

# **Polyethylene Film Used as a Propagation Frame For Gardenias**

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During the winter of 1954 Polyethylene film was used to construct a demonstration propagation frame in the greenhouses of Butler and Ullman Company of Hadley where the owner had indicated he would like to find some other type of material for construction of a propagating frame for gardenias. Since a permanent propagation bench is not present in the range and each year a bench 80 feet long must be taken out of crop production to root gardenias and then be free within 8 to 10 weeks or less, it can be appreciated that a reduction of a week to 10 days in rooting cuttings and mobility of frame construction means the difference between profit or loss in production area.

The usual method of construction of a frame consisted of the labor of moving in a large number of boards for construction work and use of 15 or so cold frame sash. Rooting time for gardenia cuttings in these frames usually required 6 to 8 weeks even with adequate bottom heat and moisture.

The experimental propagation frame in the initial tests was an open frame work of furring one cold frame sash in width and length which was covered with a sheet of Polyethylene film 56 inches wide and of 200 gauge. One pound of the 200 gauge film will cover about 104 square feet, and the price of the film was about 66 cents a pound in 100 pound quantities.

Gardenia cuttings taken in January and placed under the film were rooted in 4 weeks with roots  $\frac{1}{2}$  inches or more in length and in 5 to 6 weeks were more than well enough rooted to be potted. Cuttings under the film were of much better color and there was less loss of cuttings from drying out along the edges of the bench in the film as compared with the glass sash covered, boarded frame. The potted cuttings from the film frame started root growth quite quickly. One noticeable thing about the cuttings was that after being potted the group of film rooted plants could be readily picked out from the others rooted under the glass sash, particularly by the flush of new top growth that had started on the film rooted cuttings.

In January 1955 one half of the 80 foot propagating bench was devoted to Polyethylene film method of propagation. Gardenia cuttings were placed in the frame on January 21 and on February 21 had roots  $\frac{1}{2}$  inches long and were well rooted in 5 to 6 weeks.

The use of Polyethylene film for propagation of general bedding plants should prove very satisfactory. Advantages of the use of the film is the ease with which a propagating area may be covered and the fact a tight or loose enclosure is possible which allows for a close or high humidity for cuttings needing this condition or lower humidity for less tolerant plant material. Temperature conditions are more readily maintained at an even level, also there is sufficient light for the cuttings. During

early spring or fall when light intensity is high some shade may be necessary but for the lower light conditions of winter the film can be given full light.

Appreciation is expressed to Butler and Ullman Co. of Hadley for opportunity to make these tests under commercial greenhouse conditions as well as to demonstrate how mutual relationship in a cooperative way can be established between Station research and commercial growers. Cooperative experimental work with commercial growers should extend the research worker's horizon and defines research in terms which the grower can more easily comprehend.

Such type of research brings some of the problems and tribulations which are involved in establishment of a piece of research work into focus for the grower. By this it is not to be implied that all research should be at the practical level for frequently what is known as basic research (not having immediate practical application to a growers problem) can some time later be applied in a practical way and there are sufficient examples in the past to substantiate this statement. So if you, as a grower, become impatient that an answer is not quickly rendered to your particular problem you can show your sincere interest by being willing to share your facilities with the research worker thereby becoming, we hope, better informed as to what research means.

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