

THE SOUTHERN FOREST TREE IMPROVEMENT COMMITTEE, 1971-81

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Abstract.--A history of the activities of the Southern Forest Tree Improvement Committee during the period 1971-81 is presented. Included are committee organization and operational policy, accomplishments and services, sub-committee activities, membership, officers, meetings, and conferences sponsored.

Additional keywords: History, forest genetics.

Thirty years ago the development of superior trees was little more than a dream. Many plans were made and some work was started, but no one was sure that appreciable genetic gains could be made or that such gains could be attained at reasonable costs. Today tree improvement is a reality and a major phase of forestry. This is especially true in the South. According to a survey made by the USDA Forest Service (1982), of the 13,618 acres of seed orchard established in the U.S. up to 1981, 78 percent were in the South. Most of the forestry organizations in this region now have tree improvement programs and many have seed orchards sufficient to supply all the seeds they need for forest planting. Estimated genetic gains are usually substantial.

There is no doubt that the tremendous progress made was due partly to the efforts of the Southern Forest Tree Improvement Committee, which was organized in 1951. This report gives a brief history and summary of activities of the Committee during the period 1971-1981, with some reference to previous activities. Previous historical accounts were given by Ostrom (1953), Kaufman (1954), and Kaufman (Committee sponsored publication No. 32)⁻¹, the latter covering the period 1951-1971.

COMMITTEE ORGANIZATION AND OPERATIONAL POLICY

Present objectives of the Committee are essentially the same as those adopted in 1952:

1. To advise and assist those interested in the improvement of southern forest trees in arranging for and conducting research and development programs.

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^{3/} Committee sponsored publications, listed in Appendix E, will henceforth be cited by showing publication numbers in parentheses. Other publications, listed under "Literature Cited," will be cited in the usual manner.

2. To provide a clearinghouse for information on forest tree improvement.
3. To provide for or assist in coordination in the conduct of a south-wide program for tree improvement research and development.
4. To foster and encourage the advancement of knowledge of southern tree genetics.

The Committee has no formal constitution or by-laws, but operates under a statement of operational procedures which has been modified several times. In 1971, the "Organization, Policy, and Procedures of the Southern Forest Tree Improvement Committee, Revised September 1968" were in effect. Essential features, along with subsequent revisions, are outlined below.

1. Committee membership and rotation was restructured in 1976, mainly to include representation of cooperative tree improvement programs. At this time it was also decided that the Committee would designate one of the three forestry school appointees to represent Cooperative State Research Service (CSRS) Regional Project S-23, and that the Pathology appointee would represent CSRS Regional Project S-100, in order to maintain better liaison with these research organizations. Representation of Forest Farmers Association was discontinued in 1978. The name of the "Southern Pine Association" was changed to "Southern Forest Products Association" in 1970. Pollen management and cone harvesting specialists were incorporated in 1977 and 1979, respectively. Membership structure (24 members) in 1981 is given in Table 1. Terms of members begin on June 1 and end May 31 of the years specified. Members serving between 1971 and 1981 are listed in Appendix A.
2. Officers consist of Chairman, Vice-Chairman, and Secretary. They are elected by the Committee and serve 2-year terms. They, along with the past chairman or a member at large, serve as the Executive Committee, which handles mainly interim routine business. Officers during 1951-1981 are shown in Appendix B.
3. Committee meetings were usually held biannually through 1960, at which time it was decided to hold them annually with the provision that special meetings could be called as required (Appendix C).
4. Southwide conferences have been held biennially (Appendix O).
5. Affiliation with the Forest Genetics Research Foundation (apparently inadvertently included in the 1968 Revised Procedures) ceased in 1961, following extinction of the Foundation. Also, service of the Committee as advisor to the Southern Institute of Forest Genetics ceased in 1965.

Table 1.--Southern Forest Tree Improvement Committee representation and period of tenure by agency or interest, as of 1981.

Agency or specialty represented	Number of Representatives	Appointers
GROUP A--6 YEAR TERMS ^{a/}		
Pulp and paper industry	3	Director, Southern Forest Institute
State forestry agencies	3	Chairman, Southern Group State Foresters
Forestry Schools	3	Assoc. of South. Coll. and Univ. For. Res. Organ., South. Region
Hardwood Research Council	1	Research Coordinator of the Council
Southern Forest Products Assoc.	1	Vice-president of the Association
GROUP B--INDEFINITE TERMS		
Southeast. For. Exp. Stn. USDA For. Serv.	1	Director of the Station
South. For. Exp. Stn. USDA For. Serv.	1	Director of the Station
Southeast. Area, State and Private For., USDA For. Serv. ^{b/}	1	Area Director ^{b/}
Tennessee Valley Authority	1	Chief, Division of Land and Forest Research, TVA
GROUP C (SPECIALISTS)--6 YEAR TERMS ^{a/}		
Geographic variation	1	Southern Forest Tree Improvement Committee
Forest pathology	1	Southern Forest Tree Improvement Committee
Forest entomology	1	Southern Forest Tree Improvement Committee
Pollen management	1	Southern Forest Tree Improvement Committee
Cone harvesting	1	Southern Forest Tree Improvement Committee
GROUP D (ACTION PROGRAM LEADERS)--INDEFINITE TERMS		
Region 8, USDA Forest Service ^{c/}	1	Regional Forester
Western Gulf Forest Tree Improvement Program	1	Director of the Cooperative
University of Florida Cooperative Forest Genetics Program	1	Director of the Cooperative
North Carolina State University-Industry Cooperative Tree Improvement Program	1	Director of the Cooperative

^{a/} Membership terminates at the close of the Committee meeting in the year of expiration.

^{b/} As of 1982, Region 8, State and Private Forestry, USDA Forest Service, appointed by the Regional Forester.

^{c/} Moved from Group B to Group D in 1976.

ACCOMPLISHMENTS AND SERVICES

Subcommittees

Major subcommittees established since organization of the Committee are given in Table 2, along with dates of establishment, officers, and notes on activity. As can be seen, most of these subcommittees have been very productive.

Southwide Conferences

The committee has continued to sponsor conferences biennially (Appendix D). Attendance at conferences has increased from an average of about 90 at the first three conferences to an average of 216 at the last three. Proceedings of the Conferences likewise increased from an average of 96 pages to 276. A notable feature in recent conferences has been the inclusion of speciality workshops, such as those on cone and seed insects, pollen management, and seed orchard yields. Distribution of Conference Proceedings has sometimes been a problem. The most recent policy (1980-81) is to print sufficient copies for free distribution to forestry school libraries and Conference registrants, plus 100 free copies for written requests. Back issues are available free from the SFTIC secretary until inventory is depleted. Requests are sent to Eastern Seed Tree Laboratory, Box 819, Macon, GA 31022. Starting with the 15th Conference, all proceedings have been submitted to the National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22151, for placement on microfilm and distribution. Copies can be purchased directly from NTIS.

Committee-sponsored Publications

Committee sponsored publications (1951-81) are given in Appendix E.

Newsletter

Newsletters have continued to be issued semi-annually, Beginning in 1967 the "Newsletter" was taken over by "The Pollen Grain," which was issued by Southeastern Area, State & Private Forestry (USDA-Forest Service) and the Committee. Editors were R. G. Hitt (1967-68), LeRoy Jones (1969-71), R. G. Hitt (1971-75), and Clark Lantz (1976-80). Publication of "The Pollen Grain" was suspended in December 1980, due to a federal publication moratorium.

Other Activities

1. In 1971, the Committee proposed establishment of the Seed Orchard Survey (SOS) to identify problems, research needs, and procedures for improving seed quality and yield. Findings led to providing of seed testing services by the USDA Forest Service, Eastern Tree Seed Laboratory. This service was terminated in 1975, but replaced by two new services: Seed Orchard Evaluation Testing (SOSET) and Cone Analysis Service (CAS) (Karrfalt, 1977). SOSET and CAS services were terminated in 1981.

Table 2.--Subcommittees of the Southern Forest Tree Improvement Committee.^{a/}

Name	Year Estab.	Chairman	Accomplishments & Status ^{b/}
Geographic sources of seed	1951	P.C. Wakeley (1951-64) O.O. Wells (1964-)	(2, 3, 6, 10, 15, 25, 29, and 31). Wakeley (1959), Snyder et al., (1967), Wells (1969). Data tapes released 1981.
Genetic control of seed	1951	F.M. Cossitt (1951-53) T.E. Maki (1953-55) George Garin (1956-66) J.E. Barber (1966-67)	(13). Promoted seed certification. Presumably dismissed in 1967.
Tree selection and breeding	1951	K.W. Dorman (1951-68)	(4, 5, 16, and 26).
Progeny testing	1951	E.G. Wiesehuegel (1951-53)	(8). Dismissed 1953.
Tree improvement brochure	1953	D.A. Anderson and C.M. Kaufman (1953-55)	(14).
Tree improvement through silviculture	1954	E.G. Wiesehuegel (1953) Bruce Zobel (1954)	(11).
Entomology ^{c/}	1954	R.J. Kowal (1954-64) E.P. Merkel (1964-72) H.O. Yates (1972-)	(27). Workshop held at 14th Conf. Stimulated pesticide research and clearance for use of chemicals.
Pathology ^{c/}	1955	G.H. Hepting (1955-59) A.F. Verall (1959-64) H.R. Powers (1964-72) E.B. Cowling (1972-81) Tom Miller (1981-)	(18). Promoted establishment of fusiform rust testing lab., 1971.

Hardwood genetics	1959	H. Doyle (1959-71)	Sponsored hardwood meetings.
Progeny testing for seed certification	1960	P.C. Wakeley (1960)	(20). Dismissed 1960.
Pest handbook	1966	J.C. Barber (1966)	(27).
Orchard seed yield and quality (seed orchard survey)	1970	L. Jones (1971) R. Hitt (1971-75)	Belcher and Hitt (1973); Belcher (1974); Belcher and DeBarr (1975). Dismissed 1975.
Cone and seed insect research	1972	J. P. van Buijtenen (1972-77).	Stimulated funding. Dismissed 1977.
Gene preservation	1974	K. Taft (1974) T. Vermillion (1979-)	Inactive 1975-78. Two reports in Pollen Mgt. Hdbk. Policy statement forthcoming.
Reorganization	1976	R. Dinus (1976)	Membership structure reorganized. Dismissed 1976.
Pollen management	1977	E.C. Franklin (1977-81) F. Bridgewater (1981-)	Workshops at 14th and 15th Conf. and at Nat. Tree Seed Lab. 1980. Pollen Mgt. Hdbk., Franklin (1981).
Geographic variation in seed orchard yields	1977	Clark Lantz (1977-)	Workshop at 14th Conf. Instigated studies of geographic effects. Schmidtling (1978).
Mailing list	1977	Clark Lantz (1977-)	Mailing list placed on computer. ^{d/}
Cone and seed harvesting	1979	S. Dianis (1979-82) J. L. McConnell (1982-)	Summary of harvest systems in use prepared.

^{a/} Does not include Conference subcommittees, which are usually shown in Conference Proceedings, nominating committees, or minor temporary committees.

^{b/} Numbers in parentheses are Committee-sponsored publications, listed in Appendix E.

^{c/} Official status as subcommittee and date established are uncertain--chaired by specialists who present reports at most meetings.

^{d/} Most of this work was done by S. B. Land, Jr.

2. The Committee's Pathology subcommittee (E. C. Cowling, Chairman) was instrumental in developing the Resistance Screening Center in 1971 (Prior to 1980 the Center was known as the Fusiform Rust Testing Laboratory). It is operated by Region 8, State and Private Forestry, USDA Forest Service.
3. In 1973, The Southern Forest Tree Improvement Conference Committee (R. J. Dinus, Chairman, B. A. Thielges, and O. O. Wells) conducted a survey of research needs and priorities. Its report (Dinus et al., 1973) suggested a dire need for more research on cone and seed insects. This in turn resulted in establishment of the Cone and Seed Insect Research Committee (J. P. van Buijtenen, Chairman). The latter committee stimulated increased funding for research by the Southeastern Forest Experiment Station and also lobbied strongly for establishment of CSRS Regional Project S-118 dealing with seed orchard insects.
4. The Committee stimulated publication of forest tree seed orchard directories in 1971, 1974 and 1981 (USDA Forest Service, 1971, 1974 and 1982).
5. In 1977, the Committee instigated and assisted with the "Sycamore decline survey" (Progress Report in Minutes, 1977 Committee Meeting).
6. In 1981, a book on pollen management was published (Franklin ed., 1981), a major accomplishment of the Pollen Management Subcommittee.
7. Through encouragement of the Committee, a guide to cone and seed insects of southern pines was published (Ebel et al., 1980).
8. The Committee continued to promote seed certification. In a 1981 report to the Committee, Earl W. Belcher, Jr., Director of the National Tree Seed Laboratory, stated that all but three Southern States now have seed certification standards.

LITERATURE CITED

- Belcher, Earl W. 1974. Observations on the third-year results of the seed orchard survey (S.O.S.). In Proc. seed yield from southern pine seed orchards, John Kraus, ed. Georgia Forest Research Council, Macon, GA.
- Belcher, Earl W. and Gary L. DeBarr. 1975. Seed orchard survey (S.O.S.): final report and summary of highlights. Proc. 13th. South. For. Tree Improv. Conf.: 145-152.
- Belcher, Earl W. and Robert G. Hitt. 1973. Observation on two-year results of the seed orchard survey (S.O.S.). Proc. 12th South. For. Tree Improv. Conf.: 55-63.
- Dinus, R. J., B. A. Thielges, and O. O. Wells. 1973. A resume of concern from the Twelfth Southern Forest Tree Improvement Conference. Proc. 12th South. For. Tree Improv. Conf.: 348-352.

- Ebel, Bernard H., Thomas H. Flavell, Loyd E. Drake, Harry O. Yates, III, and Gary L. DeBarr. Gen. Tech. Rep. SE-8, Rev., USDA, For. Service, 44p.
- Franklin, E. Carlyle (ed.). 1981. Pollen management handbook. Agric. Handbk. 587. Washington, D.C.: U.S. Dep. Agric., 98 p.
- Karrfalt, R. P. 1977. Seed orchard evaluation testing (SOSET) and cone analysis service (CAS) at the Eastern Tree Seed Laboratory. Proc. 14th South. For. Tree Improv. Conf.: 122-129.
- Kaufman, Clemens M. 1954. The Committee on Southern Forest Tree Improvement. J. For. 52: 685-686.
- Ostrom, Carl E. 1953. The activities of the Committee on Southern Forest Tree Improvement. Proc. 2nd South. Conf. For. Tree Improv.: 1-7.
- Schmidtling, R. C. 1978. Southern loblolly pine seed orchards produce more cone and seed than do northern orchards. Proc. Flowering and seed development in trees 177-186: Mississippi State Univ., Starkville, MS.
- Snyder, E. B., P. C. Wakeley, and O. O. Wells. 1967. Slash pine provenance tests. J. For. 65: 414-420.
- USDA Forest Service. 1971. Forest tree seed orchards--a directory of industry, state, and federal forest tree seed orchards in the United States. USDA, Forest Service:15 p.
- USDA Forest Service. 1974. Forest tree seed orchards. USDA Forest Service: 33 p.
- USDA Forest Service. 1982. 1981 Directory of forest tree seed orchards in the United States. USDA Forest Service FS-278: 48 p.
- Wakeley, P. C. 1959. Five-year results of the southwide geographic seed source study. Proc. 5th South. Conf. For. Tree Improv.: 5-11.
- Wells, O. O. 1969. Results of the southwide pine seed source study through 1968-69. Proc. 10th South. Conf. For. Tree Improv.: 117-129.