

SEED PRODUCTION ON CARNATION

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It has been thought that the presence of petals on a carnation flower serves to protect the pistil and ovary during pollination. This protection and possibly a supply of some hormone from the petals were also thought to increase seed set. Common practice in preparing a carnation flower for pollination included removal of the inner petals and the anthers. After the stigmas have developed to the point of starting to curl, pollen is applied to the stigmatic surfaces. Wilting of the remaining petals serves as an indicator that fertilization of the ovary has occurred.

Five crosses were made during the late fall of 1970 to compare the seed set on those flowers where some petals were left during pollination with others from which all petals were removed before pollination. A total of 193 pollinations, almost

equally divided between the two treatments, was included in the study. Table 1 shows the five different crosses with % capsules setting seed and the number of seed per capsule produced by each treatment. One seed parent (69-3) was rather infertile.

The presence of petals when carnation flowers were pollinated did not increase the seed produced per capsule. In three of five combinations, a slightly higher percent seed set was obtained when petals were present. In one combination the % set was equal whether petals were present or not. In another combination percent set was slightly higher when petals were removed. It is doubtful that the presence of petals during pollination had a significant effect on the production of seed in this study.

Table 1. Effect of presence of petals during pollination on % seed set and number of seed per capsule in 5 carnation crosses.

Treatment	Number Pollinations	% Set	No. Seed per capsule
69-3 x Caribe			
With petals	26	81	5
Without petals	24	51	3
82 x 69			
With petals	18	81	18
Without petals	14	64	19
Dubonnet x 66-2			
With petals	41	98	20
Without petals	40	83	17
75 x 69			
With petals	7	86	16
Without petals	8	87	18
Dubonnet x Caribe			
With petals	8	75	11
Without petals	7	86	9

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