

The healthy Frankenfood

A tour of Solbar, one of the world's biggest processors of soy protein, reveals how the food business really works

• DAVID SHAMAH

The food production business has long "graduated" from the images you still see on TV commercials, which feature farmers lovingly whipping their milk or gently kneading their dough to produce the yogurt or loaf of bread you find on your supermarket shelf. Food is a big business today, with all sorts of ingredients and additives "enhancing" the look, taste and feel of all sorts of products. And, as it happens, one of the world's most important companies making products to enhance the taste, look and health benefits of a wide range of manufactured food products is based right here in Israel.

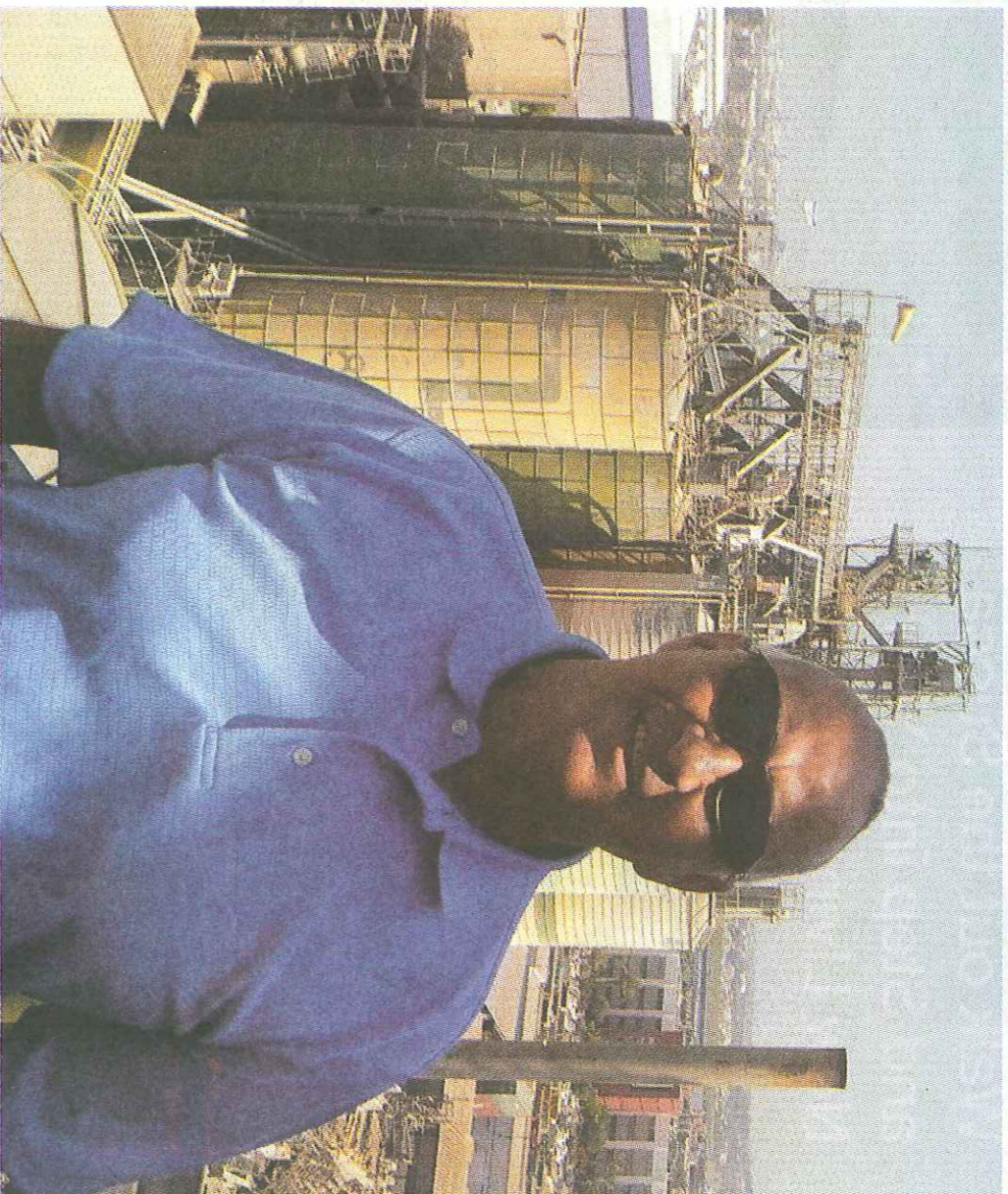
Welcome to Solbar, one of the world's biggest processors of soy protein. Its hi-tech manufacturing and distributing system has spread Israeli-made soy protein around the world, where it shows up in products as diverse as hot dogs, cereal bars, milkshakes, heat 'n' eat schnitzel, pot roast, and even cosmetics. If you think the term "soy food product" refers solely to the fake burgers you find in supermarket freezers, you're way behind the times; Israeli-made soy protein is in production and places where you would least expect to find it.

"Soy is unique in that it has a high level of protein that humans can use," says Solbar CEO Shaul Shelach. "It's in demand all over the world for its health properties, and as a cheaper replacement for animal protein, so we are in the right place at the right time."

The Solbar company has been around since 1961, but for decades concentrated on a small segment of soy protein production. Shelach took over in 2007 and began expanding the company's offerings and its production. Today, in addition to its Ashdod headquarters where 220 of the company's 400 employees work, Solbar has a facility in China, where it has won a number of very prestigious manufacturing awards ("We are one of the most successful foreign companies, Israeli or otherwise, doing business in China," says Shelach). And the company recently opened a production facility in the United States as well.

Although worldwide sales of soy products are down, "we opened the facilities abroad to satisfy increasing demand for our products," says Shelach. Interestingly, nearly all the soybeans themselves are grown in the US, where farmers have the land and resources (i.e. large amounts of water) to grow them. "If we grew all the beans we use in production here in Israel, we would need about a third of all the land here," Shelach says. The beans that are shipped to Israel are exported largely to Europe, Asia and South America, while the US and China facilities make products to satisfy the substantial demand in those places. Both facilities are solely owned by Solbar, which is a public company traded on the Tel Aviv Stock Exchange.

THE WORLD of soy protein production is a dizzying one of dehulling, defatting, alcohol and acid washing and thermal denaturation, all controlled by automated computerized systems that ensure the most efficient processing of the soybean – separating the protein, oil, and carbohydrates. Solbar sells the oil onward to bot-



SHAUL SHELACH. In the right place at the right time.

(David Shamah)

ters and distributors and sells the protein in different forms, covering a wide range of uses.

Such as, for example, "enhancing" processed meat products; when you see a cut of meat in the supermarket whose label reads "10% water added," it's a sign that the meat has been injected with soy protein (which usually constitutes about 2% of what is actually a mixture of water, soy and other components). While some processors do this to reduce the cost of their products, most actually do it for other reasons, ranging from lowering fat content to improving taste to enhancing the "look" of a product (soy is good at absorbing moisture, making the entire product more stable). And while many countries (like Israel) require that "fresh" cuts of meat to which soy protein has been added say so on the label, there is no such requirement for "processed" meat products – hot dogs, cold cuts, breaded chicken schnitzel, etc.

As we head down the "food chain," soy becomes even more prominent. Soy proteins are now a major component – as much as 10% – of snacks like cakes, ice cream, chocolate and even potato chips. "Power bars" and health drink powders are an up-and-coming-business for Solbar, which supplies specialized soy protein products to enhance the nutritional content and stability of those items. And, of course, there are the soy "meat" products found in the freezer cases of supermarkets; these "meats" are usually made of textured soy protein (TSP). I asked Shelach about a puzzling paradox I've noticed: If soy protein is cheaper than animal protein, why does a pack of veggie hot dogs or hamburgers made by a certain local "natural" manufacturer (no names, please) cost so much more than the real thing? To this, Shelach had no answer, but he did say it seemed to him that it should be much cheaper to produce and sell TSP products than their meat equivalents.

It all sounds a bit "Frankenfoodish" – especially the part about soy protein injected into meat. But Frankenfood – referring to the genetic manipulation of food – is a different matter altogether, and soy protein enhancers

are anything but. In fact, Shelach proudly says, Solbar uses only "real" soybeans – avoiding genetically modified (GMO) crops altogether. And the health benefits of soy protein far outweigh any of the safety or health issues that soy critics put forth, he adds. "Scientists have time and again confirmed the nutritional value, safety and health of soy protein, which is what is used to enhance other foods. The health problems associated with soy, if any, relate to consumption of the bean itself, not the protein."

There has been some debate about soy in the past few years. Soybeans contain a significant amount of phytoestrogens (isoflavones genistein and daidzein), which some scientists believe are linked to various forms of cancer and possibly even brain damage. However, much of the literature relates to the whole bean; isolated soy protein contains fewer phytoestrogens, although soy products do have relatively high levels. Also, Shelach says, studies that have implied problems with soy (and they are by no means the last word, he adds) generally require the individual to have consumed large amounts of soy protein – far more than they would be usually exposed to in the course of a normal diet. On the plus side, soy protein helps lower the calorie count in many food items, especially meat, and also contains phytic acid, considered useful in reducing the risk of cancer and minimizing diabetes. And the LDL cholesterol-reducing properties of soy protein have long been known.

Solbar has customers in 50 countries and business keeps getting better every year, Shelach says. In 2009, Solbar's China facility, located in Ningbo, received a singular honor: the site's manager, Yosef Gohary, was named one of the 100 top managers in China, an award given out only once every five years, with Solbar one of the very few non-Chinese companies to ever be awarded. "And they are very big on such awards in China," says Shelach. "It gives us a good feeling to be liked, and we're very happy to be working in an industry where we can actually help people eat healthier."