SNAPDRAGONS

From a talk given by Paul Newman, West End Greenhouses, Olean, New York, at the North Carolina Flower Growers Short Course in Raleigh, North Carolina, May 1962

To preface his remarks on snapdragon production, Paul Newman pointed out that the 6,000 square feet of bed area devoted to snapdragon production at West End Greenhouses was turned over about four times a year and thus their snap production on a yearly basis was on 24,000 square feet of growing area. Until a year ago snaps were grown as a pinched crop, but Paul says that now he is convinced that it is easier to time the crop and therefore get maximum use of bench space by growing single stem snapdragons.

The cropping procedure at West End Greenhouses used to be plant the seedling and let them come single stem, cut a crop, and let them come again as a pinched crop. Then they replant and repeat this same sequence, thus getting four crops per year. The reason for switching slowly to single stem production the year around was due to the fact that it was difficult to time the seedlings so as to be ready exactly when the previous crop was moved. Paul stated that they never like to leave a bench empty for more than two days. A 31° F. storage has solved this problem, and now should the rotation schedule be off and the bench not be ready for planting the seedlings when they are at the proper stage of development, the seedling flats are simply stored at 31° until the bench is ready for planting. The speaker has stored seedlings for as long as ten weeks with no ill effects. The proper stage of development for storing the seedlings or for dibbling directly into the bench is when the seedlings have produced the first two true leaves. The seedlings are lighted in storage by flashing lights (5 seconds per minute). No legging or bending toward the light has been noted.

Thanks to the top-notch hybridizers throughout the country, we have excellent seed sources for snapdragons. In his projected planting plan a grower should expect a minimum of 1,000 seedlings per trade packet. There are numerous ways for germinating seeds, and at West End Greenhouses the seed flats are prepared by placing a thin layer of coarse sphagnum over the cracks in the bottom of the flats and then covering this with horticultural vermiculite. The vermiculite is then leveled out and the seeds are broadcast on the vermiculite and covered lightly with a very finely pulverized sphagnum moss. On top of this is placed a readily visible layer of Parzate. The flat is then sub-irrigated with a nutrient solution containing approximately 40 parts per million of nitrates, 5 ppm phosphorous, 40 ppm potassium and traces of manganese and boron. Next the flat is covered with a polyethylene film and kept at a temperature of 65 to 70° F.

If a 65 to 70° location is not available, it was suggested that seedling flats be placed under heat pipes that have been covered with aluminum foil to reflect the heat downward. If this system is used, the layer of clear polyethylene should also be covered with a layer of black polyethylene, which will absorb more heat. With this procedure and by maintaining a good high temperature, the black polyethylene can be rolled back in about six days and then in another two days the seedlings will have progressed sufficiently so that the clear layer of polyethylene can be removed also.

The seedlings are best dibbled into the bench when the first two true leaves are formed and if the bench is not ready at this time, place the seedlings in the 31° storage as described above.

Mr. Newman emphasized the importance of having a high oxygen content in the soils for growing snapdragons. Poor drainage, soil compaction or other factors limiting oxygen have invariably resulted in low quality products. Coarse, angular, gracieted gravel has been mixed with the soil at West End Greenhouses and perlite is added periodically.

Although literature on the subject suggests a growing temperature of 55 to 60° F., Mr. Newman said that all his firm's snapdragons are grown at 48 to 52°. He finds that higher temperatures result in softer stems and poor quality.

A six by eight inch wire grid is used for supporting the crop and also is used as a spacing guide when the seedlings are planted. Plants grown single stemmed can be spaced 3 x 4 inches, thus giving one dozen flowers per square foot of bed area.

All the fertilization at West End is done by the use of a fertilizer injector, and the water from the end of the hose is tested periodically and the nutrient levels are regulated so that they contain about 40 ppm of nitrates, 3 - 5 ppm phosphorous and 30 to 40 ppm of potassium.

On insect and disease control, the speaker emphasized sterilization and sanitation as good insurance measures against the pythium wilt organism. A preventive dusting program is followed rather than waiting for problems to develop. The following dust is used once every week on all West End crops: Parzate (65%), 3 pounds; Fermate (76%), 3 pounds; Dusting sulphur, 4 pounds; Aramite, 15 w, 4 pounds; 25% Malathion, 5 pounds; 50% Thiodan, 2 1/2 pounds; and, as a carrier, 20 pounds of 3% DDT dust. This dusting combination is not used when the flowers are in bloom; however, if this schedule is followed properly, almost all problems are under control by the time the flowers are showing color. Good aphid control has been obtained with the Dithiono No. 57 bomb.

To prevent curved tips on the snapdragons, they are marketed and shipped upright in 16 x 16 x 48 inch hampers. Snaps can be stored up to seven days after harvest in a 31° F. storage. By using one tablespoon per gallon of a 1% solution of sodium hypochlorate (clorox), Mr. Newman indicuated that it was necessary to change water in their coolers only once every three to four weeks.

If you are looking for a more economical way to produce snapdragons, you may look for more efficiency in harvesting since about 40% of the production cost for cut-flower crops is in harvesting.