

## 2. Forest Tree Seed Certification, Charles Rindt, Chairman.

Charles Rindt

"Perhaps we should start out with a little background concerning seed certification particularly in the Pacific Northwest. Not too many years ago seed was purchased, collected and used with some, but not too much, thought given as to the correlation of the use of seed with the seed source, and it soon became apparent that there were some mistakes being made. As the trees that were planted grew up, we found places where trees were dying. In looking back at what records were available, we found that trees were taken out of their native climates and moved to a climate that was more severe or different than where the parent trees grew and that was the only apparent cause for these trees to die and for their poor development.

'We had in the Pacific Northwest a particular problem--perhaps it is not comparable to other parts of the country; that is, we have the same species of trees growing at sea level and all the elevations

clear up to timberline. Douglas-fir, for example, will grow right on the coast, the Pacific coast, at one foot elevation and then clear on up to five and six thousand feet. There's a very great difference in frost hardiness. It's inherited apparently, so that if we take trees grown from seed collected at the low elevation and plant them at the high elevation, trees are not frost hardy and die. We've had this particular experience. It's very disheartening and very costly. The native trees of the same species coming from seed at the same elevation are doing all right. At the Wind River Nursery we have an aboretum and one of the groups of Douglas-fir trees in the aboretum was grown from seed that came from over in the Rocky Mountains some place. Those trees grew for a number of years and then died. Why they died, we don't know. The native Douglas-fir trees growing alongside of them grew on up and are healthy and growing fast. Apparently it isn't the difference in frost hardiness, because surely over in the Rocky Mountains there is as much frost and cold weather as we get at Wind River, maybe more. But there certainly is a difference in rainfall, and perhaps that has something to do with it. Anyway, it becomes more and more apparent as we observe these things and do more research that we must have control over the source of the seed that we use if we are going to have successful plantations, successful second crops. Source is more important than genetic improvement because we can get genetic improvement of a certain percentage within a seed source. If, on the other hand, we take that seed source, move it out of the climatic zone to which it is acclimated, and put it some place else, we've not only lost all the genetic improvement, but we have practically a complete failure. So, we think that a tight control of the source of our seed is our No. 1 responsibility. It's for that reason that we launched into what we call a program of seed certification. We use large volumes of seed in Region 6, and we use many species. We use seed of the same species that is collected and used all the way from the Canadian line to California, from sea level to 4,000 feet on the north, which is about timberline there, to probably 6,500 or 7,000 feet, which is timberline in California. Now, if we could just say, this is Douglas-fir seed that we have in quantity and use this seed any place, it would be very easy. Because of this great range in elevation and latitude and climate, because the coast side of the mountains is very wet and the other side is dry, we're faced with a great variety of seed sources. This is a headache to the nurserymen. When our seed inventory comes out in the Wind River Nursery where most of our seed is stored, I think we had this year about 20 or 25 pages of different seed source. Each must be kept separate, and in making the planting plans we must forecast two or three years ahead, for instance, the number of thousands of trees that are going to be planted at 2,500 feet in the Mt. Baker Forest. We must have those trees ready. Likewise we're going to have to have the forest's planting plans, since they're going to use those trees. If we don't have enough, the planting is not going to get done and if we have too many, we cannot take those trees and move them down to the Siuslaw Forest or to sea level on the Olympic or some other place. So it

all makes a very complicated and again an important part of our jobs. Now, we also, in Region 6 in the Northwest depend a whole lot on commercial sources of seed. We, in the past and in the present, too, **do** a certain amount of seed collection of our own but always we have purchased seed from seed dealers and it's an established industry there. *We* have felt that we owe something

to the industry to support it when they can do the job for us at a cost that is comparable to what it would cost us, provided they would keep the identity of the source for us the way we would do it. Therefore, we have to cooperate very closely with these seed dealers as seed buyers. I'm talking as a seed buyer. We must cooperate right closely with them in working out how we are going to **identify** and maintain the integrity of these seed sources so that we're going to get what we want both in the way of seed and in the way of results from the seed. Now, I think it will be brought out here, later in the discussion, by some of the other people that there are two thoughts on seed certification. I think there's been just a whole lot of correspondence about it. There are a lot of people in **the** room who have entered into this correspondence in the way of surveys. I guess sometimes there's a little temper shown in some of the correspondence. I think it evolves mostly from the fact that we're talking about two different things. Certification of seed as farm crop seed is looked upon, as I understand it, as certification which implies some genetic improvement. In other words, here's a field of seed which has come from parent stock that has some superior quality. If wheat, it may be rust resistant. It has been proved rust resistant. Therefore it's certified rust resistant. Certification of tree seed from seed orchards would be profitable. Here's some seed grown in a seed orchard. It has been grown from selected parent stock. It can be certified as having these parent characteristics. We, here, are thinking of it not only from that standpoint, but as certification by the seller of seed with respect to source. This means selling seed in--what, a million dollar business? Maybe one dealer--a million dollars. Last year we bought Last year we bought 350,000 dollars worth of seed. We want from our seed dealers a certification that the seed they deliver to us was collected, for instance, in the Skagit River Drainage at an elevation of 2,000 to 3,000 feet and not higher and not lower, and not any other place. That's the kind of certification that we're talking about. Perhaps I could illustrate that by a story which would show a little difference between simply genetic improvement. There was a very powerful and important Indian brave and he was hauled up before a court for killing his wife, his squaw. The judge asked him right off the bat whether he pleaded guilty or not guilty. He said he pleaded "Not guilty." The judge said, "Well, did you kill your squaw?" He said, "Yes, me killum squaw, but me not guilty." "Well," the judge said, "How do you make that out, how can you explain this?" So, the Chief got up, and he crossed his arms over his chest. "Me big Indian brave. Me plantum wheat.

Up come wheat. Me plantum corn. Up come corn. Me plantum oats. Up come oats. Me plantum Indian. Up come Chinaman. Me killum squaw. So, me not guilty." **So I think that's what we're faced** with here. When we plant Douglas-fir seed from the Skagit River basin at 2,000 feet **we want that kind of trees to come up from the seed we plant. And** that's the kind of certification we're working for. I think that **both** genetics and source have to be **considered, and** I think that we should come into some harmonious agreement as to how both of these needs can be met. We get into a discussion, then, perhaps of authorities, as to just how we're going to have control of **these** things, what the machinery is that's going to be set **up-- responsibilities, purchasers' responsibilities and buyers' responsibilities.** We have always felt. in Region 6 of the Forest Service **that, as buyers,** we had a responsibility. The weakness we have found many times is that, as a buyer of seed in letting a contract, **we have not** been too sure or too specific **in** the statement of what we want and in defining the areas from which this is to be collected. Then there is the next step of being certain that there is 'a crop to be collected. You see, when we work, as we do, with seed dealers and require the seed dealer to give us a certification that he is going to **deliver what is** asked for, we have to have some knowledge that there is **a crop out** there to be collected. **The bid is** let early in the season, and the bids are accepted before the crop is harvested. It's different, again, from a farm crop or a crop of, probably, tree seed that would come from a seed orchard **in** which a stock could be carried **year after year, and** we would get the same product, if you will, that is advertised and **described.** In our business, our needs change from year to year and, as I say, we have **to forecast ahead what** our planting program will be at each elevation and area. At these **elevations and** areas we have to forecast what our **needs** are in letting these contracts. Then, after that, we want the seed dealer to give us a positive assurance that he, in the management of his business, will see to it that the seed comes **from** where we specified it should come from. He must guarantee on delivery that, it did come from there. And there's a feeling that perhaps some of these seed dealers aren't as honest as they ought to be. (Laughter) I say that's an unfortunate **feeling,** and I'm speaking very frankly, because I don't have that feeling myself. I've associated very closely with all of these people and I know **they're doing the** very best job they possibly can, and it's a very difficult thing to accomplish. It has to be **a cooperative effort in** which the rules are very **carefully** designed and laid **down** and everybody is going to play according to those rules. If we bring in a certification agency, such as the State or Government, or what not, then they are going to **have** to be acquainted with those rules and they're going to have to be able to administer them.

"I think Jack **Cameron** is going to talk more about that **from a** seed seller's standpoint. I think I've probably **used up more than my** time, Monk, in an effort to give you the sort of background of what this problem is and what we're thinking about. So, with that, I'll pass to the next man on the program who, I believe, **is Dick** Bingham."