

DRIED/DEHYDRATED VEGETABLES SECTOR

Prepared by
Gamze KAHYAOĞLU AYTAÇ
2009



Export Promotion Center of Turkey

DRIED/DEHYDRATED VEGETABLES SECTOR

As is known, the drying process was the first technique of preserving food used by human beings. Today dried/dehydrated vegetables, which constitute a basic ingredient of ready meals, have become popular worldwide, especially in the developed countries as a result of changing life styles.

Although the consumption of fresh vegetables in Turkey has intensified, the high productivity of vegetables in all varieties grown under favorable weather conditions and with better quality due to rich soils, have been impetuses for placing emphasis on preservation methods.

Turkey is one of the world's major producers of vegetables. The total volume of production was about 28 million tons in 2007. Tomatoes are the largest production item with 9.9 million tons. The second largest production item by quantity is potatoes (4.3 million tons in 2007) and the third is pepper with 1.8 million tons.

Production of Fresh Vegetables by Years (thousand tons)

	2006	2007
<i>Tomato</i>	9,855	9,945
<i>Potato</i>	4,366	4,228
<i>Pepper</i>	1,842	1,759
<i>Cucumber</i>	1799.6	1,675
<i>Aubergine</i>	924	864
<i>Cabbage</i>	687	648
<i>Beans</i>	564	520
<i>Carrot</i>	395	642
<i>Leek</i>	320	256
<i>Spinach</i>	242	236
<i>Onion</i>	201	185
<i>Radish</i>	168.6	156
<i>Pea</i>	89.6	88
<i>Cauliflower</i>	136	135
<i>Parsley</i>	53.2	49
<i>Kidney beans</i>	55,8	59
<i>Broad beans</i>	49	43
<i>Okra</i>	36.8	37
<i>Artichoke</i>	35	34
<i>Garlic</i>	27.3	24
<i>Celery</i>	17.6	17
<i>Peppermint</i>	9.6	9
<i>TOTAL (including other vegetables, melon, watermelon)</i>	28,384	27,970

Source: Turkish Statistical Institute

Production

The dried/dehydrated vegetables sector in Turkey has become one of the important subsectors of the food industry using modern dehydration technology together with the traditional sun-dried production methods.

Most types of dried/dehydrated vegetables produced in Turkey are used as ingredients by food processors, mainly from the European Union countries and the United States. Dried/dehydrated vegetables are used in the production of instant soups, sauces, dressings, ready meals, prepared products, baby food, dairy products, ready pasta dishes and pasta sauces, microwave dishes and some meat and fish products. Various dried/dehydrated vegetables are also used in a number of other food industries.

Total Production of Dried/Dehydrated Vegetables by Years (tons)

1999	2000	2001	2002	2003	2004	2005*
7,000	7,000	9,000	10,000	13,000	16,000	20,000

Source: State Planning Organization

**: Estimated*

Although fresh vegetables are produced throughout the country, the production of dried/dehydrated vegetables is mainly concentrated in Western Turkey.

The main dried/dehydrated vegetables produced in Turkey are tomatoes, mushrooms, leeks, carrots, potatoes, garlic, cauliflower, squash, peas, sweet corn, okra etc.

Production trends of dried/dehydrated vegetables in Turkey are closely linked to foreign demand. The previous five-year period showed a rising trend, and total dried/dehydrated vegetables production increased from 7 thousand tons in 2000 to 16 thousand tons in 2004 and it is estimated to reach 20 thousand tons in 2005.

A remarkable development in the dried/dehydrated vegetables industry is expected in the near future due to both the availability of fresh vegetables and new investments in the industry.

Some companies have specialized in the production of dried/dehydrated vegetables, whereas others offer these products in their assortment of food products. Dried/dehydrated vegetables are produced in various forms such as flaked, sliced, granulated and in powder. Organic dried/dehydrated vegetables such as tomatoes and mushrooms are also produced in Turkey.

Export

Turkey is obviously a net exporter of dried/dehydrated vegetables. The largest share in the exports of dried/dehydrated vegetables belongs to tomatoes whose quality is known today worldwide by all importers. Exports of dried/dehydrated tomatoes increased steadily between 1997 and 2008 and reached 16,484 tons, valued at 66.6 million \$. The major markets were the USA (5,824 tons), Italy (3,452 tons), Germany (1,461 tons) and Australia (1,326 tons).

Mushrooms and eggplants are the other major export items. Exports of dried/dehydrated mushrooms, which are the most valuable export item, were at 24 tons, valued at 2.3 million US \$, in 2008. The main markets were Italy (13.4 tons), France (5.5 tons) and Germany (1.4 tons).

Exports of eggplants amounted to 71 tons, valued at US \$ 0.72 million, in 2008. The main export markets for dried/dehydrated eggplants were Germany (46.1 tons), France (14.4 tons) and Austria (3 tons).

Exports of Dried/Dehydrated Vegetables by Years (Q: Tons, V: US \$ 1,000)

	2006		2007		2008	
	Q	V	Q	V	Q	V
<i>Tomato</i>	16,839	48,102	17,977	61,070	16,484	66,579
<i>Mushrooms</i>	334	2,389	21	1,710	24	2,348
<i>Eggplant</i>	80	611	101	813	71	723
<i>Squash</i>	103	629	99	782	62	445
<i>Leek</i>	84	583	116	679	44	332
<i>Onion</i>	21	98	38	143	59	224
<i>Okra</i>	9	119	6	101	5	142
<i>Others</i>	277	1,273	165	978	107	840
<i>Total</i>	17,445	53,803	18,523	66,277	16,857	71,632

Source: Turkish Statistical Institute

The total export value of dried/dehydrated vegetables was 71.6 million dollars in 2008, increasing by 8.1 % compared to the previous year.

Turkish dried/dehydrated vegetables producers and exporters are highly equipped to meet the specifications of end-users such as color, grade, cut, allowable levels of extraneous matter and bacteria count, moisture content, packaging and storage requirements, etc.

Exports of Dried/Dehydrated Vegetables by Major Countries in 2006-2008 (Q: Tons, V: US \$ 1,000)

	2006		2007		2008	
	Q	V	Q	V	Q	V
USA	5,615	14,807	6,138	19,183	5,831	23,458
Italy	4,998	13,939	4,196	13,840	3,465	12,336
Germany	1,343	5,589	1,882	8,439	1,615	8,011
Australia	1,523	5,245	1,782	6,767	1,328	5,998
England	917	3,391	1,170	5,137	1,070	5,298
France	368	2,465	368	2,609	408	2,722
Brazil	359	895	484	1,496	594	2,484
Canada	407	1,091	363	1,141	499	2,028
The Netherlands	356	1,231	353	1,275	396	1,694
Greece	328	887	437	1,468	398	1,424
Others	1,230	4,263	1,351	4,922	1,252	6,179
TOTAL	17,445	53,803	18,523	66,277	16,857	71,632

Source: Turkish Statistical Institute

The demand for organic products has also created new export opportunities for Turkish exporters of dried vegetables. Turkey has started to export organic dried/dehydrated vegetables to developed markets.

The products are mostly marketed in large packs since they are oriented to industrial-type consumption.

Quite a large share of the dried/dehydrated vegetables exports are directed towards developed countries. USA is the leading importer country taking over 33 % of total exports of dried/dehydrated vegetables in 2008. It is followed by the Italy (17 %) and Germany (11 %)