

Suckered vs Nonsuckered Snapdragons

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There are many statements made about the merits of suckered versus non-suckered snaps but actual figures are difficult to find or nonexistent. In order to obtain some information on this topic two studies were conducted.

STUDY 1

Seeds of the variety Jackpot were sown on February 22, 1961. Germination occurred March 1 and the seedlings were benched 4" x 5" on March 28. Photoperiod and temperature treatments were begun on March 10. Treatments consisted of suckered and non-suckered plants being grown under natural (natural daylength), 9-hour (natural light 8 am to 5 pm), and 18-hour (natural light 8 am to 5 pm plus incandescent, 10-25 ft c, 5 pm to 2 am) photoperiods at 50° and 60°F. Each treatment had 64 plants. The influence of the treatments on one observation made before maturity and seven observations at maturity (time of harvest) are presented in Table 1.

Results

Days to First Floret Open and Maturity from Germination: Within similar photoperiod treatments, suckered plants at 50°F consistently reached the first-floret-open stage and maturity 1 to 2 days before non-suckered plants. At 60°F the same trend occurred under 18-hour photoperiods, but not the natural or 9-hour photoperiods. The natural and 9-hour photoperiods showed no consistent trend.

As would be expected, regardless of associated treatments, plants grown at 60°F reached the first-floret-open stage (when the first floret on the flower spike was fully open) and maturity (when the tip of the flower spike started to elongate) sooner than those grown at 50°F. Also, regardless of associated treatments, plants under 18-hour photoperiods reached the first-floret-open stage and maturity sooner than those under natural photoperiods, and these in turn sooner than those under 9-hour photoperiods.

Stem Length: Suckered plants at both temperatures consistently had shorter stem lengths than non-suckered

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Table 1. A comparison of average values for observations on suckered and non-suckered plants of the Variety Jackpot grown under natural, 9-hour, and 18-hour photoperiods at 50° and 60°F.

Observation	50°						60°					
	SUCKERED			NON-SUCKERED			SUCKERED			NON-SUCKERED		
	Natural	9-Hour	18-Hour	Natural	9-Hour	18-Hour	Natural	9-Hour	18-Hour	Natural	9-Hour	18-Hour
Days from Germination To Maturity	104	119	96	105	121	98	88	103	79	88	104	81
Days from Germination To First Floret Open	99	112	90	100	113	92	85	98	76	84	98	77
Stem Length (cm)	93.9	93.5	83.5	98.1	97.8	89.6	92.4	94.9	69.9	95.6	100.8	76.6
Spike Length (cm)	28.6	24.6	24.1	26.1	22.7	24.6	28.4	23.2	17.5	28.4	23.6	18.6
No. of Florets Open	32.9	24.2	23.5	26.9	22.4	21.3	28.0	28.2	13.0	26.1	29.2	12.9
No. of Florets	36.9	34.6	26.5	30.3	32.3	24.4	32.2	31.4	16.8	28.7	32.4	18.2
Total Weight (gm)	51.6	47.0	30.5	59.6	57.3	39.4	40.1	41.9	17.8	50.7	55.0	25.8
Weight Less 1/3 Leaves (gm)	45.0	41.8	27.2	50.2	47.6	31.2	36.7	36.3	16.3	41.9	46.0	21.8

plants. Stem length was shorter under 18-hour photoperiods than either natural or 9-hour photoperiods. Also, there was a tendency for the stem length to be shorter at 60°F than 50°F.

Spike Length: Within similar photoperiod treatments there was little or no difference between the spike length of suckered and non-suckered plants at either temperature. At both temperatures plants under natural photoperiods had a longer spike length than either the 9-hour or 18-hour photoperiods. Suckered and non-suckered plants under 9-hour and 18-hour photoperiods at 50°F and 9-hour photoperiods at 60°F had approximately the same spike length. However, at 60°F spike length under 18-hour photoperiods were shorter than the other photoperiod treatments.

Florets and Florets Open: At 50°F, suckered treatments had more florets than non-suckered treatments. While at 60°F, there was more florets on suckered plants grown under natural photoperiods, but this was not observed for the 9- and 18-hour treatments. In general, more florets were produced at 50°F than 60°F.

Weight: The weight of a cut stem was greater at 50°F than 60°F. At 50°F, suckered and non-suckered plants under natural photoperiods were heavier than those under 9-hour photoperiods and these in turn were heavier than those under 18-hour photoperiods. However, at 60°F, plants under 9-hour photoperiods were heavier than those under natural photoperiods and these in turn were heavier than those under 18-hour photoperiods.

A direct comparison of the weight of suckered and non-suckered plants would not be fair because the weights of non-suckered plants with the sucker growth removed were not available.

STUDY 2

In order to measure the influence of suckering on stem weight and development seedlings of the variety June Bride were benched 4" x 5" on March 28, 1962 in a 50°F greenhouse. The treatments consisted of 15 plants which were suckered as the plants grew and 15 plants that were not suckered until maturity (time of harvest) both grown under natural photoperiods. The results of these treatments are shown in Table 2 and Figures 1 and 2.

Results

Table 2 shows the variety June Bride suckered plants matured 2 days sooner, had a shorter stem length and longer spike length than non-suckered plants.

A comparison of the total weights of both treatments (Table 2) shows that at maturity non-suckered stems weighed 41% (89.6 vs 125.9) more than stems suckered throughout the growing period. However, when non-suckered stems had the suckers removed they weighed 44% (50.3 vs 89.6) less than those suckered throughout the growing period. Approximately 60% (50.3 vs 125.9) of the weight of non-suckered stems was made of main breaks and "grassy" growth, as can be seen in Figures 1 and 2.

In Figures 1 and 2 it can be seen that the stems of plants suckered as they grew were thicker than those suckered at time of cutting. Also, leaves on suckered plants were larger than those on non-suckered plants.

Under the conditions of this trial plants suckered as they grew graded one S A F grade higher than those suckered at maturity.

Discussion and Conclusions

On the basis of these studies, suckering can be expected to:

1. hasten maturity 1 to 2 days over non-suckered plants.
2. produce a shorter stem than on non-suckered plants.
3. produce heavier, sturdier stems than non-suckered plants.
4. produce stems of a higher S A F grade than non-suckered plants.
5. The general differences between suckered and non-suckered plants appeared to be the same regardless of temperature, photoperiod or variety.

Temperature would seem to have an influence on the number of florets produced by suckered and non-suckered plants. At 50°F suckered plants produced more florets than non-suckered, but this was not true for all treatments at 60°F.

These trials would tend to point to a varietal difference with regards to spike length and suckering. Jackpot showed little or no difference in spike length between

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FIGURE 1. Three flowering stems of the variety June Bride. Left to right—a stem suckered as plant grew; a stem suckered at maturity; a stem before suckering at maturity.



FIGURE 2. Close up of plants shown in Figure 1 to show stem and leaf size.

Table 2. A comparison of average values for observations on suckered and non-suckered plants of the variety June Bride grown under natural photoperiods at 50°F.

Treatments	Date of Maturity	Stem Length (cm)	Spike Length (cm)	Total Weight of Cut Stem (gm)	Weight of Suckered Stem (gm)	S A F Grade
Suckered as Plants Grew	June 7	94.7	27.8	89.6	Special
Not Suckered (Until Maturity)	June 9	97.5	22.2	125.9	50.3 gm	Fancy

suckered and non-suckered plants, whereas June Bride produced longer spikes on suckered plants.

The results of these studies can in no way be considered as the full answer to the comparison of suckered and non-suckered snapdragons. However, they do present some interesting facts that can form a base for future observations.

Posies, Petunias and Potted Plants

It has been brought to the attention of the Editor that the statistical information for this article, reprinted in Bulletin 247, was primarily obtained from USDA—Marketing Research Reports numbers 704 and 741. Additional information can be obtained from these reports.

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