



IN COOPERATION WITH COLORADO A & M COLLEGE

Bulletin 12

Secretary, Ray App, Lowell Blvd.
Denver, Colorado

Sept. 1950

COLLEGE DAY

Over 150 flower growers from Colorado and a few from neighboring states were on hand to inspect and hear reports on the research work in progress at Colorado A & M. If you couldn't make it ask one of those who were here about what he saw.

PRODUCTION AND PRICES

Following a brief business meeting and words of welcome by Prof. Binkley and President Morgan, O. Ben Haley, Jr., manager of Denver Wholesale Florists Co., opened the afternoon classes. His talk on "The Price and Production Outlook for the Average Year" was ably presented by means of graphs prepared from records of the last five years. He stated that although each year seems an exceptional one at the time, they all follow the same curves. From December to May the supply of carnations was much shorter than demand and the quality was high. From June through November supply exceeded demand, quality was lower and competition was heavy from field-grown flowers, hence lower prices. He noted that market surveys showed that areas presently served by the Denver market were far from flower-saturated during the winter period and estimated that we failed to deliver two million or more blooms on standing orders last year. Ben challenged the researchers and growers present to find ways of shifting some of the excess production to the better winter-spring period.

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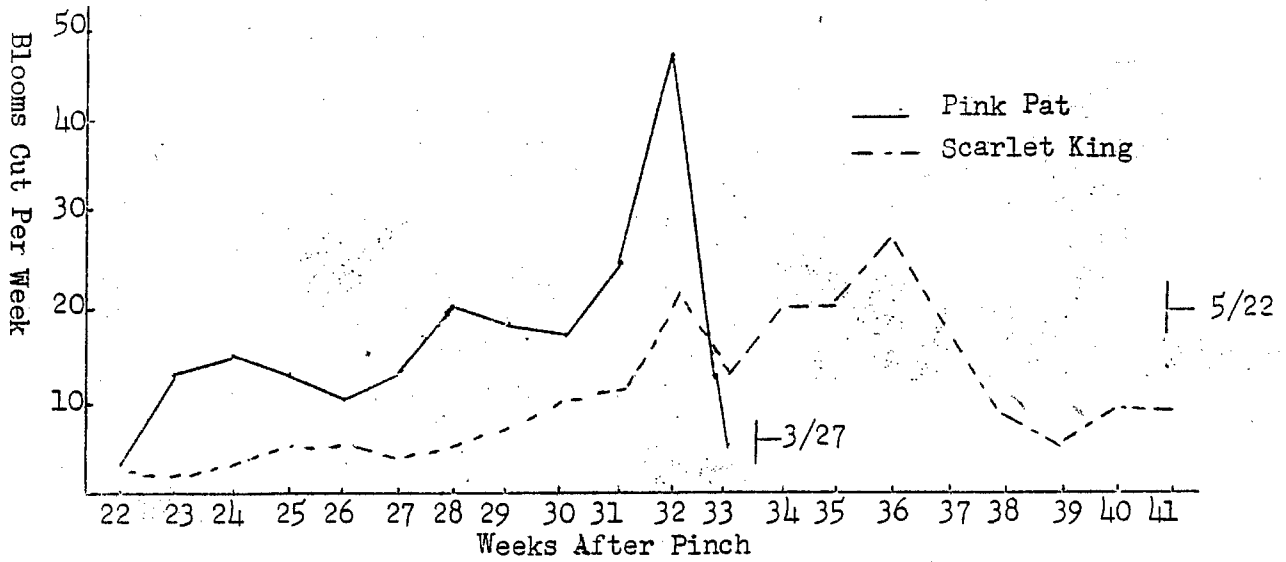


Fig. 1—Crop from August 1 Pinch on Pink Patrician and Scarlet King



Fig. 2—Return Crop from William Sim Cut the Week Following October 17.

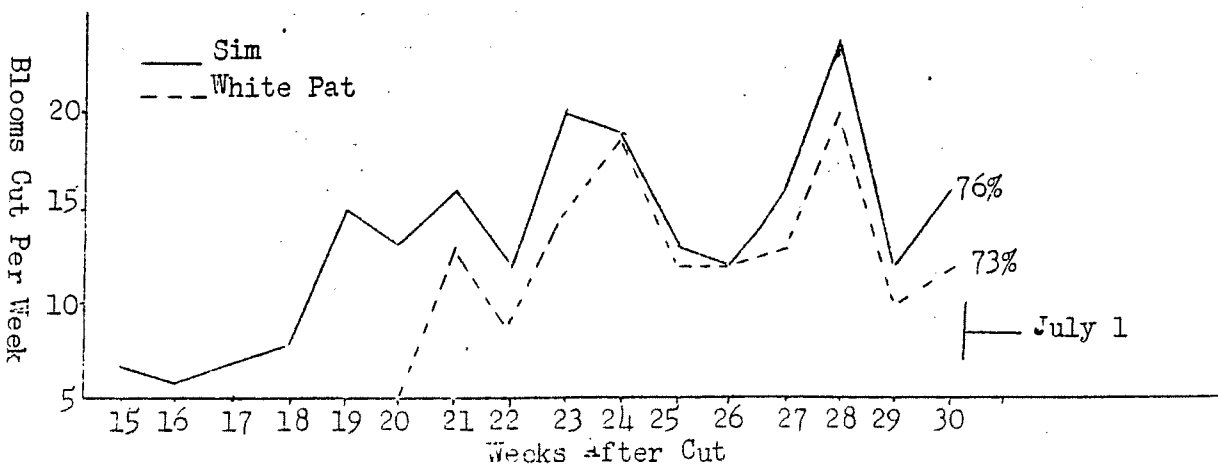


Fig. 3—Return Crop from William Sim and White Patrician Cut the Week Following November 26.

PROGRESS REPORT ON CARNATION TIMING

It takes longer to flower a carnation crop than many of us realize. work is just getting under way at Colorado A & M on a comprehensive study of carnation timing, hence the results published here must be considered as only a small part of what we hope to be a complete picture in a few years.

David Wagner, CSFGA Research Fellow, presented by means of charts most of this material at the College Day in Fort Collins.

From a Single Pinch

Pink Patrician and Scarlet King benched as rooted cuttings June 27 and pinched August 1, produced their crops according to Figure 1, page 2. Pink Patrician cut its flowers over a period of about 10 weeks beginning with the 23rd week after pinching. Scarlet King cut few flowers until about the 30th week then cut over a period of ten weeks. The extreme peak cut for Pink Patrician was due in part to weather. Substantially all flowers were cut off in 33 weeks from the pinch for Pink Pat and 41 weeks for Scarlet King.

From a single pinch in the nursery bench on December 7, William Sim began cutting May 1 or 21 weeks after the pinch. The crop peaked in early June and 89 percent of the crop was cut by June 26.

Return Crops

William Sim cut the week following October 17, began cutting again February 11, but did not peak until April 15 or 26 weeks after the October cut. Two side breaks were left with the October cutting except on stems which had no side growth. The graph in Figure 2 illustrates 97 percent of the return crop which cut before July 1.

For a November 26 cut on William Sim and white Patrician the portion of the return crops cutting off by July 1 are shown graphically in Figure 3. An appreciable part of the return crop on Sim came in April and early May during the period from 19 to 24 weeks following the cut. However, only 49 percent of the crop from this variety was cut before June 1, 27% during June and 24% cut after July 1. White Patrician began cutting in late April and cut well in early May with 43% cut by June 1, 30% during June and 27% after July 1. White Patrician averaged about one week later than William Sim.

The top shoots developing from a cut bloomed three to four weeks sooner than the second shoots. many of the second shoots did not develop far enough to be tagged and a smaller percent of those developing were cut before July 1, as shown in Table 1.

Table 1. Effect of Position of Stem on Number Developing and Time of Flowering

	Position	Numbering Developing	Percent not cut by July 1
White Patrician	top	70	17
	second	46	41
William Sim	top	108	12
	second	64	42

SUMMARY

From Figures 2 and 3, Sim and its sports will probably require about 19 weeks to return in crop after a fall cut and should peak around the 24th to 28th weeks. From a single pinch in December, 26 weeks were required to the peak of the crop. Patrician varieties are a week to ten days slower than Sim.

General weather conditions, the number of shoots developing on a stem, time of the year, variety, and probably several other factors influence timing of carnations. Several of these factors are under investigation at Colorado A&M this year.

SOME PRELIMINARY FACTS ON THE TIMING OF CARNATIONS

The following was presented on the College Day program by Bill Gunesch of Park-Elitch Company. The figures on William Sim were obtained at Dick Braun's Greenhouses. The figures for Shangri La came from P E Greenhouse.

William Sim

Rooted cuttings were benched 7x8 - two cuttings per hill on October 10, 1949. One block (A) of 408 plants was pinched November 29 and one of equal size (B) was not pinched. These cuttings were allowed to bloom and the first flower cut served as the pinch. The C treatment in Table 1 is the same as for A except that it represents a bench of 1352 hills.

	Cut per hill per month		
	A	B	C
February		.56	
March		1.34	
April	.06	.06	.50
May	4.26	1.22	5.04
June	2.35	3.93	1.93
July	.78	1.02	.77
August	.52	.38	.75
Total	7.97	8.51	8.99

Eighty-five percent of the flowers cut from unpinched cuttings at this time of the year were fancy and the rest graded standards. The peak cut for the two pinched blocks was in May with an especially high cut for Mother's Day on treatment C. The unpinched block cut two flowers per hill by April 24 then came back in crop for June.

Shangri La

Rooted cuttings were benched direct 7x8 - one cutting per hill on June 9, 1948. One pinch was given June 18. The production from a block of 500 plants follows:

	Cut per plant per month
Oct. 9 - first flower	0.03
Nov.	0.58
Dec.	1.13
Jan.	1.23
Feb.	0.74
Mar.	0.30
April	0.62
May	0.38
June 10 - last cut	0.16
Total	5.17

Peak cut was in January or 28 to 30 weeks after pinching.

Elitch (Records through courtesy of Herman Oliner)

Date stuck - October 20, 1949
Planted 3" bands - November 12
Benched Standard 6x8 - December 1 - bands removed
Allowed to grow until side breaks were about one inch long then pinched about Jan. 15.
Cropped heavily for mother's Day week - may 7-14
Crop off by may 30th and averaged 4 fls. per plant. This crop cut leaving all side breaks on the plant.
Return crop started cutting August 1, and hit its peak August 20.
It is Herman's belief that by the time the present crop is off by October 1, the plants will have cut another six flowers.

The Haley Pinch

Larry Taylor of Denver Wholesale Florists Company described an August 12 pinch made by many of their growers last year to reduce early cut on William Sim. Most shoots removed had fairly large buds and records were kept only on the top shoots resulting from this pinch. The following are approximately the flowering dates for shoots of various lengths at the time of pinching:

- Shoots 2" long early December
- 1½" long Christmas
- 1" long early January
- ½" long late January
- No shoots visible mid February

These records were obtained through the cooperation of 5th Avenue Greenhouses.

New Members

South Logan Greenhouses, 1925 South Logan St., Denver, Colorado
Nicholls Greenhouses, Farmington, Utah.

BACTERIAL FASCIATION DISEASE OF ORNAMENTAL PLANTS

A report has been published recently by Dr. Kenneth F. Baker concerning the fasciation disease on numerous ornamental plants in California. Of bacterial origin (Corynebacterium fascians), the disease occurs principally on species of Chrysanthemum. Such daisies as the Esther Read Daisy and Shasta Daisy have been found to be very susceptible to the disease. However, the Marconi variety has a very high degree of resistance. Among the species of Chrysanthemum known to be susceptible are C. maximum, C. indicum, and C. morifolium, although the latter species has shown some degree of resistance.

On the chrysanthemum the disease causes large, swollen, "cauliflower" masses of interlocking basal shoots developed at and slightly below soil level. The galls may decay and spread to other portions of infected plants, eventually killing them. Because of the prevalence of this disease production has been greatly reduced and the number of root divisions obtained has been seriously decreased.

Efforts to control this disease by treatment of root divisions in hot water and such disinfectants as mercuric chloride, calomel, calcium hypochlorite, sodium hypochlorite, and Elgetol have been unsuccessful. As the bacteria spread easily from decayed galls to other plants through irrigation water, strict sanitation practices and roguing should be followed.

The disease has been reported on carnation causing a dense leafy gall 1½ inches in diameter on the aerial stem. It was first reported in England in 1934 and in California in 1944. However, no report has been made concerning its occurrence in commercial plantings. Whether this is the same disease which has been observed in the Denver area recently is yet to be determined.

--W. D. Thomas, Jr.

DENVER DATA

WHAT THE GROWERS ORGANIZATION MEANS TO YOU

As we enter another season, it might be well to take stock of our growing growers organization. What does it mean to you? What does it do for us? Is it just a bunch of dull dinner meetings, a picnic, and a November field day with "entertainment"? I think not. It's more than that, much more.

In the beginning, a few growers got together once a month because they all had one thing in common, flowers were their livelihood. Strictly social at first, they then began to discuss common problems, common points of interest. They decided to organize, Presidents, parliamentary procedure and all the other attributes of a business meeting. But, those growers did not lose their sense of fellowship, of just getting together, of having a good time. Here is a group of men, while, technically competing with each other still enjoy good fellowship and each others company. It is a remarkable situation. How many businesses do you know where you can walk into anothers plant and "look around". Here is proof that this group has functioned as a unit. Following is an editorial about our Organization. This one is on "Research" by Bill Gunesch. Next month we will have another on "Publicity" by Ben Haley. We are in hopes that after reading these two short articles you will know that you belong to the best Organization of its kind anywhere and can associate with the grandest bunch of men in any business.

Ralph Hill, Jr.

RESEARCH

By Bill Gunesch, Park Elitch Company

Increasing costs of operation, and in some instances, decreasing net returns have prompted many growers to look for means of saving money in their cost of operation. They are motivated by the desire to maintain returns at a level attained during the war years. Casting about for a means of saving, many have asked, "what am I getting for my 1/4 of 1 percent contributed for research?" How has Colorado A & M College helped me increase my production and at the same time, improve my quality.

First, we need to critically survey the physical plant at Colorado A & M for part of the answer. The new greenhouses completed in March of 1949 are now in full swing of producing answers to many of our production problems. The greenhouses are constructed for research work with small units adaptable for temperature, humidity, and even light control. Practically any condition

necessary for testing the multitude of factors that effect the growth of plants can be produced. As one grower remarked at the meeting of September 13th, "Every-time I look at these new greenhouses, I see Homer Pearson as a spirit striding up and down between the benches". In reality, it was a group of growers cognizant of the need for research that prompted the drive and determination to get a physical plant in which proper and correct research work could be conducted.

Second, review the progress that has been made in the past two years in the eradication of disease. Cultured stock of Carnations is now available to every grower. He need only make his requirements known and the boys at Fort Collins will provide him with the nucleus stock, and assist him in keeping it clean.

Third, the command of the day is for more efficient operation. This means a progressive change in our cultural methods. Whoever heard of stored Carnation cuttings two years ago? What prompted the trend toward year around planting and opened the field for timing Carnations to meet specific markets? Primarily, this trend was motivated by the research men insisting that plants must be kept soft, no checks in growth in order to get the ultimate of production. Consequently we are propagating later and thus arouse the need for finding a method of storing cuttings.

Fourth, the program to date has in effect concentrated on Carnations, but other crops are also getting consideration. Bullheading of Roses, off color Rose Buds and what causes them, shattering of Snapdragons, timing, lighting and shading techniques for Chrysanthemums all are part of the program. True, all the answers we desire cannot be forth coming in 18 months of operation. They are, however, making a great deal of progress. The future is bright.

I should like to ask, where else can you get the answers to your production problems that are specific for your locality? Where else can you get as much for your 1/4 of 1 percent? The banks don't pay that kind of interest.

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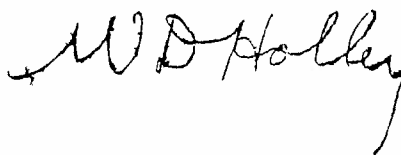
Letting is given credit for saying "Research is an organized method of finding out what you are going to do when you can't keep on doing what you are doing now."

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The material presented by Dr. Thomas at College Day on Soil treatments against carnation Fusarium will appear shortly with work from other stations in Carnation Craft. His other material will appear in forth coming CSFGA Bulletin.

See you all at the October meeting of Growers at the Oxford, October 5.

Your editor,



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