nummer/>
- Han, E. (2014). Tofu varieties: What's the difference? *The Kitchn*. Retrieved October 26, 2016 from <http://www.thekitchn.com/tofu-varieties-whats-the-difference-201345>
- Hansen, R. (2012). Organic soy. *Agricultural marketing resource center*. Retrieved November 1, 2016 from <http://www.agmrc.org/commodities-products/grains-oilseeds/organic-soy>
- HappyCow's Healthy Eating Guide. (2016). Find vegan & vegetarian restaurants in Colorado Springs, CO. *HappyCow*(39). Retrieved December 8, 2016 from [https://www.happycow.net/north\\_america/usa/colorado/colorado\\_springs/](https://www.happycow.net/north_america/usa/colorado/colorado_springs/)
- House Foods America Corporation. (2016). Corporate information. *House Foods*. Retrieved October 28, 2016 from [http://www.house-foods.com/about\\_us](http://www.house-foods.com/about_us)
- Hodo Soy. (2016). Wholesale bulk tofu. *Hodo Soy*. Retrieved November 8, 2016 from <https://hodo-soy.myshopify.com/products/tofu-bulk>
- IBISWorld. (2016a). Soybean farming. *IBISWorld*. Retrieved December 7, 2016 from <http://clients1.ibisworld.com/reports/us/industry/default.aspx?entid=4>
- IBISWorld. (2016b). Corn, wheat, and soybean wholesaling. *IBISWorld*. Retrieved December 7, 2016 from <http://clients1.ibisworld.com/reports/us/industry/default.aspx?entid=981>
- ImportGenius. (2016). *Pulmuone Foods Co., Ltd consignee mapping* [Data file]. Retrieved November 10, 2016 from [www.importgenius.com](http://www.importgenius.com)
- IndexMundi. (2016). *World price of soybean meal* [Data file]. Retrieved November 9, 2016 from <http://www.indexmundi.com/commodities/?commodity=soybean-meal&months=120>
- IndexMundi. (2016, September 11). *Soybeans: monthly price* [Data file]. Retrieved November 9, 2016 from <http://www.indexmundi.com/Commodities/?commodity=soybeans&months=60&currency=eur>
- Indiegogo. (2016). Frischer, handgemachter Bio-Tofu aus Berlin! *Indiegogo*. Retrieved December 8, 2016

- from <https://www.indiegogo.com/projects/frischer-handgemachter-bio-tofu-aus-berlin#/>
- Knoema. (2015). *Soybeans: Producer price* [Data file]. Retrieved November 9, 2016 from <https://knoema.com/FAOPS2015July/fao-price-statistics-2015?country=1000600-france&item=1001840-soybeans>
- Lewin, J. (2016). The health benefits of... tofu. *BBC Goodfood*. Retrieved October 26, 2016 from <http://www.bbcgoodfood.com/howto/guide/ingredient-focus-tofu>
- Life Food GmbH. (2013a). Bezugsquellen. *Taifun*. Retrieved November 1, 2016 from <https://www.taifun-tofu.de/de/bezugsquellen>
- Life Food GmbH. (2013b). Konsequenz ökologisch. *Taifun*. Retrieved November 1, 2016 from <https://www.taifun-tofu.de/de/konsequenz-oekologisch>
- Life Food GmbH. (2013c). Im kontakt mit kunden und handel. *Taifun*. Retrieved November 1, 2016 from <https://www.taifun-tofu.de/de/unternehmensbereiche/vertrieb>
- Life Food GmbH. (2013d). Kritische fragen zu Taifun-Tofu. *Taifun*. Retrieved November 16, 2016 from <https://www.taifun-tofu.de/de/kritische-fragen-zu-taifun-tofu>
- Life Food GmbH. (2016). Company history. *Taifun*. Retrieved October 28, 2016 from <http://taifun-tofu.de/en/company-history>
- Marchenko, P. (2015, March 24). Lokal erfolgreich: Interview mit TofuTussis. *E-FoodBlog*. Retrieved November 1, 2016 from <http://www.efoodblog.com/interviews/lokal-erfolgreich-interview-mit-tofutussis>
- McHugh, T. (2016). How tofu is processed. *IFT*. Retrieved October 26, 2016 from <http://www.ift.org/food-technology/past-issues/2016/february/columns/processing-how-tofu-is-processed.aspx?page=viewall>
- McNeil, M. (2016, September 22). Millennials and organic: a winning combination. *Organic Trade Association*. Retrieved November 3, 2016 from <https://www.ota.com/news/press-releases/19256>
- Miersch, M. (2014a). Inhaltsstoffe und qualität bei soja. *Sojaförderring*. Retrieved November 1, 2016 from <https://www.sojafoerderring.de/qualitaet/>
- Miersch, M. (2014b). Modellhafte wertschöpfungskette lebensmittel soja. *Sojaförderring*. Retrieved November 1, 2016 from <https://www.sojafoerderring.de/markt/wertschoepfungsketten/lebensmittelsoja/>
- Miersch, M., & Recknagel, J. (2014). Bedeutung und anbauumfang. *Sojaförderring*. Retrieved November 1, 2016 from <https://www.sojafoerderring.de/markt/>

- Morinaga. (2016). Aseptic package. *Morinaga*. Retrieved November 17, 2016 from <http://www.morinu.com/en/aseptic-package>
- Nasoya. (2016). Healthy tofu products. *Nasoya*. Retrieved December 8, 2016 from <http://www.nasoya.com/healthy-tofu-products/>
- Nath, T. (2015, February 12). The economics of organic labeling. *Investopedia*. Retrieved December 8, 2016 from: <http://www.investopedia.com/articles/investing/021215/economics-organic-labeling.asp>
- Ökolandbau. (n.d.). *Ökolandbau*. Retrieved November 16, 2016 from [https://www.oekolandbau.de/fileadmin/redaktion/Bildarchiv/Sonderformate/Marginal\\_klein/bio-siegel.jpg](https://www.oekolandbau.de/fileadmin/redaktion/Bildarchiv/Sonderformate/Marginal_klein/bio-siegel.jpg)
- Organic & Non-GMO Report, The. (2006, May). *The Organic & Non-GMO Report*. Retrieved December 8, 2016 from [http://www.non-gmoreport.com/articles/may06/soybeans\\_GMO\\_free.php](http://www.non-gmoreport.com/articles/may06/soybeans_GMO_free.php)
- Organic-market.info. (31. May 2013). Von Germany: Taifun's Tofulation. *Organic-market.info*. Retrieved December 8, 2016 from <http://organic-market.info/news-in-brief-and-reports-article/14272-Germany.html> abgerufen
- Organic Trade Association. (2013, May 31). Germany: Soy foods maker sees strong growth for its offerings. *OTA*. Retrieved November 10, 2016 from <http://www.globalorganictrade.com/news/germany-soy-foods-maker-sees-strong-growth-its-offerings>
- Organic Trade Association. (2016). *OTA*. Retrieved November 3, 2016 from [http://ota.com/sites/default/files/indexed\\_files/BrightSpot\\_Infographic.pdf](http://ota.com/sites/default/files/indexed_files/BrightSpot_Infographic.pdf)
- Peters, M. (2013, Jul 14). A gap in organic food chain; feed needed by meat and dairy producers falls short; foreign suppliers required. *Wall Street Journal (Online)*. Retrieved November 10, 2016 from <https://libproxy.uww.edu:9443/login?url=http://search.proquest.com/docview/1399826985?accountid=14791>
- Pulmuone Holdings Co., Ltd. (2015). *2015 Pulmuone Integrated Report*. Retrieved November 3, 2016 from [https://www.unglobalcompact.org/system/attachments/cop\\_2016/301311/original/Pulmuone.pdf?1468561364](https://www.unglobalcompact.org/system/attachments/cop_2016/301311/original/Pulmuone.pdf?1468561364)
- Recknagel, J. (2014). Märkte und preise. *Sojaförderring*. Retrieved November 9, 2016 from <https://www.sojaforderring.de/markt/maerkte-und-preise/>
- Registrar Corp. (2016). US FDA FCE-SID tofu requirements. *Registrar Corp*. Retrieved November 7, 2016 from <http://www.registrarcorp.com/fda-fce-sample/Tofu?lang=en>

- Schröck, R. (2014, June). Die nachfrage nach biolebensmitteln in Deutschland. *Uni Giessen*. Retrieved December 8, 2016 from [http://geb.uni-giessen.de/geb/volltexte/2014/10920/pdf/SchroeckRebecca\\_2014\\_05\\_14.pdf](http://geb.uni-giessen.de/geb/volltexte/2014/10920/pdf/SchroeckRebecca_2014_05_14.pdf)
- Sicherheitszeichen. (n.d.). Gruener punkt. *Sicherheitszeichen*. Retrieved December 8, 2016 from [http://www.sicherheitszeichen.de/images/product\\_images/info\\_images/15320\\_0\\_Gruener\\_Punkt.jpg](http://www.sicherheitszeichen.de/images/product_images/info_images/15320_0_Gruener_Punkt.jpg)
- Smilefood. (2014). Tofu. *smilefood*. Retrieved November 9, 2016 from <http://www.smilefood.de/tofu-und-seitan/tofu/>
- Statista. (2016). *Sales value of organic refrigerated foods in the United States in 2016, by category (in million U.S. dollars)* [Data file]. Retrieved November 3, 2016 from <https://www.statista.com/statistics/621911/sales-value-organic-refrigerated-foods-us-by-category/>
- Swiss granum. (2016). *Durchschnittliche Marktpreise für Ölsaaten (Ernte 2016)* [Data file]. Retrieved November 9, 2016 from [https://www.swissgranum.ch/files/2016-08-02\\_preisschema\\_speiseoelsektor.pdf](https://www.swissgranum.ch/files/2016-08-02_preisschema_speiseoelsektor.pdf)
- Sywottek, C. (2009, March). Die öko-nomen. *brand eins*. Retrieved November 1, 2016 from <https://www.brandeins.de/archiv/2009/essen/die-oeko-nomen/>
- taz. (2009, June 27). Tofu in der kulturkritik: Essen ohne schuld? *taz*. Retrieved November 1, 2016 from <http://www.taz.de/!5160739/>
- Transport Information Service. (2016). Soybeans. *Transport Information Service*. Retrieved December 7, 2016 from [http://www.tis-gdv.de/tis\\_e/ware/oelsaat/sojabohn/sojabohn.htm](http://www.tis-gdv.de/tis_e/ware/oelsaat/sojabohn/sojabohn.htm)
- Ulrich, D., & Ulrich, F. (2015). Why tofu? *Lord of Tofu*. Retrieved December 8, 2016 from <http://www.lord-of-tofu.de/en/why-tofu.html>
- United Soybean Board. (2014). *BITE - The Data Is Delicious*. Retrieved November 3, 2016 from [http://www.soyconnection.com/sites/default/files/Consumer%20Attitudes\\_Med\\_062714.pdf](http://www.soyconnection.com/sites/default/files/Consumer%20Attitudes_Med_062714.pdf)
- United Soybean Board. (2016a). Soy plays growing role in feeding a hungry world. *SoyConnection*. Retrieved November 3, 2016 from <http://www.soyconnection.com/newsletters/soy-connection/health-nutrition/soy-plays-growing-role-feeding-hungry-world>
- United Soybean Board. (2016b). Demand, availability drive new growth in soyfoods market. *SoyConnection*. Retrieved November 3, 2016 from <http://www.soyconnection.com/newsletters/soy-connection/health-nutrition/articles/Demand-Availability-Drive-New-Growth-In-Soyfoods-Market>

- United Soybean Board. (2016c). Consumer attitudes about nutrition, health and soyfoods: 23<sup>rd</sup> Annual Survey *SoyConnection*. Retrieved November 3, 2016 from <http://www.soyconnection.com/bite-2016>
- UN Comtrade Database. (2016a) *food preparation nes, import, export* [Data file]. Retrieved October 26, 2016 from <http://comtrade.un.org/data/>
- UN Comtrade Database. (2016b). *CIF pricing* [Data file]. Retrieved November 9, 2016 from <http://comtrade.un.org/data/>
- US CBP. (2016). The ACE basics: How to get started with CBP's automated commercial environment. US Customs and Border Protection. Retrieved December 10, 2016 from [https://www.cbp.gov/sites/default/files/assets/documents/2016-Aug/ACE%20Basics%20August%202016\\_0.pdf](https://www.cbp.gov/sites/default/files/assets/documents/2016-Aug/ACE%20Basics%20August%202016_0.pdf)
- USDA. (2016). Organic labeling standards. *USDA*. Retrieved November 3, 2016 from <https://www.ams.usda.gov/grades-standards/organic-labeling-standards>
- USDA Agricultural Marketing Service. (2012). Labeling organic products. *USDA Agricultural Marketing Service*. Retrieved November 17, 2016 from <https://www.ams.usda.gov/sites/default/files/media/Labeling%20Organic%20Products.pdf>
- USDA Agricultural Marketing Service. (n.d.). *USDA Agricultural Marketing Service*. Retrieved November 17, 2016 from <https://www.ams.usda.gov/sites/default/files/media/Organic4colorsealGIF.gif>
- USDA Agricultural Marketing Service. (2016a). Organic standards. *USDA Agricultural Marketing Service*. Retrieved November 7, 2016 from <https://www.ams.usda.gov/grades-standards/organic-standards>
- USDA Agricultural Marketing Service. (2016b). FAQ: Becoming a certified operation. *USDA Agricultural Marketing Service*. Retrieved November 7, 2016 from <https://www.ams.usda.gov/services/organic-certification/faq-becoming-certified>
- USDA Agricultural Marketing Service. (2016c). Organic regulations. *USDA Agricultural Marketing Service*. Retrieved November 17, 2016 from <https://www.ams.usda.gov/rules-regulations/organic>
- USDA Agricultural Marketing Service. (2016d). Organic production & handling standards. *USDA Agricultural Marketing Service*. Retrieved December 8, 2016 from <https://www.ams.usda.gov/publications/content/organic-production-handling-standards>
- USDA Agricultural Research Service. (2016). Organic tofu firm. *USDA Branded Food Products Database*. Retrieved October 26, 2016 from

<https://ndb.nal.usda.gov/ndb/foods/show/45632?fgcd=&manu=&facet=&format=&count=&max=50&offset=&sort=default&order=asc&qlookup=tofu&ds>

USDA Foreign Agricultural Service. (2014). Germany finances protein strategy until 2017. USDA Foreign Agricultural Service. Retrieved December 10, 2016 from [http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Germany%20finances%20Protein%20Strategy%20until%202017%20 Berlin Germany 11-6-2014.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Germany%20finances%20Protein%20Strategy%20until%202017%20Berlin%20Germany%2011-6-2014.pdf)

USDA Foreign Agricultural Service. (2015). Oilseeds and products annual. *USDA Foreign Agricultural Service*. Retrieved December 10, 2016 from [http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Oilseeds%20and%20Products%20Annual Vienna EU-28 3-31-2015.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Oilseeds%20and%20Products%20Annual%20Vienna%20EU-28%203-31-2015.pdf)

USDC International Trade Administration. (2016). Germany country commercial guide. *Export.gov*. Retrieved November 10, 2016 from [https://www.export.gov/article?series=a0pt0000000PATqAAG&type=Country Commercial kav](https://www.export.gov/article?series=a0pt0000000PATqAAG&type=CountryCommercial_kav)

US FDA. (2015). Importing food products into the United States. *US Food & Drug Administration*. Retrieved November 7, 2016 from <http://www.fda.gov/Food/GuidanceRegulation/ImportsExports/Importing/>

US FDA. (2016, September 14). Ingredients, packaging, and labeling. *US Food & Drug Administration*. Retrieved November 17, 2016 from <http://www.fda.gov/Food/IngredientsPackagingLabeling/default.htm>

US Soybean Export Council. (2015, October 6). Buyer's guide. *US Soybean Export Council*. Retrieved December 7, 2016 from <http://ussec.org/wp-content/uploads/2015/10/buyers-guide.pdf>

Vitasoy International Holdings Ltd. (2016). *Annual Report. 2015/16*. Retrieved November 3, 2016 from [http://www.vitasoy.com/wp-content/uploads/2015/01/ew\\_00345-Annual-Report\\_20160715.pdf](http://www.vitasoy.com/wp-content/uploads/2015/01/ew_00345-Annual-Report_20160715.pdf)

World Trade Organization TAO (2016). *Tariff Analysis Online* [Data file]. Retrieved November 2, 2016 from <http://tao.wto.org/default.aspx>