

Keep Begonias Vegetative

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Christmas begonias (*Begonia socotrana*) will make a well branched, flowering plant in a 5" pot for the following Christmas (propagated as late as April or May).

High temperature and long days are necessary to keep stock plants vegetative. Stock plants, in a vegetative condition, have more leaves and are in better condition for propagation than plants with well advanced buds or in flowering condition.

It has been difficult to prevent bud initiation and flowering on stock plants during the short days to March first.

Previous experiments have shown that the variety, "Lady Mac", is more sensitive to photoperiod and temperature than the varieties Melior and Marjorie Gibbs. The Norwegian variety, "Tove", proved less sensitive.

During the fall of 1952 and winter of 1953 we studied the effect of temperature in conjunction with daylength in keeping the *Begonia socotrana* vegetative for propagating purposes.

Marjorie Gibbs, Lady Mac, Norwegian "Tove" and the Dutch hybrids were used. Twenty plants of each variety were placed in each temperature of 60°F and 80°F, minimum, respectively. Ten plants of each variety in each temperature were subjected to normal daylength, and ten plants were subjected to a daylength of 15 hours. The additional daylength was provided by 60 watt Mazda bulbs, placed five feet apart and 30" from the plants.

Plants were placed under these conditions on August 15, 1952, before a restricted daylength had affected bud initiation.

Variety	Dates of Flowering			
	80°F		60°F	
	Normal	Longday	Normal	Longday
Melior	12/10	vegetative	12/20	1/15/53
M. Gibbs	12/10	vegetative	12/20	1/15/53
Lady Mac	12/10	vegetative	12/15	1/10/53
Tove	11/30	vegetative	12/10	12/30/52
Dutch Hybrid	vegetative	vegetative	12/15	12/25/52

The Dutch hybrid begonias will not flower when grown in 80°F temperature, with either long days or short days. When the Dutch hybrids are grown in 60°F temperature, which is optimum for this variety, the plants will flower only under long days. Buds which initiated early in the fall continued to develop, but no new buds initiated when the daylength was much less than 13 hours.

The varieties "Melior", "Marjorie Gibbs", "Lady Mac", and "Tove", all flowered in a maximum temperature of 80°F during normal short days. However, when these varieties were given a 15 hour day in 80°F constant temperature, no buds initiated.

The Norwegian "Tove" variety initiated buds during a much longer day than the varieties, "Melior"