Colorado Flower Growers Association

IN COOPERATION WITH COLORADO A & M COLLEGE

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Resistance of Carnations to Fusarium Stem Rot in the Nurse Bed

by Ralph Baker

Preliminary studies (1) have demonstrated that Sim varieties of carnations are somewhat resistant to the Fusarium stem rot pathogen in the nurse bed. This report deals with further efforts to discover the point at which these varieties are almost completely resistant to infection by this organism.

Sim and Miller's Yellow cuttings were rooted from mother blocks which had been sprayed periodically with Captan. These rooted cuttings were transplanted to flats at 3 x 4 spacing. Innoculation potential at each time was 5000 spores per cc of soil. Two separate tests each involving three replications were carried out. Forty-five days after transplanting the plants were given a disease index rating from 0 to 5 (2).

The results are summarized in Fig. 1. These indicate that Sim is almost completely resistant 4 days after transplanting to the nurse bed. In contrast, Miller's Yellow apparently is relatively susceptible for a longer period of time.

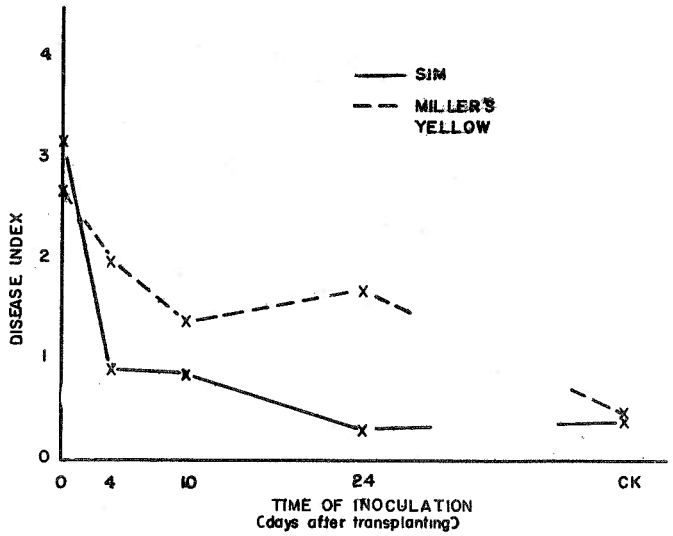


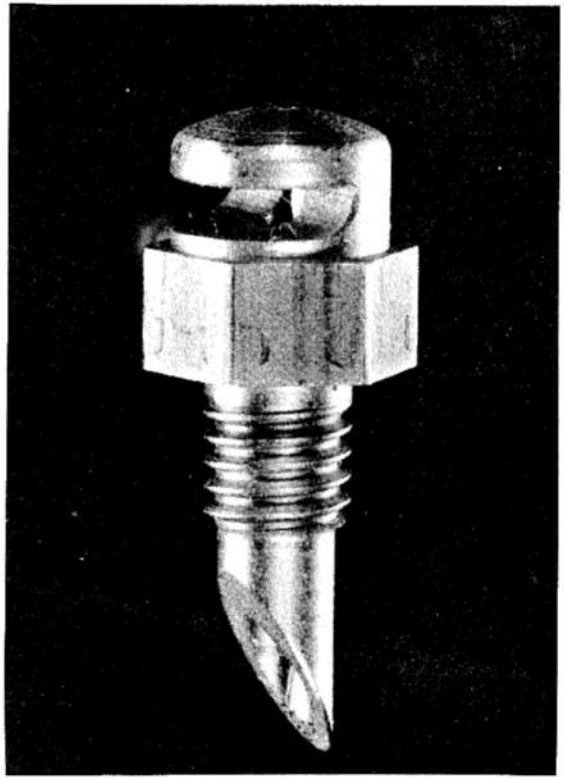
Fig. 1. Resistance of 2 carnation varieties to the Fusarium stem rot organism at various intervals after transplanting into the nurse bed.

1. Baker, Ralph and James Tammen. 1954. Fusarium stem rot of carnations. Colo. Flo. Gro. Assoc. Bul. 53.

2. Baker, Ralph. 1955. Resistance of some carnation varieties to Fusarium stem rot. Colo. Flo. Grow. Assoc. Bul. 64.

Progress in Greenhouse Irrigation

A new nozzle designed by research men of the Gates Rubber Co. should bring the cost of permanent-type irrigation systems within the reach of all. The nozzle pictured here differs from earlier ones in several respects. A smaller and sharpened shank facilitates easy installation in flexible plastic pipe without drilling holes in the pipe. After the pipe is arranged around a bench and clamped down securely, the nozzles are punched into the pipe and screwed down with a simple hand tool.



A smaller shank allows the use of these nozzles in 50P pipe which has thinner sidewalls and costs considerably less than the 75P required for other nozzles.

The adjustable feature of earlier nozzles has not been found necessary so this feature has been eliminated to save in cost. Clogging has not been a problem with these nozzles. If an occasional nozzle plugs, it can be screwed out by hand, the hole in the shank freed of debris, and the nozzle reinserted without cutting off the water.

Closed loop installations on benches up to 100 feet long are now being used satisfactorily with these nozzles in 50P-.824 I.D. flexible pipe. Longer sections have experienced some head loss at the end away from the water source.

Present costs of installing this irrigation system should not exceed 30 cents per lineal foot of bench.