Special thanks to St. Joseph Land and Development Company for hosting the 1986 Contact Meeting at Wakulla Springs Lodge. Charles Chase and Guy Bartium did an excellent job organizing the meeting, social hour, dinner and the river and springs tour. The atmosphere was both relaxed and productive; thank you, St. Joe!

This newsletter summarizes the major points of the presentations and discussions at the Contact Meeting.

Mitch opened the meeting with a special welcome to invited guests Bob Weir, of the North Carolina State Tree Improvement Coop; Tom Byram, Western Gulf Tree Improvement Coop; and Tim LaFarge of Region 8, U.S. Forest Service.

First time participants at a CFGRP Contact Meeting were also introduced: Paul Belonger, Florida Division of Forestry; Terry Allen, Scott Paper; Sam Allen, International Forest Tree Seed; Sonja De Souza, Ph.D. student in forest genetics; and, Gary Hodge, CFGRP staff.

Based on research by Pat Layton, the Cooperative implemented, on a trial basis, a new scoring system for assessing fusiform rust in progeny tests. The new system scores each tree for the severity of the rust instead of just absence or presence of rust.

Tim presented results of analyses showing that over 15 Diallel progeny tests in which the new system was measured, family rankings using the new and old system were very similar. The average linear correlation between family means was 0.92 and the relative gain efficiency averaged 0.94.

It was decided to retain the current system (0 = No Rust, 1 = tree has rust) because it is much faster to implement in the field.
Gary outlined a biological model that describes how varying rust levels in progeny test affect growth evaluations.

Interactions and genetic relationships between growth and rust resistance will be incorporated into the new clonal evaluation system (Best Linear Prediction System) in an attempt to make best use of existing programs test data for ranking parents.

If interested, copies of a paper which details the biological model and presents results of genetic relationships between growth and rust can be obtained from Gary or Tim.

Harm summarized the status and plans for converting the Longleaf Pine progeny tests into seedling seed orchards.

Cooperators with 1979 plantings were urged to make the 8-year measurements by January 15, 1986. These data will be analyzed to rank parents based on their performance across several test plantings. The parental rankings will be made available to the Cooperators in February so that the tests can be rogued of poor families and converted into seedling orchards.

Calculations indicate that roughly 1 acre of seedling orchard will produce enough seed to reforest 100 acres.

Mitch thanked the cooperators for their efforts in organizing and compiling their historical seed orchard data on the recording forms. He commented that a few cooperators had records that dated back to 1970 or earlier, but the most complete records were from 1977 onward. With the help of Greg a computer coding system had been developed and most of the seed orchard records were already on the system.

Mitch further reported that he was working with the Florida Division of Forestry to obtain climate data and records which were located as close as possible to each orchard. In order to know which weather station data to use, Mitch asked each coordinator to mark the locations of their orchards on maps which were distributed.

Mitch presented two graphs showing the individual values and means of yields in bushels of cones per acre and pounds of seed per acre per year since 1977. He pointed out that the distribution of the data points was clustered about the mean during the relatively low-yield years which may suggest that poor crops were due mainly to most orchards not being in production or to adverse environmental conditions. However, the range of the individual data points was dramatic for the relatively high-yield years which suggest that when the environment is conducive to seed production, certain cultural treatments may have heavily influenced these individual yields.
Mitch reported that as soon as the desired climate data was obtained the staff would be conducting various analyses to look for correlations between seed yield and various cultural treatments and environmental conditions.

SEED CERTIFICATION

Mitch described the status of the Seed Certification Procedures which are now on the books as statutes in Florida.

The process as adopted by the State is so cumbersome and expensive as to be nearly useless. It was decided that the Seed Orchard Committee should draft a statement expressing the displeasure of the Cooperative and recommending changes in the statutes.

SUMMARY OF 1986 MEASUREMENTS

Greg summarized the status of the 1986 progeny test measurements test measurements and analyses. Data from 138 progeny tests were sent to Gainesville and 87% of these have already been analyzed.

All the data were transmitted electronically to Gainesville this year and the transition away from paper data forms is complete! We in Gainesville thank the Cooperators for making the data transfer a smooth operation.

Updated clonal evaluations were distributed for slash pine, longleaf pine and sand pine. Clonal evaluations for loblolly pine and the slash pine c-lots did not change and needed no updating.

BEST LINEAR PREDICTION

Tim summarized the used of parental rankings from progeny tests at many stages of the breeding cycle. To make most efficient use of existing progeny test data, a new clonal evaluation system is being developed. The system, called Best Linear Prediction (BLP), is patterned after similar methodologies being used in Dairy Cow breeding.

BLP handles many of the "messy data" problems commonly encountered in the estimation of parental rankings from progeny test data. A paper is available from Tim or Gary describing the use of BLP in forestry.

A special thanks to Brunswick, Container, Champion, and Rayonier who are making extra 15-year measurements in several open-pollinated tests. These data will be used to estimate genetic parameters needed for implementing the BLP system.

SECOND GENERATION SELECTION PROCEDURES

The slash pine data management system will use the best linear predictions and other data to identify candidates for second generation selection. These candidates will be the best individuals within the best families growing in old cross tests,
diallels or factorials. The candidates will be screened in the field and the best individuals chosen for inclusion in the second-generation selected population. Some of the best original first-generation clones may also be held over in the second generation selected population. (Backward Selection)

A list of candidates will be distributed to the Cooperators in the first quarter of 1987.

ROOTSTOCK SCREENING STUDY

The proposed rootstock screening study was described and much discussion ensued. It was agreed that screening potential genotypes for their value as rootstock was a worthwhile project if it can be accomplished without too much effort and without compromising the establishment of the second generation clone bank.

It was decided that 1) the rootstock seed should be sown by December as described in study plan and 2) the Slash Pine Breeding Committee (plus Gene Schreiber, Early McCall and Paul Belonger) will investigate the logistics of the study and make recommendations to the Advisory Council.

IMPROVED SEED EFFICIENCY WORKSHOP

Bob Schroeder, of the Florida Division of Forestry, announced an upcoming workshop on "Improved Seed Efficiency for Southern State Nurseries." The 3-day workshop will be held at the Munson Nursery and conducted by Clark Lantz of the U.S. Forest Service and personnel from the National Tree Seed Lab. All CFGRP cooperators are encouraged to attend. Date and times will be announced later. Contact Bob Schroeder (904/488-7617) for additional information.

Wishing You
A Happy
Thanksgiving!
THE GAINESVILLE STAFF