

Snapdragons as an Alternate Crop in Colorado

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Single stem and pinched snapdragons were compared for quality and production at carnation temperatures from Aug. 27, 1974, to May 12, 1975. Four Group II varieties produced an average of 28.9 flowers per

square foot when grown single stemmed, as compared to 23.5 flowers per square foot for the same Group II varieties and one Group III variety grown pinched, multiple crop. The numbers 6 through 2 were assigned to each grade beginning with Special. Average mean grade for single stem was 5.00 as compared to 4.36 for the pinched crop. However, the single stem bench had to be replanted four times as compared to once with the pinched method.

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Methods

Seeds were germinated under intermittent mist and transplanted to inert media at the Bay Farm greenhouse. Benches were 105 feet long and irrigated with the Chapin, double-wall drip system. Automatic fertilizer injection was used. Plants received the same nutrient feeding as the carnations in the house. CO₂ was injected when exhaust fans were off.

The pinched-multiple crop bench was divided equally among four Group II and one Group III varieties, planted on Aug. 27, 1974, at a 6" x 8" spacing. These were pinched on October 22 to at least four leaf pairs. The single stem bench was divided into four plots, each containing 79 square feet. Each plot was further subdivided for the four Group II varieties. Planting and flowering dates are given in Table 1.

All flowers were graded according to the SAF 5-grade system. The pinched-multiple crop system was cut, leaving two leaf pairs per stem.

Results

For four single stem crops of 'Montezuma', 'Debutante', 'California' and 'Baltimore', time in bench

varied from 134 to 157 days. Production per square foot ranged from 19.7 to 35.4 flowers. With the exception of Debutante, more than 45% of the total flowers cut graded Special (Table 2). Debutante produced 5% in the lowest (Second) grade while the other three varieties produced 2% or less. Baltimore had the lowest production.

The pinched crop produced two well defined flowering peaks. The second peak began the latter part of March for 'Montezuma', 'Debutante' and 'Tennessee', and the middle of February for 'California' and 'Baltimore'. The two peak periods were divided and compared. There were no consistent differences in quality between periods when all varieties were averaged. 'Montezuma' and 'Baltimore' produced 16% and 24% more flowers in the second period. 'Montezuma' produced a large number of Second grade in the second period. Total production per square foot ranged from 17.4 flowers for 'California' to 28.0 for 'Montezuma'. Fancy and Special grade flowers were fewer compared to the single stem crops (Table 3).

There appeared to be considerable difference in varietal response. Although single stem production produced more flowers with higher quality, the cost of replanting and return per flower must be weighed in a decision to use pinching and multiple cropping.

Table 1. Planting and flowering dates for single stem snapdragons, planted 4" x 3".

Plot No.	Benched	First flowering	Terminated	Days in bench
1	Aug. 27, 1974	Nov. 25, 1974	Jan. 7, 1975	134
2	Sept. 15, 1974	Dec. 29, 1974	Feb. 11, 1975	149
3	Oct. 20, 1974	Feb. 17, 1975	April 11, 1975	174
4	Dec. 1, 1974	April 4, 1975	May 6, 1975	157

Table 2. Yield and quality of four varieties of snapdragons, four crops, grown single stem. See Table 1 for planting and flowering dates.

Variety	Grade					Total	No. per sq. ft.	Mean Grade
	Special	Fancy	Extra	First	Second			
'Montezuma'	340 52%	149 23%	118 18%	41 6%	11 2%	659	35.4	5.16
'Debutante'	207 38%	121 22%	103 19%	86 16%	25 5%	542	30.1	4.73
'California'	260 47%	126 23%	91 17%	66 12%	6 1%	549	30.3	5.03
'Baltimore'	160 46%	85 24%	80 23%	24 7%	0	349	19.7	5.09
Mean	241.8 46%	120.3 23%	98.0 19%	54.3 10%	10.5 2%	524.9	28.9	5.00

Table 3. Snapdragon production for a pinched, multiple crop, planted Aug. 27, 1974, pinched Sept. 22, 1974, and finished May 12, 1975. Days in bench — 259.

Group	Variety	Date of first flower	Grade					Total	Flowers per sq. ft.	Mean Grade
			Special	Fancy	Extra	First	Second			
II	'Montezuma'	Dec. 11	238 13%	425 24%	573 32%	409 23%	145 8%	1790	28.0	4.11
	'Debutante'	Dec. 15	94 5%	429 25%	606 35%	477 28%	131 8%	1737	27.0	3.92
	'California'	Jan. 6	290 26%	340 30%	298 27%	137 12%	50 4%	1115	17.4	4.61
	'Baltimore'	Jan. 7	360 27%	383 28%	350 26%	200 15%	57 4%	1350	21.1	4.58
III	'Tennessee'	Jan. 7	309 20%	540 35%	425 28%	214 14%	42 3%	1530	23.9	4.56
	MEAN		256.4 17%	423.4 28%	450.4 30%	287.4 19%	85 6%	1502.6	23.5	4.36