NEW YORK STATE FLOWER INDUSTRIES, INC.

NYSFI

Number 113, February 1980

BULLETIN

Executive Secretary/Treasurer, Ann Reilly
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Production and Marketing of Succulents in the North

Recently, consumers have developed an interest in succulents; as consumer demand has increased, production of many succulent species, especially cacti, also has increased. Consequently, questions have been raised about production methods, cultural practices and home care.

Contrary to the popular belief that cacti and other succulents do best in a desert-like environment, these plants grow better when watered and fertilized more frequently than generally done. Good light is essential, but it does not have to be as intense as that found in the deserts, nor is it necessary to keep the temperature high at night. In fact, succulents do well at cool temperatures ranging from 50 to 60 degrees F. at night.

These and other findings by Cornell University researchers are now demolishing long-held ideas that succulents are difficult to grow because they need high light intensity and grow best with little water and fertilizer.

"These myths are incorrect," refutes James P. Stefanis, a graduate student at the N.Y. State College of Agriculture and Life Sciences at Cornell. "Our research results have shown that many of the accepted notions about succulent production are untrue."

"Many succulents do grow in deserts, but many do not," he notes. "In our experiments, all of the plants tested responded well to frequent watering and fertilization, like most other ornamental crops."

Stefanis has evaluated more than 200 species and varieties of succulents, including a large number of cacti, over the past three years under the direction of Professor Robert W. Langhans in the College's department of floriculture and ornamental horticulture.

The researchers are now confident that year-round commercial production of cacti and other succulents is possible anywhere in the northern United States and in Canada. This could mean more exotic varieties of succulents may become available to retailers and consumers.

Most of the commercially grown cacti and other succulents now available to retailers and consumers in the northern United States are shipped from Arizona, California, Florida, and Texas, and commercial production of succulents in the Northeast is limited to a few firms.

"Overall, succulents are easy and inexpensive to grow," Stefanis says. "They don't need high nighttime temperature and therefore are a good energy-saving crop, both commercially and at home."

Best of all, these plants can grow very rapidly, provided they are given adequate water and fertilizer. Says Stefanis: "Even in winter when days are dark, cold and short, they can achieve substantial growth."

"One of the reasons why they don't grow fast, as many believe, is that they do not get enough fertilizer. They grow very little because they are hungry," he observes.

In his experiment, Stefanis fed the plants 200 parts per million of nitrogen and potassium each, plus trace elements. Plants were watered and fertilized daily during summer and at less frequent intervals during the rest of the year.

In the northern United States, spring and fall appear to be the best periods of growth, he says. Summer light intensities are ideal for many succulents, but may be too high for some species and seedlings.

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Cornell graduate student James F. Stefanis shows many different types of cacti grown experimentally to see if they could be coaxed to grow rapidly. The 4′ *Cereus peruvianus* was grown from seed about 3 years ago.

Production and Marketing of Succulents in the North (continued)

The researchers also found that the Cornell-formulated peat-lite mix consisting of equal parts of sphagnum peat moss and perlite works best for starting the plants either from seed or cuttings and for growing them at later stages.

Growing media containing sand now in wide use for succulent production dry out too fast and thus are not recommended by the researchers. The peat-lite mix, Stefanis explains, provides excellent drainage and holds the nutrients longer.

Highlights of other key findings include:

—Growers can produce salable plants in 2¼-inch pots from seed in less than six months to one year, depending on species grown.

—Seed usually germinates in 3 to 14 days if given ample moisture, 72°F medium temperature and a light intensity under fluorescent lights of 1500 ft-c for 18 hours a day. Cuttings of most species evaluated root in 3 to 4 weeks at 70°F.

—Most seed can be sown anytime of the year, but a February or March sowing may be best because many species can be ready for sale in small pots by fall.

—Most succulents grow fastest when left crowded together as long as possible before they are transplanted to pots.

—Good quality plants can be grown in either plastic or clay pots.

—Insect pests and diseases with succulents are few. Damping-off, resulting from overwatering or poor air circulation, can be prevented by watering only in the morning.

Summing up, the Cornell researchers say that succulents are easy to produce and maintain, and therefore should be considered as a potentially profitable crop to grow commercially in the northern United States.

(More Next Month)

The 1980 Cornell Potted Mum School

The 1980 Cornell Potted Mum School will be providing information on cultural practices, pest control management and production techniques of potted mums. The program will draw upon the expertise and research experience of Cornell faculty and field staff from the Departments of Floriculture and Ornamental Horticulture, Plant Pathology and Entomology. Demonstrations of topics such as Temik injury, various fertilizer programs, growth regulator applications, the effects of supplementary light and temperature, and the latest potted mum varieties for New York State will be viewed and discussed during this one day class.

The Cornell Mum School will be offered in Central New York on March 4th, Western New York on March 6th, Long Island on March 11th, and in the Capital District on March 13th. For further information on the meeting location and program schedule, please contact your county cooperative extension agent.

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President's Message

Jack Bauer

Here we are a month into 1980 already—another month, another year, another decade. With them come the many varied forecasts for our business future, many of them being negative.

But I say, "Let's do our best today and every day to insure our successful future." Positive results are the only acceptable type for our floral industry.

Sure, we have all increased costs: energy, taxes, labor, rent, inventory, plus many other items that we dare not mention. And so what! So has every other private industry seen a rise in the cost of doing business.

Between all of you are many of the correct answers to all of the pertinent questions regarding our unique flower industry. So for our mutual benefit, let's continue to exchange knowledge through N.Y.S.F.I. and insure total success to all.

Jack Bauer

Don Phelps (center) and Carm Cosentino (right) visit with Prof. Carl Gortzig in the Cornell greenhouse during the Cornell Open House held on January 10, 1980.