

Table 1. Influence of spacing and humidity on fruiting and shedding.\*

	Close spaced		Wide spaced	
	Interior	Border	Interior	Border
Low humidity				
Squares	4.00	9.00	36.7	44.3
Blooms	0	0.42	1.67	2.33
Bolls	0	0	0.33	1.67
Sheds	8.00	6.92	6.00	1.33
Total fruiting positions	12.00	16.33	44.7	49.7
Percent shed	66.7%	42.3%	13.4%	2.7%
High humidity				
Squares	2.83	10.42	23.33	35.67
Blooms	0	0.25	0.67	1.67
Bolls	0	0	0.33	0
Sheds	7.92	7.33	13.33	5.00
Total fruiting positions	10.75	18.00	37.67	42.33
Percent shed	73.6%	40.7%	35.4%	11.8%

\*Data are averages of 12 plants for close-spaced and 3 plants for wide-spaced plants.

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#### EFFECTS OF SUPPLEMENTAL LIGHTING ON FRUITING OF CLOSE-SPACED PLANTS

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One possible reason for relatively poor fruiting of close-spaced plants is that self-shading decreases photosynthesis and, thus, limits the amount of sugars and other substances necessary for fruiting. A greenhouse test was conducted to determine the effects of supplemental lighting.

Hopicala plants were cultured in nutrient solutions at a density of four plants/sq. ft. Two 40-watt fluorescent lamps were suspended in the middle of the plant canopy of one group of plants. The lights were switched off at night. Plants were harvested shortly after they started blooming.

Supplemental lighting improved fruiting performance slightly (Table 2). The differences were not great, but neighter was the amount of added light.

Table 2. Fresh weights and fruiting characteristics of close-spaced plants with and without supplemental light in the middle of the plant canopy.\*

	Control	Light
Number of shed positions	13.2	11.5
Squares	8.6	8.9
Bolls	0.46	0.96
Boll weight	0.84 g	5.76 g
Wt. of stems plus leaves	207 g	210 g

\*The data are per plant averages for 24 interior plants in each treatment.