36. RESUME OF THE THIRD SOUTHERN FOREST TREE IMPROVEMENT CONFERENCE

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Although a Yankee type with strictly Mendelian segregationist sympathies, I have had the privilege and good fortune to have attended all of the Southwide forest tree improvement conferences sponsored by the Committee on Southern Forest Tree Improvement. As an outsider looking on, I can with complete objectivity and frankness tell you, first of all, that the one thing that has most impressed me at this meeting (aside, of course, from the bells) is the abundant evidence that you all seem to have been pretty serious in Atlanta, back in January 1951.

In the heat of enthusiasm, there is nothing easier than to make extravagant and far-reaching plans. I must confess that at the first meeting in Atlanta, and for some time thereafter, I was frankly worried.. Subsequently, however, my worries and doubts faded away. I must say that the Committee on Southern Forest Tree Improvement and its cooperating individuals and agencies is the "followingest-through" group I have ever seen in operation.

I was expecially interested in yesterday's first session concerned with the problems of seed source, the groundwork for which was so ably laid by Rudolf. The "Southwide Cooperative Study of Geographic Sources of Southern Pine Seed", a current evaluation of which was presented by Wakeley, Henry, and Coyne, is probably one of the best examples of "follow-through" that has been demonstrated by the Committee on Southern Forest Tree Improvement. in view of the numerous individuals and agencies that have so freely worked on the venture, it stands as a model of cooperative effort that might well be copied in other regions.

Wiesehuegel's report on results of the Tennessee Valley Authority's racial studies of loblolly pine, Sihvonen's account of Crossett's "Corrigan Study" of seed source in reverse, and Bercaw's up-to-date report on the old loblolly seed source study at Bogalusa provided added evidence that interest in seed source--the logical point of departure in tree improvement efforts--is still a lively topic of interest in Southern silviculture.

I have often expressed the opinion that such fundamental, extensive studies as those concerned with the study of wild tree variability at the racial, stand, or individual tree level, is not only scientific good sense, but practical good sense as well. From the practical standpoint the initial pursuit of such studies will provide quickly what the South needs badly, namely, good wild native seed in commercial quantities. Scientifically, the knowledge accumulated on the variation pattern at the racial level is essential to adequate analysis on the stand or individual tree level. As such knowledge accumulates, its further practical applications will be manifold in the more intensive phases of tree improvement in the future.

While on this subject,. I would like to make one brief comment on a fact that tree-improvers, and especially the emissaries of intensive breeding, frequently overlook. It is simply this: we are inclined to minimize the very important fact that through the Grace of God and a highly favorable series of evolutionary processes, the South already has some mighty good trees. If your slash pine, for example, did not exist, I would accept with reluctance the responsibility of breeding (even with all the top quality raw genetic material in the whole of the genus Pinus at my disposal) a mythical "slash pine" endowed with the numerous superior characteristics possessed by Pinus elliottii--variety elliottii, that is.

For this reason I was particularly pleased to hear Dorman emphasize the importance of individual tree selection, and was reassured to learn of the attention being given to this phase of Southern tree improvement as reported in yesterday afternoon's session by Ellertson, Zobel, and Pomeroy.

Putnam's paper on the need for genetic research in southern hardwoods was not only of special interest to me because of my own interest in hardwood genera, but is a valuable and timely reminder to you piney woods runners that the South's claim to fame rests not alone on cotton, corn, and pine.

You in attendance at this Third Southern Conference on Forest Tree Improvement have been especially fortunate in having with you two of the best informed men in this country, if not the world, on the genus Pinus. I refer, of course, to Pete Righter and Al Johnson. There can be no doubt but that the pioneering work in inter-specific hybridization which has been done at the Institute of Forest Genetics in Placerville will have far-reaching and beneficial influences on pine improvement work throughout the South. Although Al Johnson's remarks here have been confined to a discussion of natural and artificial hybridization in the southern pines, I can assure you that he could speak as authoritatively about the pines of Mexico or China.

To those of you unfamiliar with the pollination and hybridization techniques developed or improved here in the South, Goddard and Allen's paper was valuable and instructive.

Chi Wu Wang's off-the-cuff report on the cooperative seed orchard program, underway in Florida under sponsorship of the University of Florida and various wood-using industries, was another reminder that the Committee on Southern Forest Tree Improvement apparently has few desk-chair operators. This fact was further confirmed by the enforced absence of Tom Perry who was originally scheduled to appear. I think that one of my cherished memories of this conference will be Chi Wu's definition of a phenotypically elite tree.

Maki's summary of work done on the stimulation of seed production was most timely, in view of current plans for seed orchard establishment in Florida and other parts of the South. Crossett and Westvaco, already in the seed production business, could, I think, profitably undertake research in this area. One of the prime weaknesses of most of the previous physiological studies concerned with the stimulation of flower an fruit production in forest trees has apparently been a failure to recognize that fruitfulness may well be under rigid genetic control in some tree populations. There is at least considerable empirical evidence to indicate that local populations may be highly variable with respect to individual tree fruitfulness. For this reason a well planned study of the effects of strangulation, fertilization , and other treatments on fruitfulness undertaken on a series of clonal lines, rather than a grow of wild trees of mixed heredity, might well prove highly informative.

I was much interested in Easley's report, read in absentia by Gustafson, on Westvaco's seed-producing areas. It is my confirmed opinion that the seed-producing area system as developed by Westvaco is one of the cleverest examples of Yankee ingenuity I have encountered in the South.

The final item on the agenda yesterday, the film "Developing Pedigreed Trees", produced by the Mississippi Forestry Commission's team of Grigsby, and Shotts, is, without exception, the finest piece of forest tree improvement propaganda I have seen. I hope it will have wide distribution.

Zak's paper on grafting techniques and Mergen's on the rooting and grafting of slash pine provide abundant evidence that this important area of research is not being neglected in the South. The results obtained by air-layering and the development of grafting methods suitable to the southern pines are of great potential value, chiefly as they relate to the pursuit of knowledge in other phases of the tree improvement research effort.

The brief reports that have just been concluded by representatives of various research agencies and foundations actively engaged in, or sponsoring research in, southern forest tree improvement, leaves one with the distinct impression that a Fourth Southern Conference is definitely on the way.

There are, in closing, a few general remarks I would like to make directed to those of you present at this conference who may not be directly engaged in tree improvement work, On the basis of the reports given, you might conclude that there is an inordinate amount of overlap and duplication of research effort by the various agencies concerned. This is, in a general sense, true. But it is by no means bad. It is, in fact, necessary and healthful. It is necessary, first of all, because the South is simply a big area, and I might say that this is true even if Texas is excluded, In consequence, though basic procedures are the same, the selection and isolation of elite wild loblolly pine in North Carolina, for example, is genetically and environmentally a wholly different problem from the identical job undertaken in east Texas.

In this connection I read recently--just where I can't remember--that all the recent work concerned with the establishment of seed source studies was a ridiculous waste of time and money. Why? Because, the author pointed out, it has long ago been well established that racial diversity in trees does exist!

I mentioned also that duplication and overlap of effort was healthful. And this is true even in the same region, preferably right next door, because, scientifically, there is nothing more healthful than having someone else test someone's hypotheses.

Finally, in addition to the vote of thanks that this body has already formally extended to the local arrangements and program committees, I wish to add my own small paean for a job exceedingly well. done. This meeting has, in my estimation, been a success not only in the professional sense, but it has proved to be one of the most wakeful affairs of this kind I have ever attended. Soto the bell-ringer of Newcomb College I think we -owe a special vote of thanks.