index of Simazine treated plots tended to be higher because enough weeds were present so that beds remained in better condition during periods of heavy rainfall and high winds. Flower data in Table 1 reflects this in part. No significant reduction in flower yields was found (Table 1) as a result of toxicity from any of the chemical weed control measures regardless of application method.

Analysis of data from harvested corms showed that no significant differences resulted from chemical treatment or application method (Table 2).

Control of annual broadleaf weeds and grasses ranged from 93 to 99 percent in all treated plots. The 6-pound pre-emergence treatment with Eptam was best for nutgrass, giving almost complete control during the four month growing season. Two pounds of Karmex DW at lay-by gave the best control of bermudagrass.

Karmex DW, either 1 pound pre-emergence and 1 pound at lay-by, or 2 pounds at lay-by, is currently recommended for weed control in flowering stock gladiolus. If corms are smaller than size 4 Sesone is recommended.

Simazine at 1 pound (50 percent) pre-emergence and 1 pound at lay-by and Eptam at 6 pounds pre-emergence and 6 pounds at lay-by are recommended for limited trial by growers. Eptam should be tried where nutgrass is a problem.

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PLASTIC FILMS FOR TEMPORARY GREENHOUSES IN FLORIDA

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Growers agree that some protection from weather should be provided for most cut flowers and foliage plants to maintain a high quality product and reduce seasonal variations during propagation and production time. Cost of constructing and maintaining a conventional glass structure has limited its use and caused growers to seek less expensive substitutes. Since there are many plastic substitutes available, the question arises as to which type is best suited for Florida's climatic conditions.

Methods

The Department of Ornamental Horticulture built a 17'x100' temporary greenhouse in April 1958. The house was designed to be a structure for testing longevity of plastics and various methods of attaching and shading plastic films.

Treated 4"x4" pine posts were set 10' apart

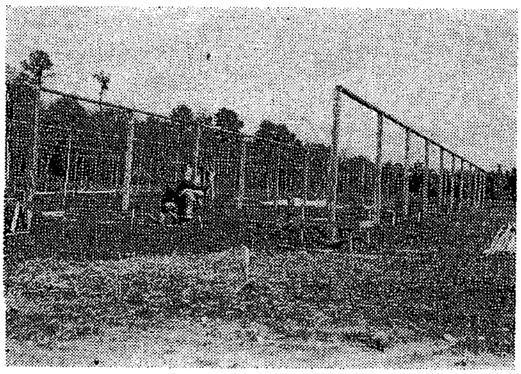

Figure 1 — Treated 4"x4" pine posts set 10 feet apart with the eave plate 6½ feet above ground.

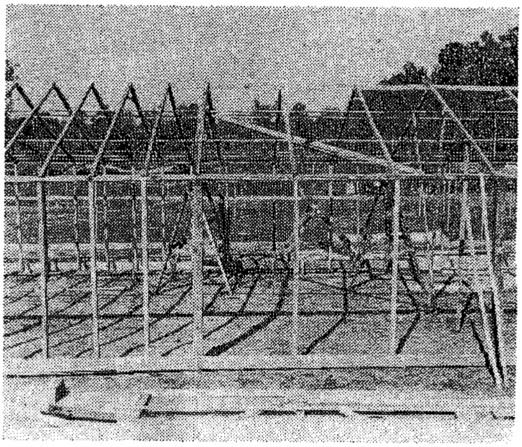

Figure 2 — Left, 2"x2" rafters on 20-inch centers, right rafters on 40-inch centers with chicken wire support.

with the eave 6½' above ground (Figure 1). The posts were sunk 2 feet into the ground and held in place with concrete. One-half the house was constructed with 2"x2" rafters on 40-inch centers with chicken wire stretched between them. The remaining half had 2"x2" rafters on 20-inch centers without chicken wire (Figure 2). The central half of the structure was covered with 46% saran cloth. The cloth shading was firmly attached to the ridge and weighted by pipes to keep it taut (Figure 3). A 48" exhaust fan was installed in the north gable and mist nozzles and burlap pads in the south gable for cooling. A forced air blower type heater is used during the winter months.

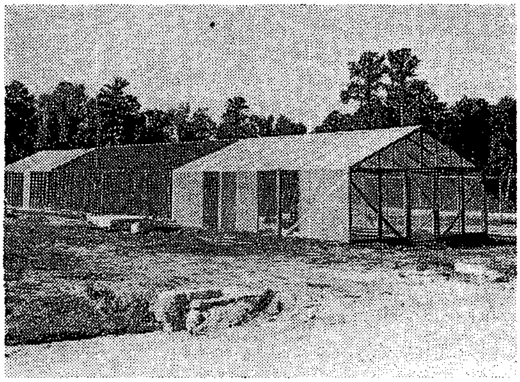

Figure 3 — Saran shade cloth was firmly attached to the ridge and weighted by pipe to keep it taut. Saran was used to cover the central portion of the house.

Five plastic films, ranging from 3.0 to 10.0 mils in thickness, are under test. Each plastic is attached to the structure by two methods. In addition each is exposed to the full sun and shaded by 46% saran cloth. The films are held in place by nailed lath strips and each panel is replicated four times.

Plastics now under test are Mylar 3 and 5 mil, Uvex 10 mil, KDAA 2344 4 mil, Griffolyn 10W-36-10W and Teflon 5 mil. Polyethylene 1.5, 4.0 and 8.0 mil, polyvinyl 4.0 and 8.0 mil, Amerex U.V. 8 mil and Kodapak II 10 mil already have been tested.

Results

Eighteen months of testing results indicate that longevity of plastics varies considerably and that they can be classified into three groups, plastics that last less than 6 months, those from 6-18 months and those that last longer than 18 months (Table 1).

Table 1.'

Plastic Longevity Scale

Duration	3-6 mos.	6-18 mos.	Over 18 mos.	To Be Classified
Film	Polyethylene	Polyvinyl Amerex U.V. Kodapak II	Mylar Griffolyn 10W-36-10W	KDAA 2344 Uvex Teflon

If the film is needed only as a temporary cover for the cool months, the short life plastics will be sufficient. However, for year round structures a grower should consider the long life plastics.

Table 2.

Effect of Age and Dirt Accumulation on Light Transmitted by the Plastic Films Expressed in Percent of Full Sunlight (10,000 fc at noon)

Plastic	Exposure	Light Transmission May '58	June '59	% Difference
4 mil polyvinyl (Amerex type)	Full Sun	76	51	-25
	Shaded (46% saran)	47	28	-19
Kodapak II	Full Sun	78	42	-36
	Shaded	51	26	-25
Amerex U.V.	Full Sun	77	45	-32
	Shaded	51	28	-23
Mylar	Full Sun	71	41	-30
	Shaded	42	22	-20
4 mil polyvinyl (calendered type)	Full Sun	67	51	-16
	Shaded	43	31	-12

The original films were attached to the structure in April and May, 1958, and thus, were exposed immediately to high light intensities and temperatures, which could cause rapid deterioration. One foremost problem encountered with polyethylene films was the rapid breakdown at the fold crease in the rolls. If this crease in polyethylene fell between two rafters, it was only a matter of a few weeks before it split, resembling a razor blade cut from one end of the panel to the other. Cutting the film on the crease would prevent this, but unfortunately all rolls are not folded alike. Consequently this creasing cannot be entirely eliminated and thus is a constant problem. Tears can be patched, but they still remain weak spots and are subject to further breakdown.

The method of attachment had little effect on the longevity of the plastics as breakdown occurred as rapidly at either end of the house.

Another problem encountered was the accumulation of dust and mold growth on the various plastics. These accumulations were more severe on vertical than on ridge panels. This caused reduction in light transmission through film from 12% to 36% (Table 2).

Despite the high reduction of light transmission recorded there is still sufficient light (2600 fc to 5,100 fc) entering the greenhouse to permit good growth on many plants. However, this could become a limiting factor if the dirt continues to accumulate. Unfortunately, it is difficult to remove this material even with detergents. No attempt has been made to separate light reduction due to plastic deterioration from that due to dirt and mold accumulation.

Summary

1. The plastic tested to date have generally been of short to medium life with only Mylar classified as a long lasting plastic under Florida's climatic conditions.
2. Dirt accumulation is the greatest problem encountered. Light reduction as high as 36% has been noted. Fortunately, this reduction is not sufficient under Florida's conditions to reduce light transmission below that required by many plants, however, it does make the house very unattractive.
3. Newer plastics under test may prove to be more durable than those presently available.

VEGETATIVE PROPAGATION OF FEIJOA SELLOWIANA AND RHODOMYRTUS TOMENTOSA AS AFFECTED BY VARIOUS COMBINATIONS OF 3-INDOLEBUTYRIC ACID, ARGININE, SUCROSE AND THIAMINE

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Feijoa sellowiana and *Rhodomyrtus tomentosa*, members of the Myrtaceae family, are used extensively as ornamentals in Florida. Feijoa is used throughout the state, while rhodomyrtus is confined to the south central and southern areas. Both plants are similar in appearance and growth habit and their fruit are used to a limited extent in the production of jellies and jams.

Rhodomyrtus and feijoa are commercially propagated by seed although clonal selections of feijoa have been successfully propagated by grafting. Repeated attempts to root feijoa cuttings experimentally and commercially have generally met with failure.

Literature Review

Joiner (5) and his co-workers initiated a rooting experiment at the University of Florida horticultural greenhouse, February 25, 1958, using *Feijoa sellowiana* as one of the index plants. Various hormones at different concentrations under three types of watering treatments were tested. Seven parts per million of 3-indolebutyric acid applied as a 24-hour soak to 4 inch terminal cuttings of feijoa resulted in 90% rooting and produced moderately good root systems where a constant mist was used. A 50-50 mixture by volume of imported peat and No. 30 perlite was used as the rooting medium. The mist was controlled by a time clock which turned on the water one hour