Roses in Colorado?

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Colorado's natural advantages for outstanding greenhouse production have been proven by the success of our carnation industry. High light intensity, cool and dry climate allow us to produce fine flowers. We shouldn't forget, however, that these assets could not have been utilized without grower participation to give us good marketing, good advertising, and the research necessary to utilize our climate.

How about roses? More than 50 years ago, M. A. Blake showed that light is a direct factor in determining color intensity of roses. In any research dealing with growth, production, blindness, or quality, light is the ultimate limiting factor. The more light, the more flowers we can produce with higher quality and longer keeping life. It is apparent that we have yet to use Colorado climate to its fullest extent.

Over 90 percent of the cut flowers grown in Colorado are carnations. We have often heard of the limitations of one-crop farming (i.e. cotton, tobacco, corn). It would add immeasureably to the

stability and economic outlook of the industry in Colorado if we could speak of "Colorado Roses" in the manner that we speak, and think, of "Colorado Carnations." The fact that we do not, speaks ill of our abilities. High light is of no use without an integrated program that advertises, markets, and sells a high quality product produced efficiently.

Let's consider some aspects that could help us. We realize that very few individuals are able to develop consistently profitable production when distance to markets and competition is considered. Size is required to ensure adequate supply, to influence appropriate legislation, and to provide money for financing advertising, marketing, and research. Rose growers should pool their resources.

Advertising should give an image of "Colorado Roses" that means uniform high quality and long keeping life. A centralized grading system, with a steady supply of consistently uniform roses, would result in an unparalleled bargaining position for old and new markets. Good growers would find it profitable. Poor growers would find it necessary to conform with minimum standards in order to profit. Roses require special handling. Specialization in this area could well reduce the cost of marketing and increase its efficiency. Through cooperative effort, within the framework of the present grower's association, ability to influence favorable legislation would be enhanced.

Past research might give the impression that everything that can be studied about roses has been done. This is fallacious. Experiments under fiberglass suggest that plants are more efficient users of diffused light as contrasted to direct sunlight through clear glass. This has yet to be proven, although rapid construction of fiberglass-covered greenhouses in Colorado indicate decided advantages.

Injection of CO_2 has increased quality and production of roses. Eastern growers are using CO_2 to overcome light deficiency. It is logical for us to increase temperatures to take advantage of our conditions. At CSU we are presently heating to $72^{\circ}F$ and cooling at 80. By allowing sunlight to heat the house, we can take advantage of high CO_2 levels with no increase in fuel consumption. But, are these temperatures optimum? What happens to nutrient levels under these conditions? Investigations in keeping and storage open exciting possibilities and this work should include roses. Studies for non-destructive, rapid measurement of keeping life should be started.

The selection of Colorado #6 at CSU has shown that a continuing selection of those types best suited to our requirements should be maintained. Many new varieties may possess genetic potential for higher production and better quality. These should be tested in a regular program under Colorado's high light and better levels of temperature, nutrition, and CO_2 that have become standard practices at CSU.

In the final analysis, a vigorously expanding floral industry requires active grower participation, willing to explore all possibilities, able to branch out in untried paths, and dissatisfied with what their forebearers did--no matter how well it was done. Colorado is fortunate that many of its young people are well trained and working in our industry. It is an indication of present vigor and is to be encouraged. Opportunities and facilities for better training must increase, and opportunities for these new members can be provided by an expanding industry.

There is every reason for Colorado to increase its production in roses as well as in carnations, maintaining Colorado as an outstanding, profit-making producer of fine flowers.

Literature cited

1. Phillips, D. J. and R. Baker. 1962. Phytophthora crown rot of petunia. Plant Disease Reptr. 46: 506-508.

Your editor,

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