

Israel Avocado Production in Steady Growth Mode

Commercial avocado production began in Israel in the mid-1950s and rose to its peak in the mid-1980s, before marketing conditions and a shortage of water resulted in a scaling back of the industry through the 1990s. But once again it is on the rise and growing at a clip of a couple of hundred hectares per years (almost 500 acres).

Discussing the Israeli avocado industry with *From the Grove* was Udi Gafni, a longtime official in the Israel Ministry of Agriculture, and a current consultant for avocados and other crops. But in fact, Gafni said his avocado knowledge dates back about half a century. “My father was one of the first avocado growers in Israel so you could say I have been involved in avocados for all but two of my 57 years,” he joked.

Formally, Gafni is an agronomist by education who joined the Ministry of Agriculture as a young man and rose through the ranks until he was head of the Sub-Tropicals Department. Since his retirement from the ministry, he has worked as a consultant and is head of a research and development committee within

the avocado industry.

“Avocado production started slowly in the mid-1950s but by 1965 or '66, it was large enough that we had a commercial crop, exporting mostly to Europe,” he said.

The markets were good and production grew quickly peaking at about 11,000 hectares (27,000 acres) in the mid-1980s. “At that point the industry started to decline for two main reasons,” said Gafni. “We had a shortage of water, and, in addition, we were getting a lot of competition from Mexico in Europe.”

In those years, Mexican producers could not ship to the United States so they sent their fruit to Europe, and Gafni said that drove down the prices and changed the dynamic for Israeli growers. Throughout the 1990s, avocado acreage was pulled with only about 4,000 hectares (close to 10,000 acres) under cultivation by the year 2000.

Over the next several years however, both the water and marketing situation improved, leading to increased acreage once again. He said research in Israel led to the development of better irrigation systems

as well as the ability to use recycled water. “Today, about 80 percent (of Israel’s avocado groves) are irrigated with recycled water.”

This has given growers much better access to water at a more reasonable rate.

In addition, the marketing situation in Europe has improved dramatically. Gafni said Europe has increased its per capita consumption creating more demand for avocados. And because Mexico now has the ability to ship to the U.S. market, it does not send nearly as many avocados to Europe.

Israel’s domestic consumption has also risen quite a bit in the past few years giving producers another outlet for their crop. In fact, Gafni said the percent of the fruit exported has dropped from about 75-77 percent five years ago to 60-63 percent now. He expects that number to fall even further in future years. “Our consumption rate is 5-6 kilos per capita per year (about 12 pounds),” he said.

Initially, he said producers would export their number one fruit to Europe and sell number twos to

domestic buyers. But as avocado consumption has increased, there are local outlets for the top quality fruit with those buyers willing to pay as much as the European market.

He estimated current total production in the country at about 7,000 hectares, which is about 17,000 acres. About 45 percent of those acres are devoted to the Hass varieties with green-skinned varieties (Fuerte, Pinkerton, Reeds and local varieties) making up the other 55 percent. Because the Hass variety has become increasingly important in Europe, about 70 percent of new plantings are Hass. But Gafni said that may start to change a bit in the future.

He said Israel does have a private-government avocado research partnership which includes a four-year-old breeding program. Initially, one of the guiding principles of the research was that it should be looking for Hass-like varieties that taste and look like a Hass but have better yields and other cultural advantages—sort of a super Hass variety. But Gafni said the breeding research committee recently changed that guideline to allow for research on any variety that shows promise.

Because of the range in varieties, Gafni said there is also quite a bit of difference in yields. As a general average, he estimated that Israel's 7,000 hectares yield about 16-17 tons per hectare, with the green varieties coming in around 18-20 tons and the Hass yielding on average about 13 tons. As a point of reference a 13 ton yield per hectare would equal about 10,500 pounds per acre.

Gafni agreed that's a very healthy number but he said that avocado cultivation in Israel is a very expensive proposition. Consequently there is a very high level of professionalism among the growers who have survived the ups and downs of the past few decades.

He said the research program is also doing a lot of work with high



Avocado in Israel
Production areas

density planting in an effort to increase yields and lower the cost of production.

Traditionally, Gafni said most growers used a 7 meter by 6 meter spacing configuration which let to about 300 trees per hectare (120 trees per acre). But research has resulted in spacing configurations of 6 x 4 or 6 x 3.5 meters for Hass and as close as 6.5 x 2.5 meters for some of the green skinned varieties. As a result some of the Hass groves have as many as 660 trees per hectare (265 per acre). And the green-skinned varieties, which tend to have less vegetation, can have as many as 720 trees per hectare (290 per acre).

He added that some innovators did try even greater density plantings in the 4 x 2 and 4 x 1.5 meter range “but that didn’t work for us at all.”

He said the growers discovered that the close proximity of each tree in relation to another required additional pruning, which is very difficult to achieve because of Israel’s labor situation.

The Israeli avocado expert said the cost of labor, as well as the lack of availability of it, have caused growers to focus very much on reducing vegetation and keeping the trees low to the ground and as small as possible. “The use of plant growth regulators is very important in Israel. It is very important to curtail vegetation growth,” he said.

Israel’s avocado production is located in several different regions around the country but most trees are located within 20 kilometers of the Mediterranean Sea. 🥑