A Progress Report On Shipping Test With Gladioli

by

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Growers in North Carolina were receiving complaints of poor arrival and holding quality for shipments of gladioli (glads) to the New York and Chicago markets. In reviewing the growers' problems it was found that the growers had no standard procedure for packing or handling glads other than grading them as to size and placing 12 per bunch. Variation existed in method of handling from cutting to shipping, including type of container and refrigeration methods. Experiments were conducted to determine the effect of these procedures.

In cooling tests with glads initially at 70° to 75°F, it was found the temperature drop was slow and that after six hours the glads at the center of the hampers were still about 10 degrees above storageroom temperatures of 40° to 45°. Glads at the bottom and sides of the hampers cooled more rapidly than those in the center of the hampers. There was a variation in the cooling rates of the different type hampers used by the growers.

Using two varieties, a comparison was made of water content and keeping quality of glads held in or out of water for approximately four hours prior to shipment. Air temperature during holding averaged about 70°F and the humidity was relatively high due to intermittent showers. The glads held dry lost relatively little moisture. Comparable glads held in water during the interval from harvesting to packing and grading gained approximately 5% of their weight.

After arrival on the market all glads were placed in water. Those that were held dry picked up more water than the glads that were held in water prior to grading and packing; however, there was little difference in keeping quality.

In two different truck shipments of partially precooled glads from Wilmington, N. C., to New York, temperatures were found to be similar. The front bunker position averaged approximately 50°F. The center position averaged approximately 55°, and the rear, around 60°. This showed a need for improved air circulation within the truck. Upon arrival at the market in New York samples were taken from each crate. When held at 70° after arrival on the market, the glads from the front of the truck (where the temperature averaged 50°) opened more slowly than those from the rear position (which averaged 60°).

During this coming year more detailed work with glads is planned to study the following factors: 1. Storage temperatures, keeping quality, and rate of opening of glads; 2. Methods of loading and of air circulation within the truck; and 3. Wet or dry handling prior to packing and shipping.