

FRIDAY MORNING SESSION

October 19, 1962

The second session convened at 8:45 a.m. with Moderator Hudson Hartmann, University of California at Davis, presiding.

THE MODERN ROLE OF MIST PROPAGATION

MODERATOR HARTMANN: Major milestones in the history of plant propagation are rare — especially in the field of propagation by cuttings. In recent years, however we have experienced two such events. One is the development of the auxin concept in plants and the knowledge of the effects of synthetic plant growth regulators, and the discovery that one of these effects is the stimulation of adventitious roots on stem cuttings. This development started about 1935, and the mass of knowledge accumulated since then has been tremendous, leading now to routine applications of auxins, as IBA, to cuttings.

The second development we have witnessed in recent years has been the discovery, starting in the 1940's, that rooting of leafy cuttings is greatly enhanced by keeping the leaves wet by means of mist sprays. This has greatly increased the scope of plant materials we are able to propagate by cuttings. Just why this is so will be explained by our first speaker, Dr. Hess. Following this, Peter Mordigan will discuss how these new techniques of mist propagation have influenced the economics of plant production.

There are many plant species, which in the past have been so difficult to start from cuttings that we have been resigned to using seed propagation for them, and accepting the seed variability and dormancy problems. This has been particularly true for some of the native plant types. Don Sexton, at the University of California Arboretum at Davis, has been doing considerable work in trying to get many such plants started by using mist. During his trials he has accumulated much information which he is going to discuss today.

Finally we will hear a talk by Floyd Dillon, Fred Real, and Don Dillon on one of the most interesting applications of mist I have seen — producing a grafted plant by healing the graft union and getting roots started on the rootstock — all in one simultaneous operation under mist. The Dillons are working with citrus, but I am sure this technique could be applied to many other plant types.

To start our Symposium this morning, we will have a discussion by Dr. Charles Hess, Associate Professor of Horticulture, Purdue University, on the Theory of Mist Propagation. Dr. Hess: