

The Georgia Seed Certification Program

By:

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Seed Certification has long been discussed by foresters in this country, but until recently little action has been taken. There has been interest in knowing more of the origin and genetic quality of tree seed and several articles have pointed out their importance. One of the more recent discussions of the problem is that of Baldwin (1954). You have heard many papers at this conference and those of previous years which provide facts and figures to show the importance of using seed of known genetic constitution. Data showing racial differences have been available many years (Wakeley, 1954; Engler, 1913). Recently, information on inheritance of individual characteristics has pointed up the importance of the individual trees from which we collect our seed (McWilliam & Florence, 1955; Echols, 1955; Mergen, Hoekstra & Echols, 1955). Such characteristics as specific gravity and straightness may rank with growth rate in importance.

In order to provide the seed buyer with some reasonable assurance of the genetic quality of the tree seed he uses, the State of Georgia has begun a program aimed at making Certified Seed the source of every seedling grown in nurseries and from direct seeding.

Let me distinguish now between labeling and Certification. The Federal Seed Act (August 9, 1939-53 Stat. 1275) defines Certified Seed as "seed that has been produced and labeled in accordance with the procedures and in compliance with the rules and regulations of an officially recognized seed-certifying agency". In Georgia, as in most states, the Crop Improvement Association or College of Agriculture is that agency. Georgia law already requires the labeling of all seed sold or offered for sale as to origin and germination. Certification provides for additional information about the genetic quality of the seed. It is a guarantee, to the extent of our knowledge, of inheritance and the integrity of the producer. The responsibility for choosing the correct species, variety, strain, or geographic source of seed still lies with the purchaser. It is the objective of selection, hybridization, and racial variation studies over the South to develop or isolate strains with special characteristics for use in various regions.

Georgia's standards were prepared by a committee of the Georgia Chapter of the Society of American Foresters. The first draft was made in 1956 and in February 1958 the Standards were adopted by the Georgia Crop Improvement Association. This Society committee continues and also serves as a Commodity Committee of the Association with the same rank as those for corn, small grain, cotton, etc. Forestry is represented on the Board of Directors and other committees of the Crop Improvement Association.

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The standards provide the three classes of Certified Seed and an additional classification, Approved Seed. Class I Certified Seed will be produced only from progeny-tested parents. Class II Certified Seed will be from seed orchards prior to the completion of progeny tests. This classification denotes that the parents are the result of intensive selection and are under test. Class III Certified Seed are produced from seed production areas where selection of the parents is more restricted and progeny tests are not made. All classes of Certified Seed provide for minimum isolation strips of 400 feet to reduce pollen contamination.

Approved Seed is an interim category which provides for the selection of the trees from which cones are collected but has no provision for controlling the pollen source. An area set up to produce Approved Seed could be developed into a seed production area for Class III Certified Seed by roguing the stand and providing an isolation strip. It is hoped that Approved Seed will serve as a "stepping stone" for the establishment of certified seed producing areas.

As seed of better quality become available, the lower classes will be dropped, with the ultimate goal being all seed Certified Class I. Varieties may be established for such characteristics as high gum-yield, high or low specific gravity, figured grain, etc. The varietal name or number will be shown on the seed labels in addition to the Class number.

All progeny tests must be maintained until accepted by the Crop Improvement Association. The Association has the right to examine these tests and refer the data to other authorities for evaluation.

The administrative procedures are quite simple. A person or company wishing to produce Certified Seed prepares his area according to the Standards and then makes application to the Association for inspection. He also pays his inspection fee in advance. The Association inspector, a specially trained forester, makes the inspection and approves or rejects the area. Trees which do not measure up to the standards must be cut while he is on the area, or a reinspection is required.

The initial inspection must be made at least 21 months prior to cone collection with subsequent annual inspections in years in which cones are collected. The Association, of course, has the right to inspect at any time to insure compliance with the Standards. To minimize mixing or contamination of lots of seed or cones, the plant facilities used must also be approved.

There are now 53 acres of Seed Production Areas in Georgia which have been approved for Class III Certified Seed for the 1960 crop. Most of the area is slash pine, but there is one seed production area each of loblolly and longleaf.

The success of this program, like any other cooperative venture, rests upon the integrity of the people involved. Certainly any control over the genetic quality of tree seed will be an improvement and the sooner we can supply seed which meet certain minimum standards the sooner we can achieve the higher production goals we seek.

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