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Propagation of Carnations from Mother Blocks

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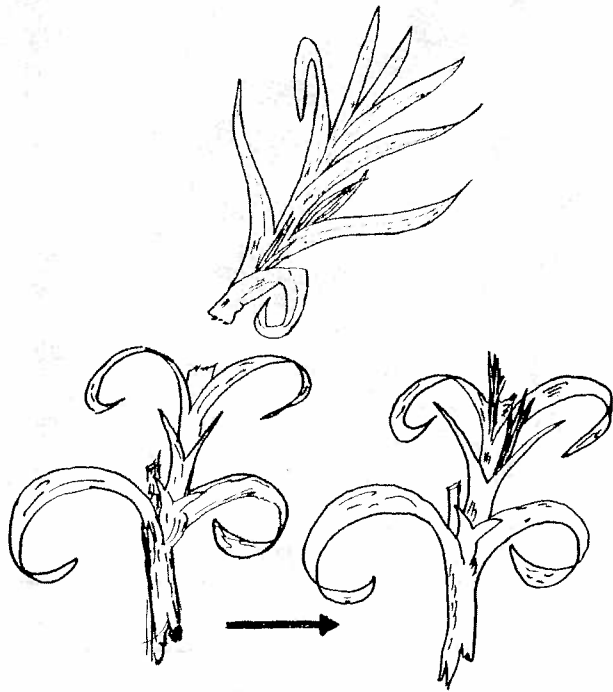
In the past five years the mother block system of propagation has become standard practice in carnation culture. The availability of wilt-free, reselected stock has made this practice a "must" for Colorado growers.

The mother block system of increasing select carnation stock has many advantages, among them are 1) faster increase; 2) larger, more uniform terminal cuttings; and 3) a significant saving of labor in taking the cuttings. Each plant in the mother block can be expected to yield 30 to 50 cuttings per year, depending upon the length of the propagative season. Large cuttings gain up to two weeks over smaller ones (Colo. Flw. Gro. Bul. 51). Uniformity of cuttings is always a boon to handling and timing.

The mother block system is not without some drawbacks. Space must be allotted to the production of cuttings instead of flowers. Large scale operations have pointed up the increased incidence of *Fusarium* stem rot (*F. roseum*) on cuttings propagated from mother blocks. With careful accounting methods, the space in mother blocks will more than pay its way. The stem rot problem (Colo. Flw. Gro. Bul. 90) must be minimized by regular spraying and sanitation to keep the source of infection down.

The following points are presented as a guide to successful handling of mother blocks:

1. Isolate them from the producing area if at all possible.
2. Locate them for maximum winter light. Poor light limits the yield and the diameter of the stems.
3. Space 8 by 8 inches.
4. Nutrient requirements are equal to or greater than for flowering plants. Nitrogen requirements are especially heavy.
5. Flower the original cutting without a pinch to eliminate color mixtures. This flower may not be reliable for other characteristics (see below).
6. Start taking the first cuttings as soon as bud color shows, but do not defoliate the young plants by taking all the cuttings from a plant at one time. Try to take one cutting or less per plant each week from the first crop.
7. In taking the terminal cuttings, leave two sets of leaves on the mother plant. Take no heel cuttings until about two months before the mother block is to be discarded.



TAKE TERMINAL CUTTINGS

Alternate Methods of Starting the Plants

Several alternative ways of handling mother blocks have been used. When no cuttings are needed until after the first of the year, rooted cuttings of select stock may be benched in late June, pinched once, flowered for Christmas then used for cuttings. The main disadvantage to this method is that the plants are seldom prepared for the changeover, resulting in too many thin cuttings. All flower stems that will not flower by Christmas should be cut back to 6 or 8 inches in length at the time flowers are disbudded for the holiday. Cut the Christmas crop to the same level and the plants will be ready to produce good cuttings. Cutting the plants too high will cause overproduction of inferior cuttings. This method allows the grower to see several flowers per plant and insures a supply of cuttings for February and later.

A second method that has been used involves pinching the original plant and flowering the top two breaks, which should have reliable flowers. The lower breaks are pinched as they begin to elongate. This method builds a strong plant while the two flowers are developing and gives a good estimate of the flower quality. Cut-

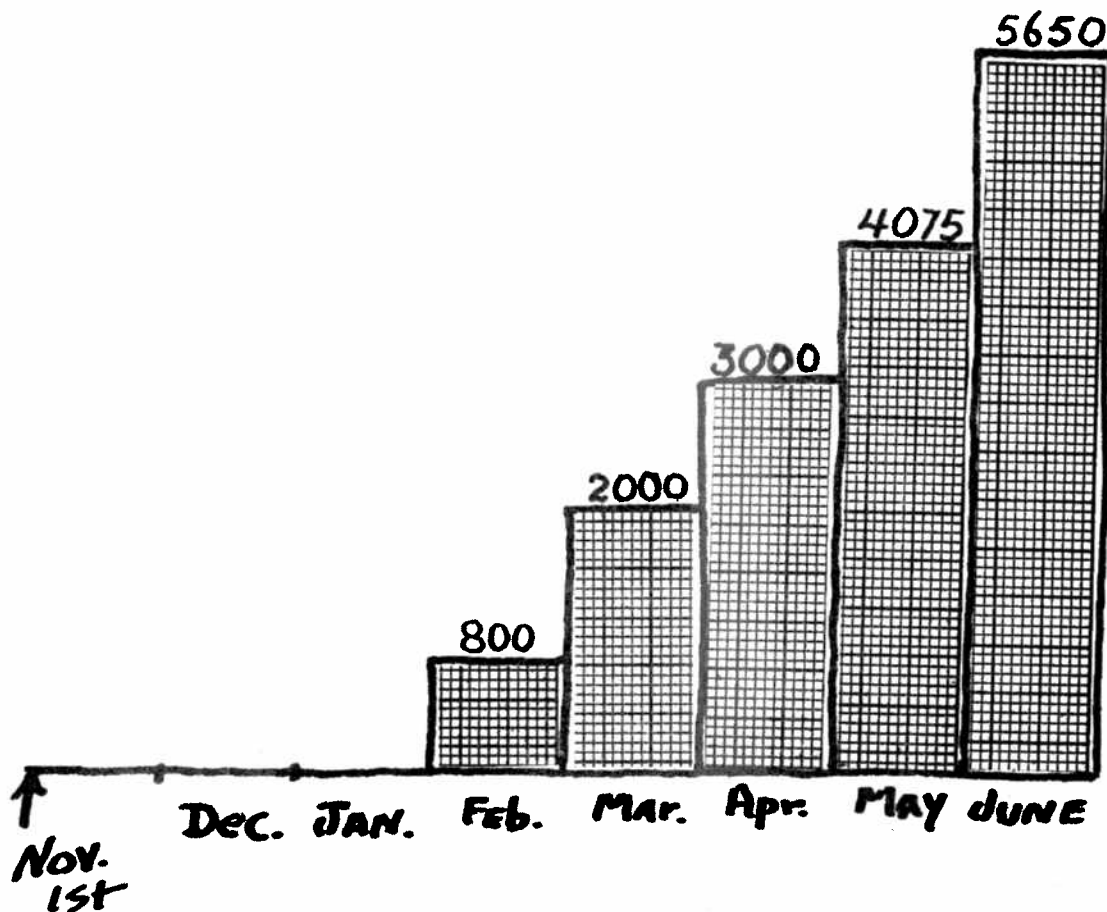
tings benched in mid-June will have flowered the two top breaks by late October. Mid-August cuttings will have flowered the two top breaks by February 1.

Probably the most common method, especially if the stock has been previously reselected, is that of benching the rooted cuttings and allowing them to flower without a pinch. The first cuttings are ready for harvest as flower color shows. Practically no reliance can be placed on flower quality since the flower bud may well have been initiated during or just following the time the cutting was being rooted. It is not uncommon to see the first flower produced on a shortened stem, in which case it will seldom be normally formed. The accompanying chart shows estimated timing for mother blocks handled by this method.

Estimated Mother Block Timing when Plants Are Flowered without Pinching

Benching date of rooted cuttings	Average weeks for color to show if not pinched	Date of first harvest
Jan. 15	16	early May
Feb. 15	14	late May
Mar. 15	13	mid-June
Apr. 15	11	July 1
May. 15	10	late July
June 15	11	early Sept.
July 15	13	late Oct.
Aug. 15	15	early Dec.
Sept 15	16	January
Oct. 15	17	February
Nov. 15	18	March
Dec. 15	17	April

In a last, and sometimes used, method the mother block plants are not flowered. This method is often used for building stock of a new variety. Since the stock is not flowered, the grower should be confident that there are no admixtures. Rooted cuttings are benched, pinched as ready and cuttings are harvested as they reach the desired size. Cuttings can be harvested two weeks sooner in early summer and four weeks sooner during winter from mother blocks handled by this method compared to the timing shown in the chart.



Actual yield of cuttings from approximately 300 square feet of mother block of the carnation variety White Sim--1956-57. Cuttings planted November 1 take longer to produce than from any other planting date. Estimated monthly yield after June--5000.

So You're in This Business.....

That's wonderful--and we wish you every success in 1957! You will be successful, too, if.... You have carefully studied all the pros and cons about your business... Your financing program is properly planned... You are the right type of person for such a venture... You have sufficient --- and appropriate--- experience, and... You stay alert to new ideas and new trends in your field.

According to Dun and Bradstreet studies of 1955, 91.3% of the business failures were from lack of management know-how. Only 4.8% failed because the business was neglected, 2.1% because of fraud, and 1.4% because of disaster. Approximately 70 out of every 1,000 retail businesses went out of operation in 1955.

To do any job a person needs certain aptitudes, certain knowledge and certain skills. Authorities say that people who make good as owner and manager of their own stores rate high in most of these character traits:

Initiative (self-starters; don't wait for directions).

Positiveness (optimistic, self-confident and willing to take risks).

Leadership (forceful, inspire confidence and loyalty).

Responsibility (accept it---don't duck it).

Organizing ability (able to see what should be done and get it done in logical order).

Industriousness (willing, capable of working hard for long hours).

Decisiveness (quick and accurate, not hesitant).

Sincerity (square shooters, on the level, honest).

Perseverance (stick-to-itiveness, particularly when hours are long and business seems slow).

Physical energy (highly energetic at all times).

(continued on next page)

Friendly (ability to get along with people, even when they try one's patience).

Here are some sources of information you should consider utilizing: 1. Your wholesalers and suppliers and their salesmen. They know a lot about your business. 2. Your banker. Cultivate him, he has seen a lot of businesses come and go, and can really be of help. 3. Your local Chamber of Commerce manager. 4. The people you rely on for expert service---your lawyer, your insurance man, your tax man or C. P. A.

5. The trade association that represents your type of business. 6. The Small Business Administration, Washington 25, D. C. It has field offices in your area. It works in the fields of loans and technical advice. It has published scores of bulletins and releases on all kinds of businesses and most phases of business.

Abs. from "So You're Going Into Business" Distributed by the Domestic Distribution Department of the Chamber of Commerce of the United States, Washington 6, D. C.

The basic long range needs of agriculture are: 1) to reduce costs, 2) to improve quality, and 3) to expand markets through research and education.

If you have two loaves of bread, sell one and buy a flower, for the soul must have food as well as the body.

--- from the Chinese

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