## Boron Deficiency in Chrysanthemum and Snapdragon

A. C. Bunt of the Glasshouse Crops Research Institute, Sussex, England, described boron hunger signs on Princess Anne chrysanthemum and on snapdragon in the September 18, 1965 issue of The Grower. Bunt states that deficiency symptoms have usually appeared in the flower of pot chrysanthemums. The Princess Anne group of varieties appears to be particularly susceptible to boron hunger. The principal symptom of deficiency is a change from the normal decorative form of the flower to incurved. The florets (petals) may also show a longitudinal curling or roll-

ing. A black center, not associated with fungal or bacterial infection, may develop in the flower. Extreme britleness of the flower heads is also associated with boron hunger.

Snapdragon symptoms take the form of crimped or curled leaves, increased branching of stems, and death of the growing tips in extreme cases.

Bunt further states that increasing use of artificial mixtures for growing media are likely to cause boron

deficiency to become more wide-spread unless provisions are made to add boron to the media. Sodium borate (borax) at 1/4 ounce per cubic yard of mixture has given complete control of boron deficiency in pot chrysanthemums at the GCRI. Safety margin on chrysanthemum is very low. At three times the above application rate, toxicity, in the form of leaf scorch, has occurred.

your editor, WD Holley

COLORADO FLOWER GROWERS ASSOCIATION, INC. OFFICE OF EDITOR

W. D. HOLLEY Colorado State University Fort Collins, Colorado

FIRST CLASS