

# Color Your World

Red, yellow, and orange peppers not only add color in the greenhouse, they can increase a grower's bottom line.

By Nicole Shaw and Daniel J. Cantliffe

**G**ROWERS in the U.S. produced 850,000 tons of bell peppers for the fresh and processed market during the 1999-2000 season, with 34% of the U.S. production coming from Florida. Florida peppers are shipped from October through the following July with supplemental imports coming from Mexico from December through April. However, increasing volumes of imported greenhouse peppers from Canada, Israel, Spain, and Holland are available during the winter months at substantially higher retail prices. In 1982, the Dutch introduced colored greenhouse peppers to North America and due to the overwhelming acceptance by consumers, high returns have been stable.

## Adding Colors

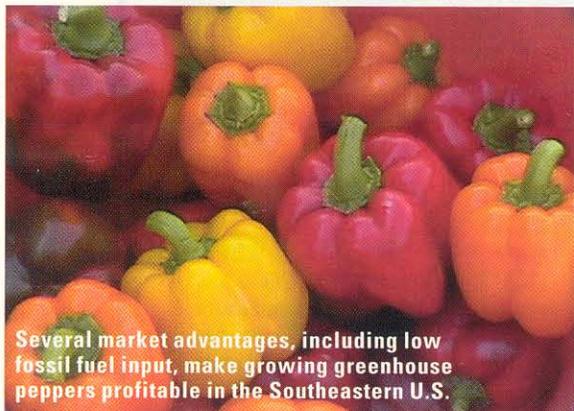
While U.S. and Florida peppers are traditionally field-grown and harvested at the mature-green stage, consumer demand for high-quality colored peppers, competition with other production areas, and the upcoming loss of methyl bromide has led the industry to seriously consider hydroponic production in greenhouses. The technology is already established elsewhere in the world. Holland reported

9560 acres of glasshouse peppers produced in 1999 with 355 acres under glass in Canada. There were 19,000 acres of protected peppers in Almeria, Spain in 1998 and 1067 acres in Israel in 2000.

Florida, with a warmer climate, like Spain and Israel, has a major environmental advantage over Holland. Inputs for fossil fuels used to cool and heat the greenhouse are a large portion of the cost of production in Holland, as well as the added price of labor, marketing, and shipping the commodity. Florida's mild winter climate and proximity to market gives the grower a desirable advantage over the competition.

The Protected Agriculture Project of the Horticultural Sciences Department at the University of Florida ([www.hos.ufl.edu/protectedag](http://www.hos.ufl.edu/protectedag)) is working to promote and improve the greenhouse industry in the Southeastern U.S. Suitable colored pepper cultivars for greenhouse production in Florida were identified in order for Florida producers to be competitive with the import market.

Seeds of 36 pepper cultivars were tested August 2001 through November 2002. The majority of the cultivars grown were blocky-type fruit with three



Several market advantages, including low fossil fuel input, make growing greenhouse peppers profitable in the Southeastern U.S.

Photo courtesy of Nicole Shaw

to four lobes, however, the cv. Pekin had a more elongated shape, similar to the shape of lamuyo-type fruit.

Total marketable yield was acceptable for all cultivars when grown in a protected structure, using biological control of pests, and harvested during the winter months. When comparing cultivars for those with the highest yield and fruit quality characteristics with low amounts of culls or other disorders, the best red were: Lorca, Torkal, Triple 4, and Zambra; yellow cultivars were: Pekin, Kelvin, Neibla, Bossanova, and Taranto; and orange cultivars were: Paramo, Lion, and Boogie. Choco, a chocolate brown variety with exceptional crisp texture and sweetness, and Mavras, a purple variety with more eye appeal than flavor, both produced high yields and quality fruit that may be desirable for specialty market production.

Growing profitable greenhouse peppers in the Southeast U.S. is possible via market advantages over the imports including low fossil fuel input, proximity to market, market demand for high-quality winter fruit, and the ability to produce superior yields without pesticides, thus increasing the market value as "pesticide-free." Labor inputs can be reduced by using low-pruning methods, and double-cropping with other niche products can keep the greenhouse in production year-round.

For information related to greenhouse production and costs for production of peppers, go to [www.hos.ufl.edu/protectedag/publications](http://www.hos.ufl.edu/protectedag/publications).



Shaw is a senior biological scientist at the University of Florida; [nshaw@ifas.ufl.edu](mailto:nshaw@ifas.ufl.edu). Cantliffe is chair and professor at the University of Florida's Horticultural Sciences Department; [djc@ifas.ufl.edu](mailto:djc@ifas.ufl.edu).

## Ellepots...high quality transplants for field crops

Excellent for melons and cucumbers!

Ellepots are bathed in oxygen resulting in quick rooting during propagation or after germination, and excellent field performance. Ideal for use in mechanical planters.

Buy Ellepots in the tray (many sizes available) ready to use, by the hundreds, thousands or millions.

Free samples, call (800) 874-8660



**BLACKMORE COMPANY**

10800 Blackmore Avenue • Belleville, MI 48111 • 1-800-874-8660 • Fax: 734-483-5454  
Visit our Web site at: [www.blackmoreco.com](http://www.blackmoreco.com)



**NEW!**