MODERATOR WARNER: Thank you, Martin. We have next Mr. Robert Eshleman, Jr. of Bloomsburg, Pennsylvania, to talk on "Planting Through Plastics." Mr. Eshleman.

Mr. Eshleman read his prepared paper on the use of plastics for rooting hardwood cuttings, and for growing potted plants. (Applause)

PLANTING THROUGH PLASTICS

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This system works well for me when I need only 500 to 1000 plants of a variety of flowering shrub, produced quickly, with little labor or expense.

The principle of using plastic to plant through is much like any other mulch but with many features that are far superior to the average material used for mulching By plastic I am referring to sheets .002 to .004 inches in thickness and preferably black in color.

The plastic is waterproof except where it is punctured to insert the cutting or plant. Rain enters at these points and spreads under the plastic. It cannot leave except through the foliage of the plant The plastic maintains a uniform soil moisture content even through dry spells. This makes the perfect environment for rooting hardwood cuttings.

The plastic acts as a greenhouse to help retain heat in the soil. This is very beneficial for root growth in the early spring.

The plastic makes an effective weed control barrier, and if black plastic is used, many weed seeds will fail to sprout at all. This enables one to plant out small cuttings that would ordinarily be engulfed by weeds or which would require a great deal of labor to keep clean

The plastic keeps the rain from packing the soil surface so that good aeration is maintained and cultivation is unnecessary. The plants hold the plastic down so that the mulch stays in place.

In order to give you some idea of how we use this technique in our operation I will describe the general procedure in detail. Prepare the beds for planting in the usual manner for the type of plant being raised, adding all soil amendments and rotovating them in. Do this preparation the fall before, if possible, to be able to make earlier spring plantings.

Spread the plastic over the bed and anchor the edges with soil until the bed is planted. The width of plastic is optional and would depend on the width of bed use. If shading is to be used, 4½ foot plastic on a 4 foot bed works well. For hardwood cuttings of flowering shrubs shading is not ordinarily used which allows you to make the beds much wider.

I have tried this system of planting through plastic with two types of plants, i.e, hardwood cuttings (*Weigela rosea, Forsythia spectabilis, Spiraea prunifolia,* etc.) and with potted plants (*Pyracantha coccinea lalandi, Cotoneaster divaricata,* etc)

Hardwood cuttings are prepared in the usual manner in January or February and buried in sand in bundles until planting time in March or April. Holes are made through the plastic the diameter of the stick and to a depth of 6 or 7″, or to a point where one inch of cutting appears above the plastic The cutting should fit snugly in the hole. It helps to use soil with few to no stones in it. The spacing of the holes depends upon how long the shrubs are to remain and how fast they grow If the plants are moved in one year, 6 inches usually is sufficient spacing, although if left two years, 12 - 18″ is required. The growth made is almost equal to that under irrigation because of the uniform moisture supply. The plants are all uniform in size and can be spaced closer than in ordinary field planting because there are no weeds to compete with and no cultivating is necessary For most hardwood cuttings, one year in the bed is sufficient They can be sold or lined out in the field for continued growth

When pot plants are put out, a digger similar to a bulb planter can be used. A circle of plastic and a volume of soil equal to the pot ball are removed and the plant is dropped and firmed in.

This system really simplifies transplanting of small plants without the need of sterilizing the soil to remove weed seeds or adding mulch later to retain moisture.

I have used plastic also out in the field in three-foot rows around established evergreen plants. This was put down after the plants had been planted. It didn't work nearly so well because I only stripped the plastic about 12 inches on each side of the row and the weeds between that had to be removed by cultivation. If you could afford to cover the whole planting surface with plastic in order to eliminate cultivation it would probably work well

Something else I could remark on would be the type of plastic we used. Clear polyethylene film was pretty well broken down by fall although it stil covered the surface sufficiently to keep the weeds down. The following spring it did not interfere with digging. When I used black plastic, it remained quite tough through two years, and might offer some interference with removing the plants after the first year

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MODERATOR WARNER Thank you for your very interesting talk.

We are now up to the last item on the program. We have a paper on "Rooting Deciduous Azaleas from Cuttings," by Warren Baldsiefen, who was unable to be here, but Mr. Leach has consented to read this paper.

Mr. David Leach read the paper prepared by Mr. Warren Baldsiefen, Rochelle Park, New Jersey. (Applause)