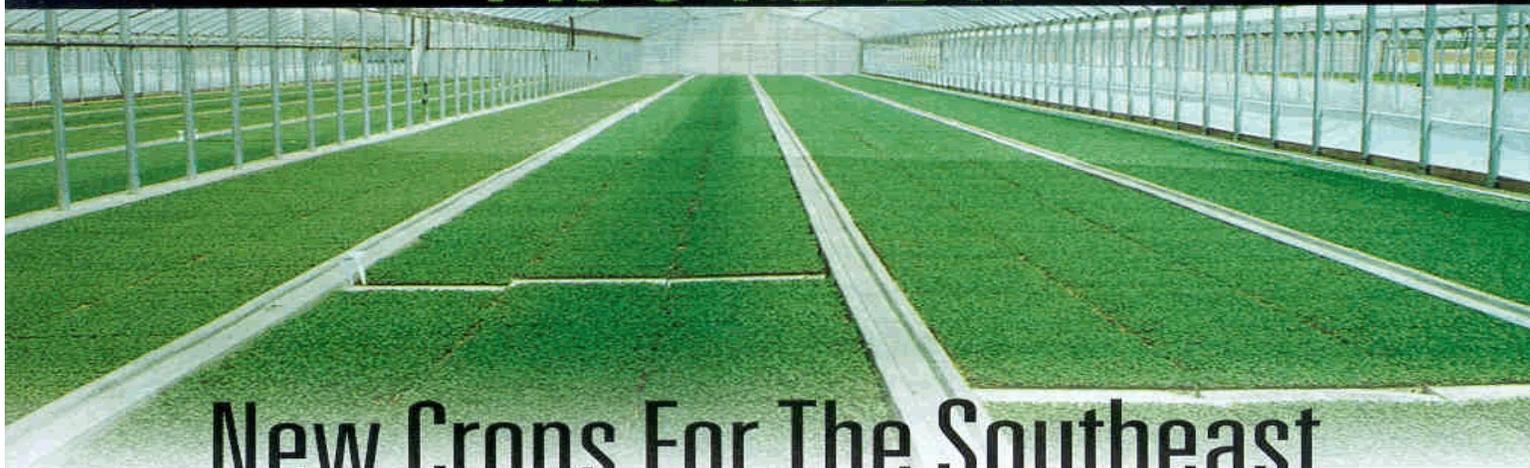


GREENHOUSE INSIDER



New Crops For The Southeast

Crops developed for field production in Israel thrive in Florida greenhouses, creating new markets in the U.S.

By Dan Cantliffe and Nicole Shaw

HAVE you seen a green-fleshed muskmelon with a golden-netted rind? How about a short seedless cucumber? If not yet, you shortly will.

The Galia muskmelon and the Beit Alpha cucumber are two crops recently introduced to Florida greenhouse growers by the University of Florida Protected Ag Project.

Both crops were developed in Israel for field production where the plants thrive on hot, desert-like conditions and lots of sunshine. While Florida's sunshine and temperatures are similar to the growing conditions in Israel, the Sunshine State receives much more rain, which can lead to disease, rot, and poor fruit quality of cucurbits. Therefore, production methods for the Galia muskmelon and the Beit Alpha cucumber were adapted to hydroponic

greenhouse production in Florida.

Currently, there are about 120 acres of vegetable greenhouses in Florida. The major crops are pepper, tomato, cucumber, and herbs. Competition from Mexico, Canada, and the Netherlands is forcing Florida greenhouse producers to look for alternatives.

Filling A Niche

One alternative is for growers to fill niche markets, such as the restaurant, hotel, or cruise ship industry, or satisfy the demands of diverse cultural or farmers' markets within Florida. Another is to produce new crops not grown by foreign competitors. Beit Alpha cucumber and Galia melon fit both of these conditions. Moreover, producers in Holland, Canada, and Mexico



Photo courtesy of Nicole Shaw

About 19 Beit Alpha cucumbers can be harvested per plant.

have no experience or expertise on growing either of these two crops.

The Beit Alpha cucumber is different from the common hothouse or Dutch cucumber. While both are green, seedless, and thin-skinned, the Beit Alpha is nearly one-half the length of the Dutch cucumber, sweeter in flavor, and does not require shrink-wrap during postharvest handling.

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Fruit set on the plant is different as well. While the Dutch cucumbers must be pruned of all laterals and to one fruit per node, the Beit Alpha supports multiple fruit at each node and the laterals can remain on the plant for additional fruit set. This leads to more production with less labor.

Research shows that there can be 19 ready-to-harvest fruit per plant at one time, and overall yields can be three times greater than yields of Dutch cucumbers when grown in a Florida protected structure. The Beit Alpha cucumber plant has been shown to survive temperatures as low as 40°F and as warm as 110°F with continued high-quality fruit set. In addition, four-month crops with over 20 harvests have been grown "pesticide free" with the use of beneficial insects.

A Special Melon

The Galia muskmelon is well accepted in European markets and is currently found in some U.S. markets as a specialty melon (such as Dean and Deluca, an emporium of fine food, kitchenware, and wine located in New York, California,

North Carolina, Kansas, and Washington, DC). The fruit should be picked at vine-ripe stage for peak flavor, potentially limiting long distance shipment to market.

Now, Galia in U.S. markets is of poor quality because it is either field grown or imported from countries such as Israel, Guatemala, or Spain, where it must be picked at an immature stage to maintain shelf-life, thus decreasing flavor development. Regardless of its quality, Galia melons are being accepted at U.S. terminal markets where prices range from \$6 to \$7 per pound. Yields grown in protected structures in Florida are about five fruit per plant, weighing 2 pounds each.

Production Advantages

Florida greenhouse growers have several advantages in producing these



Photos courtesy of Nicole Shaw

For peak flavor, researchers recommend picking Galia muskmelon at the vine-ripe stage.



two commodities. They include climate, sunshine, proximity to market, and modern greenhouse structures. Both crops can be grown from seed to final harvest in less than five months, opening up the greenhouse for an additional crop each year, such as peppers. Currently, one grower in Live Oak, FL, is growing the Beit Alpha in one greenhouse and cluster tomatoes in another, where both crops are being distributed through regional supermarkets.

The University of Florida Protected Ag Project introduced the commodities to greenhouse growers at regional and national events. Cultivar trials, along with production methods, have been published in the "Proceedings of the Florida State Horticultural Society" and there is an up-to-date Web site

www.hos.ufl.edu/protectedag

which includes current and past research, publications, and links to all products used including information regarding biological control.

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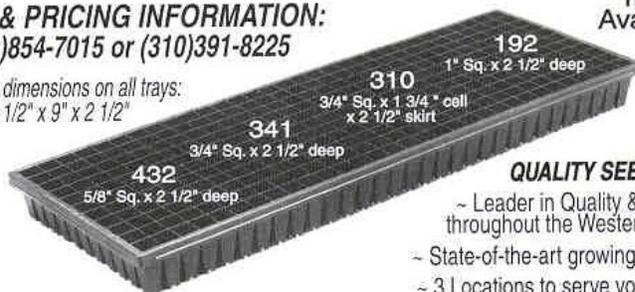


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