

Dolomite should be used to adjust the pH to a range of 5.5 - 6.5, and 5 pounds per cubic yard of single superphosphate should be incorporated into the soil. These amendments provide sources of calcium, magnesium and sulphur, create a favorable pH for nutrient availability and reduce problems of iron toxicity associated with low pH.

Irrigation

Assuming the growing medium has adequate air space, enough water should be applied to keep the soil at, or near, the water holding capacity. As previously mentioned, allowing caladiums to wilt will result in tubers becoming dormant. Caladiums can be watered using overhead sprays, "spaghetti tube," ebb-and-flow, or capillary mat irrigation systems. However, since water conservation from 40 -80 percent can be achieved, the latter three methods should be considered in areas where water is scarce or expensive.

Light intensity

Light intensity in the growing area can be important for two reasons. First, most cultivars do not develop proper color unless they are grown under 2500 to 5000 footcandles of light. Secondly, light intensities lower than 2500 footcandles will cause undesirable stretching of petioles, oversized leaves for small pots, and unsightly plants which fall over when handled. There are exceptions since some cultivars require light levels lower than 2500 footcandles for optimal coloration including: the white cultivars Candidum, White Christmas, June Bride, and White Wing; the pink cultivars Kathleen, Fannie Munson, and Lord Derby; and the red cultivars Frieda Hemple, Postman Joyner, Poecile Anglais, and Dr. T. L. Meade. In addition, the dwarf cultivars in the tissue-cultured Honey Bunch series perform best at 1500 to 2500 footcandles.

Some cultivars perform well under light levels of 5000 to 10,000 footcandles. Among these are the white cultivars Candidum Junior and Seagull; the pink cultivars Carolyn Whorton, Rosebud, Mrs. W. B. Haldeman, Pink Gem, and Lance Whorton; and the red cultivars Fire Chief and Red Frill.

Forcing temperature

After potting, caladiums should be forced at temperatures averaging at least 70°F. Although a night temperature of 55°F for a few hours over several days can be tolerated, longer durations of cold temperatures or colder temperatures may damage the plants. Regrowth may occur but will be slow and usually of poor quality. Day temperatures above

90°F are not favorable, since the rate of emergence can be reduced. Therefore, a day temperature range of 70-90°F and a night temperature range of 65-90°F is optimal.

Many growers stack potted tubers in a confined and easily heated area (such as heat tents) until sprouting occurs and then space plants in the greenhouse. This method reduces heating costs and appears satisfactory when air exchange is used to prevent build-up of ethylene gas and to prevent temperatures from exceeding 90°F. The costs of handling plants twice should be weighed against heat savings before this method is adopted, especially if tubers have been stored properly and are ready to sprout.

Growth retardants

Although growth retardants can reduce the height of caladiums, the response to a given growth retardant can be variable and is cultivar-dependent. Further, growth retardants do not satisfactorily control the height of the primary leaves from the terminal bud. Therefore, growth retardant usage is currently not recommended for use on caladiums.

Shipping

If caladium plants are to be shipped and sold in other than the production greenhouse, then shipping and retail outlet temperatures should be maintained near 70°F. Research has shown that storage of plants at 55°F for 3 days in the dark caused 40 percent of the caladium leaves to turn brown and abscise. Even greater leaf loss occurred with temperatures below 55°F.

Caladiums will not tolerate the cool temperatures that may be ideal for shipping other potted plants. Additionally, mass merchandisers often display plants in produce sections that may be too cold for caladiums. If caladiums are displayed out-of-doors, they must be protected from the low night temperatures and windy conditions that occasionally occur in late spring.

Caladiums in the Landscape

Site Selection and preparation

Caladiums have proven to be excellent bedding plants for shade and partial shade locations. Although plants develop more intense leaf color in partial shade, they will grow and survive in full sun if provided adequate water. In addition some cultivars perform best in full sun locations. Cultivars that tol-