



### Carnation Growth Distortions

Never have there been more crippled growths sent in to CSU than during this past summer. One of these problems is shown in the accompanying photos.

After all pertinent information was obtained on prior treatment of the plants (in many stages of growth), it was decided that one of two sources of injury was most likely. Either over fumigation with an insecticide mixture in a fogging device or an herbicide contaminant in a mixed fertilizer then in use were the only possible causes that could not be eliminated.

Rooted cuttings were established in flats of soil for about 4 weeks then subjected to the following treatments. The fumigations were done in a small chamber and were much in excess of any greenhouse fumigation a grower would use.

1. Overfumigated with petroleum distillate (cleaner).
2. Treated with an excess of exhaust from the fogger.
3. Overfumigated with G21 (Carmel).
4. Overfumigated with G19 (Carmel).

A fifth flat was fed with a 4-12-4 fertilizer that had been used by the grower prior to the appearance of the illustrated symptoms and one flat was not treated.

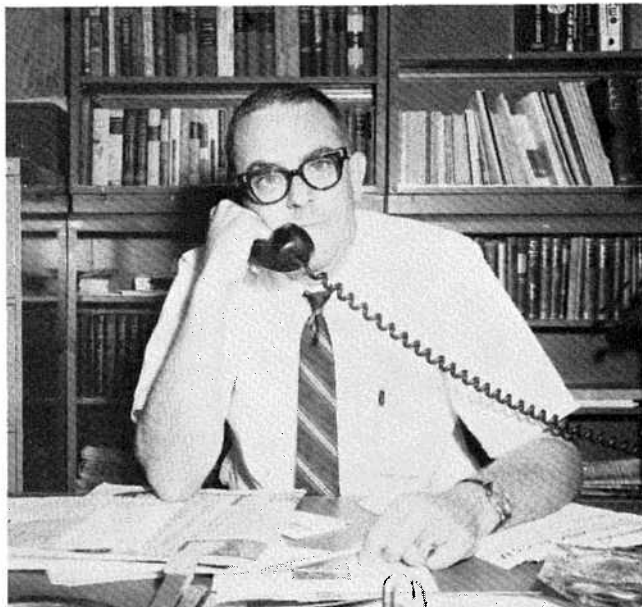
None of the fumigation treatments produced crippled growth although the wax was melted on the leaves and some scorching of leaf tips resulted from the G19 treatment. On the other hand, some of the crippled symptoms shown in the photos appeared on new growths within 30 days after application of the fertilizer. These symptoms included shortened leaves, increased branching, thinner stem tips and typical 2-4D injury.

Moral—Beware of mixed fertilizers, especially those prepared for lawns. The mixing equipment in fertilizer plants that service field and turf growers may be contaminated with enough herbicide to damage greenhouse crops.



Dr. Kenneth M. Brink of Purdue University became head of CSU's department of horticulture on September 1. He succeeded Dr. Richard L. Foskett who resigned to wind up his research and enter private business in the production of hybrid onion seed.

Brink, 36, is a native of Ohio and received B.S., M.S. and Ph.D. degrees in horticulture from Purdue University. He spent two years in the Armor Branch of the U.S. Army before starting as graduate research assistant at Purdue in 1957. Dr. Brink rose from instructor to assistant professor to associate professor while at Purdue.



Brink served Purdue in a four-way staff appointment of teaching, research, extension and administration. He taught several courses, served as extension marketing specialist, was on several administrative committees and conducted research on specific fruit and vegetable crops.

Brink represented the horticulture department on the University Senate and University Committee on Faculty Documents and Records. He was a member of the program planning committee for the Purdue Marketing Institute, the student information and scholarship committee of the Food Science Institute and the dean's committee for School of Agriculture reorganization.

Brink has authored numerous publications and articles on horticultural production and marketing and served as a judge at the Indiana State Fair.

Ken and Mrs. Brink and their two children have a beautiful new home in the southeast Indian Hills section of Fort Collins. We will be bringing him to Denver to begin meeting flower growers and wholesalers any day now.

Your editor,

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