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# Alternanthera: Stalled Growth & Flowering

*The short days of winter will result in the induction of flowering and stalled growth with alternanthera (Joseph's Coat). This Alert describes the diagnostic signs and ways to avoid the problem.*

Alternanthera (*Alternanthera* species) is an excellent addition to any garden because of its bright leaf color that holds up after a rain. On a recent trip of visiting greenhouses, two instances were observed where alternanthera plants had stunted growth, the new leaves were smaller, and flowers were present (Fig. 1).

The desired characteristics of robust plants actively growing and covered with large leaves is the result of long day conditions. Alternanthera plants flower under short day conditions of winter (Fig. 2&5). This results in the plants initial-

ly developing smaller sized leaves and then flowers (Fig. 3). With all the energy going into flower production, the overall plant size is smaller. This can



Figure 1. Flowers on alternanthera plants grown under short days.

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be a production challenge when trying to grow out a full sized plant for spring production or when the plant is for stock and you want to harvest vegetative cuttings.

Flower formation in alternanthera is a short day response. Vegetative growth occurs under long day conditions (March through September in the northern hemisphere). From September 21st until March 21st in the northern hemisphere is the time to provide day length extension so the days are 14 hours long or night time interruption to avoid flowering. A typical tactic is to place the plants under lights

from 10 pm to 2 am (Fig. 4). If the plants are grown with other light sensitive plants such as poinsettias, black cloth will need to be pulled to avoid light pollution to those sensitive plants.

If your plants have flowers, then give them a hard pinch so that you remove all the smaller reproductive leaves. This may not be feasible if the plant has been grown the entire winter under short day conditions. Place the plants under long day conditions. Provide them with adequate fertility to encourage growth. From my observations, regrowth is extremely slow and the



Figure 2. Flowers on a yellow leaf alternanthera grown under short days.

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plants will be months behind schedule. Thus, waiting for regrowth really is not an economically feasible option to have stalled plants ready for spring sales. It would be better to

discard them and restock with new actively growing plants.

**Key Points**

In summary, alternanthera need long days to avoid



Figure 3. An actively growing plant grown under long day conditions (left) and stalled growth and flowering due to growing the plant under short day conditions (right).



Figure 4. A simple night interruption lighting and shade system used to provide long day conditions and keep plants vegetative.

stalled growth and flower formation. Lighting should be provided so that the day is extended to 14 hours or

provide a night lighting interruption to avoid flowers and keep the plant actively growing.



Figure 5. Flowers on a red leaf alternanthera grown under short days.