

*Low Temperature and "Skips" in Snapdragons

A drop in temperature from 50°F to 40°F or less for 2 or more nights when buds are showing in snapdragons causes "skips" on the spike if plants are at low light intensity, as during January. Most serious trouble results in December to February. Such temperature drops do not cause skips if the light is good. Stopped spikes with few flowers may be induced by similar treatments.

Cyanide gas prevents normal development of buds of certain age on snapdragons. Skips in the spike have been found when cyanide was not used and low temperature was thought related to this problem.

Ball hybrid pink #2 snapdragon seeds were planted August 23, 1951. Seedlings were transplanted to 2 1/4" pots September 18 and transferred to 3" pots October 19, later pinched to leave two nodes and later transplanted to deep flats and grown at 50°F until given low temperature treatments.

January 1, the plants were showing color in most of the spikes and others were in various stages of bud development. They were treated for 2, 4, 6 and 10 days at 40°F or nights at 31°F then returned to the 50°F temperature to develop. The following table summarizes the results of this experiment.

Treatment	Temperature and average buds blasted per spike	
	Length of Temperature	
	2 days	10 days
50° constant	1.3	
40° - day	3.3	5.6
31° night, 50° day	5.0	8.7

The lower the temperature and the longer the



Flat heads caused by low temperature and low light.

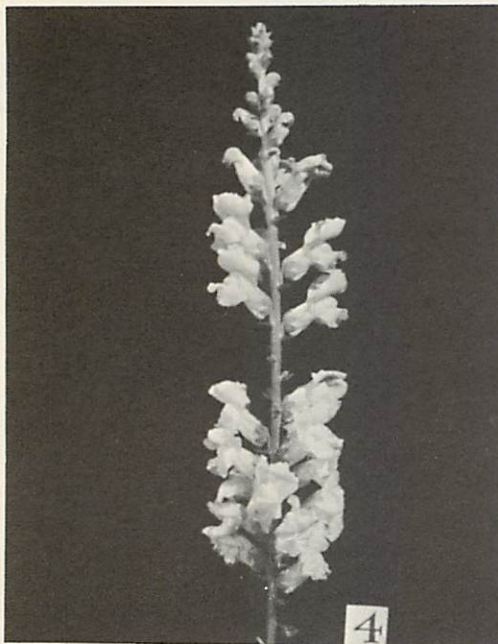
exposure, the greater the number of blasted buds per spike.

Plants kept continuously at 40°F developed no more skips than those kept continuously at 50°F. The injury occurs when temperature is lowered below the regular temperature. Plants apparently adjust to the lower temperature if given time before buds are in the stage in which they blast.

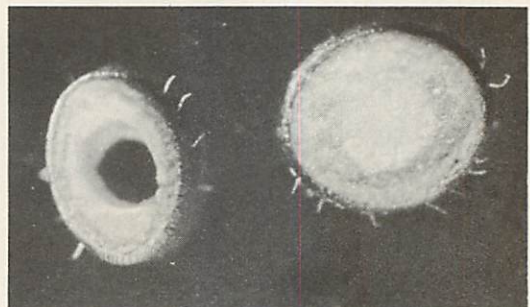
This experiment was repeated in April when the light was greater than during January. No blasted buds appeared on any temperature treatment.

One additional plot was shaded to produce a maximum of 200 to 1200 foot candles of light. This was similar to the light during January. These spikes had hollow stems which were too weak to hold the spike upright. Close examination showed the stems were flat rather than the normal round and they bent and broke more easily than stems grown in normal light.

Varietal differences are probably important in this problem.



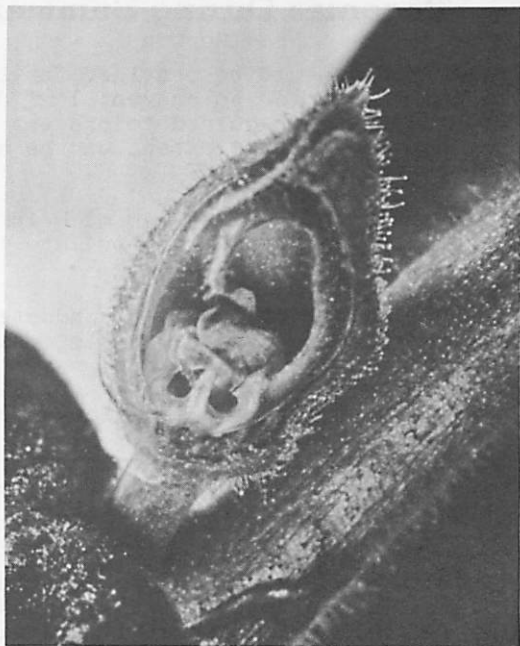
Skips in the snapdragon head caused by low temperature with low light.



Hollow flat stem is caused by low light intensity.



Cross section of a normal
bud of a snapdragon.



Cross section of bud exposed to
low temperature and low light.
Exterior is normal - interior is
completely disintegrated.

* Summary of the thesis of Harry Arthur
Lloyd McLaughlin. "A study of the effects of
low temperature upon the blasting of buds in
Antirrhinum Majus" (completed June, 1951). Mr.
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turst of Nova Scotia, Canada.

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