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Stored Food in Carnation Cuttings

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The amount of usable food stored in a plant or plant part is a good indication of its potential life in storage. This also helps to determine the potential life of a cut flower and should have considerable influence on the performance of carnation cuttings.

In the presence of light, plants manufacture or accumulate foods. These foods are mostly sugars and relatively simple organic compounds in their early stages. During both day and night plants use a portion of these foods in respiration and other growth processes. Foods are made in the leaves and green stems, but they may be moved to other parts of the plant for immediate use or storage for future use.

One of the best methods of measuring the changes in food supply within a plant is by means of oven dried weight. With carnation cuttings this was accomplished by taking groups of cuttings periodically, placing their basal ends in water until they were completely turgid, then weighing them. The cuttings were then placed in a drying oven and dried to constant weight, and weighed again. The oven dried weight divided by the green weight gives the percentage of dry weight. Changes in percentage of dry weight are an accurate measurement of accumulation or loss of food reserves.