

Direct Rooting of Poinsettias in 2 $\frac{1}{4}$ " Pots

by Russel Weiss*

This past season after successively rooting 125,000 poinsettias directly in 2 $\frac{1}{4}$ " and 3" pots, we can say that we will never use sand again. With mist and under sterile conditions we were able to propagate poinsettia 100% in sand, but we have switched to direct rooting because less labor is involved, rooting percentages are also 100%, and quality is improved. Once the proper system is arrived at, sterile established 2 $\frac{1}{4}$ " pots may be produced in less time than where sand was used as the rooting medium.

These things are a must, however, if direct rooting is to be done; a steam sterilized, well drained soil mixture preferably one in which 20% perlite is incorporated, a good misting system and a source of well fed cuttings. We have rooted plants in 2 $\frac{1}{4}$ " and 3" clay pots and peat pots, but we prefer clay over peat because of the drain hole in clay which allows for rapid drainage.

Basically all that is involved is replacing the sand bed with 2 $\frac{1}{4}$ " pots filled level with soil. These are placed in flats on the propagating bench and the bench, flats, soil, and pots are steam sterilized all at one time. The pots are then lined out on the bench tight in the rows with 3 inches between rows. The freshly taken cuttings have been stuck, one to a pot, and the mist turned on. The misting cycle at the start should be 12 seconds every 3 minutes.

Some shade on the glass is needed in the first three or four days after which only a light shade is needed. (The less shade, the better.) The misting is decreased until 12 seconds of mist is used every 15 minutes. This should happen around the tenth to the twelfth day. After this, the plants may be removed from the propagating house to a lightly shaded house where a few hand syringings will keep them turgid. We like to move them from the mist as early as possible since the plants stay shorter and the leaves are not leached by the mist. In about 15 to 18 days a nice well-rooted 2 $\frac{1}{4}$ or 3 inch poinsettia may be obtained which can then take full sunlight.

One thing we find is that plants which are mist propagated must be maintained at a high fertilizer level. Espe-

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cially is this true for white poinsettias. If white are taken from hungry stock plants or left too long under mist, they may become hard and the leaves become yellow, brittle, and then drop off. To combat this we feed the stock plants with $2\frac{1}{2}$ lbs. per 100 gallons of potassium nitrate alternated with 20-20-20. After the sixth or seventh day (callous time) we begin to feed the cuttings directly in the pots at three day intervals with $1\frac{1}{2}$ lbs. of the above materials. We feed our plants throughout—decreasing the rate of application when we take them out of the mist as less leaching is present.

If enough care is taken using this method, nice, short, well rooted $2\frac{1}{4}$ and 3 inch plants ready to pan with every leaf in place should be obtained in about 4 weeks with a little less time for white.



This is the type of plant you can expect from direct rooting. Healthy, well established plants that retain the leaves right down to the soil are the result of ideal growing conditions.



A house full of well-rooted $2\frac{1}{4}$ " poinsettias. You can expect 100% "take" with direct rooting if your system is adequate. Note the flats that held the pots for steaming, at the end of the bench. These steamed flats were used to carry the rooted plants from the propagating house to these freshly steamed benches eliminating possible disease contamination from unsteamed flats. Also note the end of the hose supported up off the floor.



This is the root growth you can expect after 15-21 days with direct rooting in pots in a well-drained soil mix under mist. This plant will never receive the shock of having its roots torn loose from the sand and being potted. It goes right on growing until you are ready to pan.
