Mist lines are set up on wood brackets about 18″ to 20″ above the beds. Mist heads are spaced about 40″ apart in the line. With our pressure this gives good coverage of the 3′ wide beds.

The rooting medium we like best is a mixture of approximately one-half Canadian peat moss and one-half perlite. This mixture is used the first time as it comes from the bag. Before a second use, the beds are treated with a Clorox solution. All of the remaining mix is then removed down to the layer of gravel (approximately ¾ to 1″ layer in bottom over the wire mesh). All the beds including theh gravel are treated with Vapam before refilling with fresh mixture.

Cuttings of miniature roses are made of both soft and hard (or semi-hard) wood depending upon variety and material available. Some varieties seem to do best using rather short cuttings (1 - 2″). Usually cuttings are made 2 - 4″ long. We find that if cuttings are made longer there is a tendency to stick them too deep into the medium.

Cuttings are dipped into a Clorox solution immediately after making, then drained and dipped into a solution of Orthocide just before sticking. Hormone treatment is regular Rootone powder. Too deep placement of cuttings seems to delay rooting and cuttings are more inclined to rot. We have found that cuttings root quickest and best in the top 1″ of medium, probably because they get more air.

Depending upon time of year and variety, cuttings root under mist 3 to 5 weeks — sometimes sooner. During the winter in the same beds, but without mist (using hard or dormant cuttings), rooting may take eight to nine weeks or more.

As soon as cuttings are sufficiently rooted the hardening off process begins. During hot, sunny weather and high temperature, close attention is essential. In cooler, fall weather or on cloudy or overcast days the minimum of attention is required. Water is turned on for a few minutes at a time at intervals. The entire hardening process usually takes about five days. After that, cuttings are on their own, needing only the minimum of care until potted.

MODERATOR HAUSCH: Thank you, Mr. Moore. I certainly enjoyed your talk and I think everybody else did too. Our next speaker will be Mr. E. P. Dering who will discuss storage and refrigeration of rose budwood. Mr. Dering!

STORAGE AND REFRIGERATION OF ROSE BUDWOOD

E. P. DERING
Peterson and Dering, Rose Growers
Scapoose, Oregon

My experience in freezing budwood, came as a result of a rather freakish circumstance. We had just built a warehouse and a refrigerator. We had some wrapped roses left over at the

end of the season, and I decided to keep them in storage for another month or two. We looked at these buds throughout April and May, and they looked nice and plump. About the first of June, I took out these roses. The roots were just wrapped and the tops were frozen. The buds looked plump so I budded them. Everyone of them grew. Well, that gave me the idea that rose budding "eyes" could be kept in storage.

Our first method was to cut the buds in late fall, put them in a peach box with a layer of peat moss, another layer of buds, and another layer of peat moss, and then dip them in a pail of of water and freeze them solid at 25 degrees. However, they were hard to thaw out. So, finally, we decided to start wrapping them in newspaper and butcher paper, and from there we went to newspaper and polyethylene bags, which we use now. Now we keep these buds at 30° or 31° F.

We take these roses just before digging, in late October, and take off just the very hard wood along with the entire leaf. Then we wrap them in paper, dip them in a pail of water, let them drain a little, and then put them in the polyethylene bag and tie it tight. This method is now used exactly in rose garden areas all over the world. The European growers, however, have not gone ahead with it as much as American growers.

Of course, frozen buds are much harder to dethorn than fresh cut buds, I tried to trim mine one time without experimenting, and I dethorned about a half million buds. Needless to say, the frost got into where the thorn had broken off and we lost the entire lot.

MODERATOR HAUSCH: Thank you, Mr. Dering. Now we will hear from a rose grower from Wilsonville, Oregon, Mr. Fred Edmunds, who will discuss commercial production of roses in Oregon. Mr. Edmunds!

COMMERCIAL PRODUCTION OF ROSES IN OREGON

FRED EDMUNDS
River Ranch Nursery
Wilsonville, Oregon

Our aim in production of two-year field-grown roses is to provide a plant with a well-branched, heavy top, a shank of two inches or less, and a finely divided root system with many flexible roots. From the standpoint of trade acceptance as well as an item that can be handled with ease, we try to approach the ideal as nearly as possible by varying our cultural methods.

Our climate is best divided into the dry season and the wet season. From June 15 until October 1, less than 10% of our rain falls. The rest of the year is cool and moist with our coldest weather arriving about the middle of January. By employing the attributes of our climate to best advantage and devising pro-