Poinsettias for Holiday Trade

Henrietta Ecke variety produces high quality blooms on schedule when grown under high light intensity

Anton M. Kofranek

The Henrietta Ecke double-type poinsettia—the most popular poinsettia pot plant variety in southern California—has the undesirable characteristic of losing the center bracts just about the time the plants are to be sold for the holiday trade. However, experiments have shown that the bract abscission can be prevented at this critical time if the grower takes proper precautions.

The variety Henrietta Ecke sets flower buds between September 25 and October 4 in the Los Angeles area—about one week earlier than other poinsettia varieties. Therefore—because the rate of flower development is about the same for all varieties—the Henrietta Ecke flowers from December 5 to 10, which might be considered too early for Christmas sales. By the time the plants are ready for sale, the center bracts are overripe and tend to drop out. However, the public buys these unsightly plants because they know they will become excellent landscape material the following year.

Since poinsettias are short-day plants—flowering during the short days of winter only—it is easy to delay flowering by lengthening the day with artificial supplementary lighting.

A side view of a well-developed multiple-stemmed Henrietta Ecke. The bracts are well developed and the plant is well proportioned. This plant was grown under high light intensity conditions. Photograph taken December 21, 1953.

In a series of experiments with the Henrietta Ecke variety, plants were lighted each night from September 15 until September 25 and 28, and until October 2, 4, and 6. On the later dates several plants were removed from long-day conditions—artificial lighting—and were then grown under natural day-length conditions until maturity. Those plants which were illuminated until October 4 or 6 produced a mature salable plant on December 15. Those which were illuminated only to September 28 or October 2 matured a few days in advance of what might be considered desirable for Christmas sale.

Another and probably more important reason for this bract abscission is caused by the low light intensity conditions under which the plants are usually grown in greenhouses. Some flower growers maintain very low light intensities—as low as 500- to 600-foot candles at noon of a bright day—in their greenhouses during the growing period. Under these lighting conditions, the center bracts of the plants become gnarled and do not

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***Left.* A top view of a double Henrietta Ecke poinsettia, showing how the center bracts have abscised. This variety is very often sold in this condition. *Right.* The gnarled center bracts are distorted because this plant was grown under low light intensity conditions. These poorly developed bracts soon abscise.**

CARROTS

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were grown near San Jose for comparison as to composition.

The test roots were harvested at the proper stage for market. Two lots were grown in the same area; one was harvested in August and the other in February. Examination showed some variation in composition within the four varieties. Imperator seemed to be high in composition for several of the constituents—dry matter, energy, calcium, and phosphorus. The Nantes variety was low in phosphorus, vitamin A, and riboflavin. Imperator seemed relatively high in many of the nutrients. The differences between varieties as to waste in preparing the roots were not important.

The results of the tests reported here are a survey and indicate possible trends, since the experiments and plots were not replicated and therefore cannot be statistically analyzed.

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L. J. Clemente, J. W. Perdue, and Laura Morse, University of California, Davis, assisted in the experiments described in the foregoing article.

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BROILERS

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broilers; and *c*, through their oversetting and undersetting practices.

The first two of these factors have their principal influence on long-run changes in output; the last principally affects short-run changes. Except for these factors, hatcheries acted in the capacity of suppliers of chicks in accordance with the orders of their customers.

During the year of this study, California broiler chick hatcheries appeared to be a neutral influence on short-run changes in output in that there was little evidence that they made significant production decisions other than decisions to utilize their excess production capacity, to take advantage of changes in their customers' minds, and to avoid surpluses. The chicks hatched as a result of these decisions represented a small proportion of their total output.

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The above-reported study is part of a larger project which will include analyses of the role of hatcheries, financing agencies, processors, and broiler producers on broiler output fluctuations. The over-all project is being conducted by the Western Regional Poultry Marketing Comittee, WM-7.

POINSETTIA

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develop properly. These deformed bracts are unable to reach maturity but abscise and leave the open center commonly seen in plants of the Henrietta Ecke variety.

Plants which were grown under maximum light intensities—about 3,000-foot candles—produced flowers with normal central bracts. Plants under low light intensities—500- to 600-foot candles—abscised bracts readily. Furthermore, plants grown under high light conditions had larger outer bracts, a more intense color, were shorter, and were generally more desirable plants than those grown under low light conditions.

Quality plants of the double-type Henrietta Ecke variety can be produced and timed for the Christmas holiday trade by growing the plants under high light intensity conditions—with modification of usual watering and fertilizing practices—and by later propagation to avoid too tall plant growth. Such changes may take some time, but when growers do make them, the public will be rewarded with top quality double poinsettias.

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The above progress report is based on Research Project No. 1470.

GROUND PEARL

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festations have been encountered in heavy clay soils.

Since ground pearls have been found on grape roots 24″ deep—which was the approximate extent of root penetration—it seems likely that they may be found even deeper.

Insect Described

The adult female of this pest has well-developed forelegs bearing strong claws. She produces an egg sac of white waxy filaments and deposits within it over 100 eggs, which are pinkish-white in color. The dead body of the female closes off the end of the egg sac. Hatching observed in 1954 began during the latter part of June and continued into late July. The crawlers are elongate, slender, and quite active. They attach themselves by means of their needlelike mouthparts to a fine rootlet and eventually secrete the hard, glassy covering characteristic of the intermediate pre-adult stages. It is from the appearance of these later immature stages—globular in shape and with a pearly, faintly yellowish-green color—that the common name ground pearl is derived. Other details of the life history of this potential pest to California grapes are at present unknown.

Additional studies of this subterranean scale insect are planned, including chemical control tests.

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PONDEROSA

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demonstrated in the first experiment. It may well be that within the completely artificial system that was set up in these experiments, vapor pressure gradients exist which do not exist under natural soil conditions. Continuing work should provide the answer.

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Water Removed from Flask

Accumulative total in milliliters

Elapsed time (days)	Live seedlings started May 1				Live seedlings started July 1				Dead seedlings			
	1	2	3	4	1	2	3	4	1	2	3	4
1	1.5	1	1.5	1	3	.5	1.5	.5	0	0	0	0
4	6	5	6	5	5.5	1.5	4.5	3.5	0	0	0	0
7	17	8.5	10	8.5	7.5	2.5	6.5	6.5	0	0	0	0
13	30.5	11.5	16.5	13.5	10.5	4.5	10	11.5	0	0	0	0
19	36	14	28	21	11.5	6	13	13.5	–	–	–	–
25	65	17	40	29.5	13.5	8	16.5	16.5	–	–	–	–
31	82	—	62	45	14.5	9	20.5	18	–	–	–	–