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# USING RETURNABLE SHIPPING CONTAINERS FOR PERISHABLES

by

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Packaging of perishables represents a large percentage of the total cost of marketing fresh fruits and vegetables. The cost of packaging, excluding labor, represents 15 to 25 percent of the FOB price for most fresh fruits and vegetables. The use of returnable shipping containers or bins can reduce the cost of packaging. In Europe, New Zealand, and Australia, the use of returnable shipping containers is a reality on a limited scale. In fact, in New Zealand, about 20 percent of all produce is shipped in returnable containers.

Returnable bins are being tested at the USDA Horticultural Research Laboratory at Orlando, FL, for sweet corn, peppers, citrus, watermelons, and tomato transplants. Other returnable shipping containers are also being tested for tomato transplants. The returnable bins being tested are constructed of wood and are collapsible. The shipping containers used for tomato transplants are manufactured from plastic and are nestable. Besides cost evaluations, packing and handling operations are being studied, including temperature maintenance in transit and condition of product upon arrival.

In shipping tomato transplants, both returnable pallet bins and shipping

boxes have been evaluated. The use of bins is economically feasible, but handling problems exist at farm level and filling the bins requires more plants than many northern growers can use, thus reducing the effectiveness of returnable bins for shipping tomato plants. The use of molded polyethylene (plastic) boxes for shipping tomato plants is feasible. One organization plans to buy 20,000 boxes for use this season. The use of returnable plastic boxes for shipping tomato transplants will reduce packaging costs significantly. For example, if the useful life of the plastic box is only five years the industry can save \$1.5 million, but if the useful life of the box is ten years then the industry can save about \$6 million. These figures include fixed cost, 20 percent return on investment, return freight, washing and storage for the plastic boxes.

The above calculations show that the use of returnable shipping containers can significantly reduce packaging costs. The U.S. Department of Agriculture is actively researching other product industries and shipping containers which may lend themselves to using returnable containers.

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