

## **VEGETATIVE PROPAGATION POINTERS**

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Successful cutting production requires: disease free stock, disinfested or sterile media, adequate light, a uniform mist delivery system, and sufficient "bottom heat" (at least 70°F in the medium). Except for the last ingredient (temperature) most growers satisfy the other propagating needs.

Physiologically, media temperature is as essential to rapid callus formation and rooting as the other four factors. Too often, growers simply lay or suspend a standard thermometer in the propagating area. A soil thermometer (several would be better) should be inserted into the rooting media. Normally, unless sufficient "bottom heat" is provided, the media temperature is lower by 3-5°F or more than the surrounding air. Slow, poor, and erratic rooting results with substantial cutting production loss.

Calibrated soil thermometers are necessary for all propagation (see CT Greenhouse Newsletter #98, 3/80 for technique). Soil thermometers are available from your favorite supplier. These thermometers are not expensive and will quickly pay for themselves in the rapid production of quality cuttings. Regardless of the propagating system - heat cables, mats, buried tubes or pipes - all systems must be checked for uniform temperature (70°F minimum). The use of several soil thermometers in the propagating media will detect "cool" spots and aid in eliminating them. These same criteria, especially soil thermometers, will provide savings in the germination of your seed crops.