

**COLORADO GREENHOUSE
GROWERS ASSOCIATION, INC.**



Research Bulletin

Bulletin 388

Edited by Joe J. Hanan

October 1982

VISITING CALIFORNIA, March, 1982

Joe J. Hanan¹

It is rather interesting to visit a place after 25 years, starting out in El Centro (Fig. 1), going through Encinitas, Watsonville, Modesto (Fig. 9) and ending up at the University of California, Davis. To obtain some idea of proportion, one has to travel it. Certainly, if there is any place where the action is in Horticulture, it is California. The state produces 25% of all ornamentals marketed in the U.S., and is about the biggest producer of any crop you wish to name (Table 1). Despite the imports, with the exception of carnations, total area in major crops, under cover, and in the field have continued to increase (Table 2).

Table 1: California production in 1980 (From Ball Grower Talks, Nov., 1981). Figures given in millions.

Plant	California	Next largest
Bedding plants	4.5 flats	Michigan — 4.3 flats
Pot mums	9.3 pots	Texas — 2.9 pots
Poinsettias	3.9 pots	Ohio — 1.9 pots
Pompoms	24.4 bunches	Florida — 6.3 bunches
Chrysanthemums	73.2 stems	Ohio — 5.3 stems
Roses	177.0 stems	Colorado — 22.6 stems
Carnations	288.0 stems	Colorado — 80.0 stems
Foliage (Florida)	94 dollars	California — 18 dollars

Table 2: San Diego County ornamental production, 1976-1981 (Seward Besemer, Plasticulture, 1976; San Diego Co. Extension, 1981).

	1976	1981
Total area under cover	400 acres	600 acres
Field production	2500 acres	3500 acres
Carnations	120	95
Chrysanthemums	90	95
Roses	30	50
Orchids	8	8
Snapdragons	1	2
Foliage plants	75	200
Flowering pot plants	60	100
Other	46	50

¹Professor, Department of Horticulture, Colorado State University.

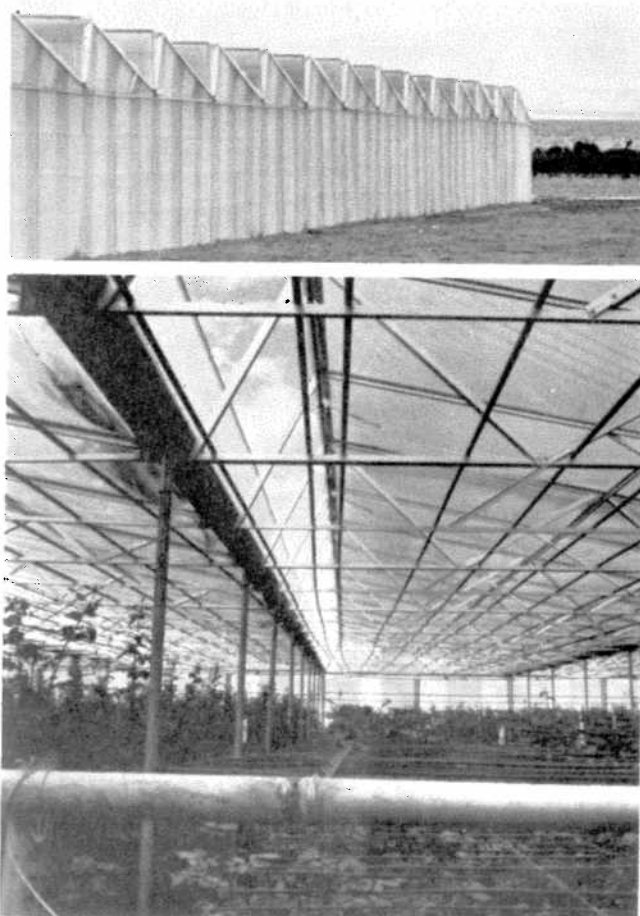


Figure 1: Nakashima's rose range on the northern end of the Salton Sea. The upper picture shows the sea in the background with rather interesting, top-opening ventilators. The bottom picture shows the ventilator arrangement better. The structure is aluminum with double ply, and the copper lines running on the bottom truss use hot water from the thermal well. Quality of the bushes was very good.

The climate is typical Mediterranean, with all the advantages, and, although any kind of greenhouse structure can be found, Fig. 2 is fairly representative, in the San Diego region. Although many of these structures are capable of being heated, carnation growers are cutting back with all the consequent problems that inadequate temperature control provides (Fig. 2). The present standard carnation cannot be grown under these conditions without banding. Colorado does have the advantage of being able to use very good environmental control. In terms of technology, Colorado still rates high in my estimation.

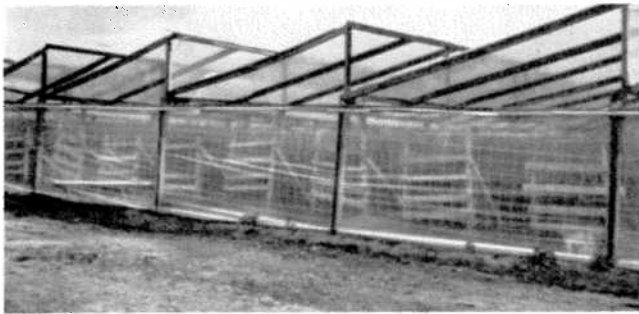


Figure 2: Typical lean-to type, soft plastic houses in Southern California. The standard to be found in most such climatic regions. The typical carnation flower resulting is shown below. All flowers banded with lots of bullheads and splits, especially since many growers are cutting back on what little heat is normally utilized. Let us hope Colorado will never have to band a standard carnation.

However, California has had a very good extension service with such people as Seward Besemer at San Diego, Hank Sciaroni in Half-Moon Bay and Del Farnham in Watsonville. I did not get to Half-Moon Bay but Besemer and Farnham spent a day with us. We also visited vegetable production areas in El Centro, Salinas and Modesto. The thought occurred that the majority of the extension agents who took us around are approaching retirement. Will the State replace them with the same well-trained and vigorous people? This should be a serious concern. The State of Israel, which would probably fit in San Diego county, has 70 or more extension specialists to do the job that one person is doing in San Diego. Despite one of the most extensive services in the nation, the California Extension Service is stretched thin in the area of ornamental production.

Although total greenhouse production in Colorado is relatively small, we still have the opportunity of producing high

quality which can fulfill a needed market demand while maintaining a premium return.

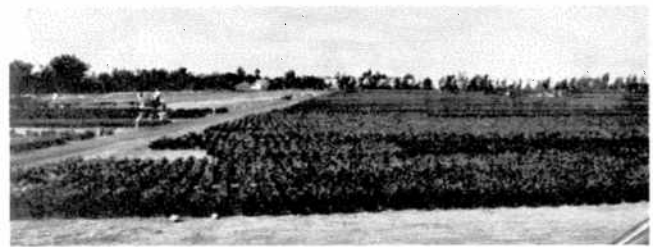


Figure 3: Field of potted plants in the upper picture and Sterlitzia in the bottom. The Pacific Ocean is in the background, with the Ecke main place off to the left in both pictures. In the Encinitas region north of San Diego. Gypsophilia, Marguerite Daisies, Gladioli, plus whatever else — you name it to be found in this region.



Figure 4: Typical forced-air cooling system to be found in several locations. The flower box is pushed against the sections with air being forced through the packed box.

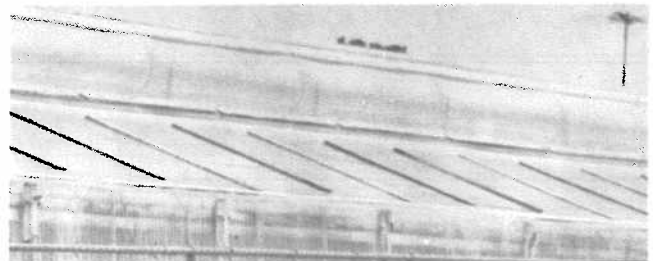


Figure 5: A rather interesting way of using an inflatable poly tube to close the ridge ventilator. This ventilator faces the ocean, providing good ventilation from the sea breezes.



Figure 6: Yoder Brothers' propagation range in the Watsonville region. Note the infra-red radiant heating tube along the ridge of this Geranium house. Installation recently completed with significant savings in fuel costs compared to the conventional piped steam.



Figure 7: Arne Thirup's Pajaro Valley roses at Watsonville. The two row planting and high, gates-type irrigation system interesting.



Figure 8: One of the very few vegetable greenhouses to be found. This one, growing cucumbers, was in the Modesto region, San Joachin valley.



Figure 9: Seedling tomato plants in the Modesto region. Transplant production is increasing rapidly, and several of these operations may be found in the vegetable production areas.