

# Strawberry widely Consumed throughout world

by Dr. Noor Ahmed Memon

Strawberry production in Pakistan increased from 274 tonnes in 2008-09 to 302 tonnes in 2012-13. On the other hand export of strawberry has also witnessed a steady growth. Pakistan is exporting strawberry to Afghanistan, Denmark, Norway, UAE and U.K.

Pakistan is producing a limited quantity of strawberries which are either eaten or used in preparing ice-cream, jam, jelly, pickle, cakes or milk shakes.

Strawberry cultivated during the month of October and it started giving fruits in January till late March and that the fruit maturity period was short and ranged from 30 to 40 days.

Main varieties of strawberry which are cultivated in Pakistan are Douglas and Toro appropriate for southern areas of Pakistan whereas Chandler, Cruz Pocahontas and Tufts are suitable for Islamabad and Honeyo, Chandler, Gorella and Corona are for Swat. It is mainly growing in Northern areas of the country like Swat, Charsadda, Mansehra, Haripur, Abbottabad, Mardan, Peshawar and some parts of central and south Pakistan like Gujrat, Sialkot, Jhelum, Chakwal, Multan and Karachi.

Strawberry belongs to the family Rosaceae, genus *Fragaria*, and is among the most widely consumed fruits throughout the world. Strawberries can slow down age-related loss of memory. It

Table 1: Production of Strawberries		
Year	Area (Hectares)	Production (Tonnes)
2007-08	0	0
2008-09	78	274
2009-10	76	270
2010-11	82	284
2011-12	84	292
2012-13	86	302

Source: Ministry of Agriculture Government of Pakistan.

reduces blood pressure, cholesterol levels and inflammatory markers to prevent heart disease. Strawberries have higher levels of vitamin C, fiber, foliate and potassium than most other fruits like bananas, apples and even oranges.

Apart from the obvious health benefits, a study by Dr Gene Spiller, Nutrition and Health Research Center, has shown that eating one serving (about 8-10 strawberries) a day can significantly decrease blood pressure, which may reduce the risk of heart disease. Other studies showed additional nutrition benefits: Strawberries are found to reduce risk of cancer, enhance memory function and rheumatoid arthritis.

The roots, fruits and leaves of Alpine strawberry were widely used in these countries to make medicine that were used

to cure digestive problems and skin diseases.

Over the years strawberries were used for treating skin rashes, sun burn, discoloration of teeth and digestive disorders. In 13th century, strawberry was widely used as an aphrodisiac are bisexual and mostly self-pollinated.

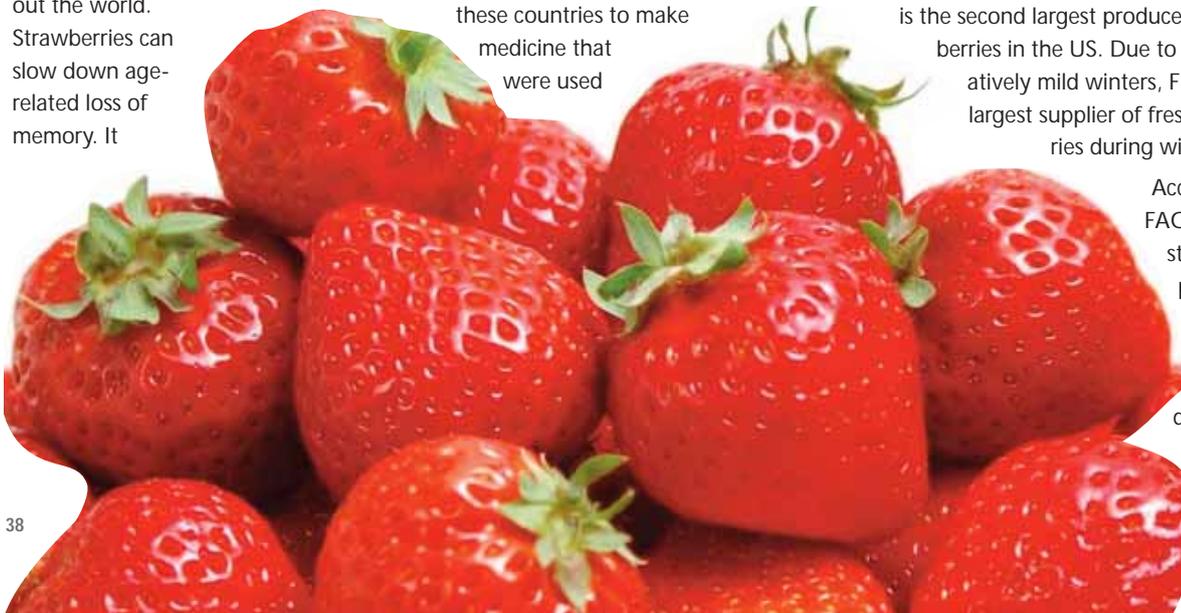
## World

Strawberries were originally grown in northern parts of Europe. They were also found in different parts of Russia, Chile and United States. Strawberries seem to have been cultivated in ancient Rome in large scale for medicinal purposes. During the 13th century, France also cultivated strawberries for its medicinal purpose.

United States is the largest producer of strawberries in the world. Unlike strawberry growers in many other countries, US strawberry growers are production-oriented rather than market-oriented. Nearly 100% of the strawberry production is done in the field, using raised-beds fumigated with methyl bromide and covered with plastic mulch.

In California, strawberries are grown as a perennial crop. It is the No1 producer accounting for 80% of the total US strawberry production. Florida, strawberries are grown as an annual crop and it is the second largest producer of strawberries in the US. Due to the comparatively mild winters, Florida is the largest supplier of fresh strawberries during winter.

According to FAO data, global strawberry production growth has somewhat slowed down in the past few



years. Global production of these berries has been increasing averagely by 3.1% annually in 2007-2011.

Furthermore, in the period 2010-2011, strawberry production stagnated partially due to abnormal weather conditions in Europe, Africa and North America in 2010. As a result, global production decreased by 5.2% in 2010 and returned to previous levels in 2011. World production of strawberry is given in Table-1.

Europe and America account for 74% of global strawberry production (37% and 38% respectively). Populous Asia cover just 16% of global production. At the same time, the fastest growth rates in strawberry production are observed in the African countries (primarily in the North African ones) due to exports to the EU. This region's annual production growth rates reach 11%. Growth rates in Europe and Asia are significantly more modest: 2% and 1% per year respectively. In America and Oceania, strawberry production increases averagely by 4% annually.

**Table 3: World Strawberries Production 2011 (in Tonnes)**

Country	2011	Share Production
U.S.A	1,312,960	30.2 %
Turkey	302,416	7.0 %
Spain	262,730	6.0 %
Egypt	240,284	5.5 %
Mexico	228,900	5.3 %
Russian Federation	184,000	4.2 %
Japan	182,091	4.2 %
Korea	171,519	3.9 %
Republic of Poland	166,159	3.8 %
Germany	154,418	3.6 %
Italy	150,000	3.5 %
Morocco	140,733	3.2 %
All others	847,031	19.5 %
<b>Total</b>	<b>4,343,241</b>	<b>100,0 %</b>

Source: Freshfel European Fresh Produce Association

During the year 2012 about 844,000 tonnes exported globally e.g. 18 % of world production. Spain is the largest world trader. USA exported 150,722 tonnes of strawberry in 2012. Exports growth during last 5 years is 18 %, lower than production (20%). World strawberry exports to major countries are given in Table-2.

### Pakistan

The strawberry fruit is soft and perishable and its quality is affected when it touches the soil. The fruit is commercially consumed both in fresh form and can be preserved for making Jam, Jellies and squashes that can be used in off-season.

In Pakistan the strawberry is growing in Swat, Abbottabad, Mansehra, Haripur, Mardan, Peshawar, Charsadda, Gujrat, Sialkot, Jhelum, Chakwal, and Karachi.

The Katcho areas along the riverbed in Sindh started cultivation of strawberry in October, 2011. The fruit is now being supplied to different markets in the country. Strawberry is currently being sent from Dadu, Gharhi Khairpur and Sukkur districts to cities like Karachi, Hyderabad and Quetta. Strawberry production increased from 274 tonnes in 2008-09 to 302 tonnes in 2012-13, out of total production only 3 tonnes were exported. Production of strawberries is given in Table-3

**Table 2: Export of Strawberries from Pakistan**  
Quantity: Kg  
Value: Rs. 000

Country	2011-12		2010-11	
	Quantity	Value	Quantity	Value
Afghanistan	800	360	--	--
Denmark	--	--	282	72
Norway	--	--	1,052	86
U.A.E	32	4	1,633	166
U.K	500	54	--	--
<b>Total</b>	<b>1,332</b>	<b>48</b>	<b>2,967</b>	<b>324</b>

Source: Federal Bureau of Statistics, Government of Pakistan.

**Exports:** Pakistan exported fresh strawberry mainly to Afghanistan, Denmark, Norway, UAE and U.K. Export of strawberry decreased from 2.97 tonnes worth Rs 032 million in 2010-11 to 1.33 tonnes worth Rs. 0.418 million in 2011-12. Country-wise export of strawberries is given in Table-4.

### Future Prospects

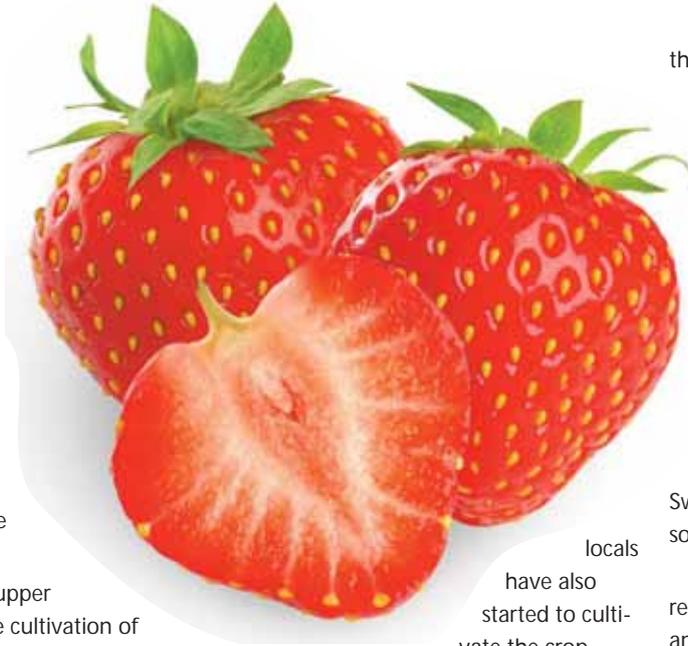
The agricultural business development specialists are of the opinion that development of infrastructure, skills in farming and introduction of modern technology will gradually increase its strawberry output benefiting the growers in future.

Sindh is suitable for strawberry crop. There is need of proper guidance to growers which could be given by the agriculture department experts. According to Sindh Abadgar Board general secretary, Syed Mehmood Nawaz Shah, climate of Sindh was suitable for strawberry crop; only there was need of proper guidance to growers which could be imparted by the agriculture department experts. This fruit was in demand worldwide and could be exported worldwide.



The traditional crops of the single-cropping belt located on both banks of the river are wheat and vegetables. Local farmers have been cultivating the two crops since generations, but they have now started cultivating strawberry as an alternative crop for the last few years.

Farmers from the upper Punjab had started the cultivation of strawberry after acquiring land on lease from locals, but for the last four years,



locals have also started to cultivate the crop after estimating the profit margin of traditional crops and the strawberry crop.

Nawaz said the growers/suppliers of the fruit also need guidance in packing and transportation of the fruit from farm to markets. Lack of proper packing and transportation damages the fruit which was the cause of loss to growers. He said strawberry was cultivated over 86 hectares acres in parts of Sindh.

Agri-business development specialist Younis Sandeela said production of strawberry could be increased from 500 grams per plant to 600 grams by introducing modern farming techniques. The new technique would also reduce

the use of fertiliser bringing down the cost of production.

The trend of cultivating strawberry is surging among farmers living in the riverine belt of the River Chenab as cultivators are much content with its profit ratio as compared to traditional crops.

Agriculture Officer Liaquat Gondal said the strawberry was an exotic fruit but now it was being cultivated on a large scale throughout the country, including Mingora, Swat, Lahore, Multan, Muzaffargarh and some cities of Sindh.

There are a number of reasons for restricted production, like the climate, size and taste. By overcoming problems related to quality, quantity and perishability of the fruit, Pakistan can also export it to Europe, the United States and Middle Eastern countries.

There is no one variety of strawberry which possesses all the desirable characteristics. Some are superior to others only because of certain characteristics. In general, the differences in tastes between different varieties are not given as much weight as in case of some other fruits. Some of its superior varieties enjoy colour that is very attractive. Its varieties grown in Pakistan are Chandelier, Corona and Stuff. These are mostly sour and small in size.

However, profit against per acre is more than the input cost which is encouraging farmers to cultivate strawberry instead of traditional crops. Pakistan must take the full opportunity of fully exploiting the valuable fruit of the world.

### Refernce

1. Federal Bureau of Statistics, Government of Pakistan.
2. Trade Development Authority of Pakistan
3. Ministry of Commerce, Government of Pakistan.
4. Agricultural Statistics, of Pakistan - 44th Volume- 2010-11.
5. Pakistan Horticulture Development and Export company - Ministry of Commerce, Government of Pakistan.
6. Saleem Shaikh and Sugra Tunio – Pakistan's mango, orchards disappearing as weather shift. ♦.

**Table 4: Country-wise Export of Strawberry (Major Countries)**

Quantity: Tonnes

Country	2008	2012	Share 2012
Spain	218.255	285.170	33.8%
U.S.A	129.236	150.722	17.8%
Mexico	71.769	113.634	13.5%
Netherlands	32.295	53.969	6.4%
Belgium	38.083	43.017	5.1%
Greece	7.530	25.574	3.0%
Morocco	22.040	24.387	2.9%
Egypt	75.619	22.954	2.7%
Turkey	22.292	21.426	2.5%
France	23.162	20.384	2.4%
Italy	23.414	18.770	2.2%
Germany	10.695	15.804	1.9%
Poland	13.248	11.463	1.4%
Lithuania	4.147	5.856	0.7%
Guatemala	2.942	5.185	0.6%
Potugal	3.107	4.794	0.6%
Moldova	0	2.419	0.3%
Serbia	912	2.293	0.3%
Republic of Korea	1.052	2.158	0.3%
Austria	1.624	1.545	0.2%
All others	12.366	13.046	1.5%
<b>Total</b>	<b>713.788</b>	<b>844.570</b>	<b>100.0%</b>

Source: Freshfel European Fresh Produce Association