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"ENERGY CONSERVATION FOR COMMERCIAL GREENHOUSES, NRAES-3"

This is the title of a great new publication put out by the Northeast Regional Agricultural Engineering Service which includes several major universities in this area of the U.S.A. Authors are W.J. Roberts (Rutgers), J.W. Bartok, Jr. (University of Connecticut), E.E. Fabian (Cornell), and J. Simpkins (Rutgers). The chapters are entitled:

1. Principles of Heat Loss; 2. Greenhouse Site Selection and Design; 3. Construction Materials; 4. Insulation; 5. Fuels and Heating; 6. Ventilation and Cooling and 7. Space Utilization.

There is also a worksheet for "Heat Loss Calculations". To obtain a copy of this publication, call the Northeast Regional Agricultural Engineering Service at (607)256-7654, or write to Riley Robert Hall, Cornell University, Ithaca, N.Y. 14353. The price is $4.00.

FUCHSIA GALL MITE MANAGEMENT

This is the title of an article in "California Agriculture," July-August 1985, the official Agricultural Experiment Station publication, University of California. The authors of the article are Carlton S. Koehler, William W. Allen, and Laurence R. Costello.

Briefly, the fuchsia gall mite is an eriophyid mite discovered in San Francisco in 1981. It spread quickly and attacks the growing points, young leaves and blossoms of fuchsia. Infested growth becomes distorted, swollen, and reddened.

The cultivar "Display" was treated with chemicals for control of the mites. The best controls for badly infested plants was to first prune away damaged growth. Thorough spraying with carbaryl (Sevin) or endosulfan (Thiodan) applying two applications two to three weeks apart was successful. Practical chemical control depends on thorough spray coverage. The most opportune time is in the spring after all the old galls and excess foliage have been removed.

"California Agriculture" will be sent free on request by writing to: California Agriculture, Agricultural Experiment Station, 2120 University Avenue, 7th floor, University of California, Berkeley, CA 94720. Telephone (415) 644-4220.

STABY

LISIANTHUS POST HARVEST TREATMENTS

In the Minnesota State Florists Bulletin, Vol. 33, No. 6, December 1984, there is an excellent article on the cultural requirements to produce Lisianthus as cut flowers or as potted plants.

There is also a discussion on post harvest treatments as follows:

Post harvest (of Lisianthus)

A harvested flowering stem may last 2+ weeks as there is continued upward flower development. Individual flowers whose inflorescence stems were in water will last 5 days; in 200 ppm HQC (8-hydroxyquinaline citrate) plus 1%, 2%, 3%, 4%, 5%, or 6% sucrose, individual flowers lived 10, 14, 16, 16, 18 or 15 days, respectively (Table 2). For stems in water or 1% sucrose, the 4th flower up to the inflorenscence failed to open properly, whereas when stems were placed in 2%, 3%, 4%, 5%, or 6% sucrose the 4th flower opened and lasted 4, 8, 11, 6 or 7 days, respectively. Based on the economics of sugar, the data from the total vase file of a flowering stem and the total amount of aqueous solution absorbed, a 3% to 4% sucrose solution plus 200 ppm HQC should be used. The junior author who has been conducting post harvest trials for 20-years notes that, i) these were the most dramatic response to "preservatives" he has even seen and ii) was the first time data on height could have been taken as the inflorescences continued to elongate and develop linearly with the increasing concentration of the sucrose.

Table 2. The response of individual (1st and 4th) flowers on harvested stems of Eustoma grandiflorum to sucrose and 8-hydroxyquinoline citrate (HQC) post-harvest solutions.

Holding solution	Average life of single flower[z] 1st opened (days)	4th opened (days)	Total inflorescent vaselife[y]	Solution absorbed (ml)
DI water	5.2	0	6 days	---
200 ppm HQC	5.4	0	6 days	525
1% sucrose + 200 ppm HQC	10.0	0	16 days	425
2% sucrose + 200 ppm HQC	13.8	4.0	22 days	640
3% sucrose + 200 ppm HQC	16.2	8.2	28 days	740
4% sucrose + 200 ppm HQC	15.8	11.0	30 days	620
5% sucrose + 200 ppm HQC	17.6	6.0	28 days	510
6% sucrose + 200 ppm HQC	15.4	6.8	30 days	410

[z]Life of single flower: From date of outermost petal unfurling to onset of necrosis or wilting of petal.

[y]Total vaselife: From date of harvest (May 24) to date at which one half or more of the remaining buds were no longer viable due to senescence. Mean of 5 stems.

[x]DI water: deionized water