

CONFERENCE ON FOREST GENETICS RESEARCH IN SOUTHERN PINE

Report of Committee on Hybridization

The objective of hybridization is to obtain increased productivity with improved quality to meet utilization requirements.

To meet this objective and to facilitate the work necessary to attain it, the following three-point program is recommended

A. Exploratory studies to develop information and techniques

1. Investigation of mode of inheritance of various characters, particularly dominance and recessiveness of specific characters.
2. Development of methods for obtaining combinations of characters desirable in a hybrid.
3. Cytological studies in number and behavior of chromosomes in hybrids.
4. Development of methods for, inducing amphidiploidy in interspecific hybrids.
5. Explore the genus *Pinus* for possible breeding material which might be used in breeding work with the southern pines.
6. Development of techniques for stimulating and controlling time of flowering and methods of artificial dwarfing, of mother trees to increase ease of carrying out breeding work and seed collection.
7. Studies of the correlation between juvenile and adult characters as a basis for seedling selection.
8. Development of techniques for testing hybrids.
9. Development of equipment for facilitating hybridization work, such as climbing equipment.
10. Development of techniques for control of mass pollination, (Hot water technique for killing pollen.)

B. Breeding studies using intra- and interspecific crossing to obtain specific objectives

1. Increased volume yields.
2. Pest resistance.

3. Good stem form.
4. Adaptability over a satisfactory range.
5. Slender branching.
6. Satisfactory relationship between spring and summer wood,
7. Heat and frost hardiness.

Cooperative regional testing of hybrids is necessary for adequate accomplishment of tree breeding work.

C. The committee also recommends that:

1. Adequate machinery be set up for the exchange of information and material between workers.
2. A standard system of record keeping be established.
3. Cooperative regional testing of hybrids.

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