Report of the Committee on Reorganization of the Standing Technical Committees

E. W. Littlefield, Chairman, H. I. Baldwin, J. B. Carlaw, V. S. Jensen, F. Mergen

"Early in July our Executive Secretary called the attention of the Chairmen of our present Technical Committees to the fact that, with the exception of the Tree Seed Certification Committee, there has been no Committee activity during the past 2 years. He also requested an opinion from the Chairmen on whether their Committees should be continued."

"The job assigned to this Committee seems to be that of 'breaking dormancy.' On the basis of suggestions and comments received from the Chairmen of our Standing Technical Committees, we recommend that rather than try to revise the dormant committees, it will be better to start over again."

The Committee recommended and the Conference approved the following Standing Technical Committees and Committee Chairmen:

Seed Certification Committee - Claude E. Heit. (C. E. Farnsworth, Chairman of this Committee since its establishment, had accepted a 2-year ICA assignment to the Phillippine Islands.)

Committee on Basic Research - Francois Mergen.

Committee on Improvement of White Pine - Herschel G. Abbott.

Committee on Improvement of Spruce - James B. Carlaw.

Committee on Improvement of Northern Hardwoods - William B. Gabriel.

A Committee on Improvement of Other Species, with Frank S. Santamour, Jr. as Chairman was recommended from the floor and approved by the conference. This Committee was disolved in 1962 at the request of the Chairman.

Two additional Technical Committees were established by the 6th Conference in 1958:

Committee on Improvement of Larch. David B. Cook, Chairman

Committee on Improvement of Virginia Pine. Albert G. Snow, Jr., Chairman.

The Technical Committees have presented 30 Committee Reports at NEFT IC meetings; these reports have effectively facilitated the exchange of information and stimulation and correlation of tree improvement research in this region. These Committee Reports would have had considerable impact on the application of tree improvement in the Northeast if conditions in this region had favored the need for such application.

THE PROBLEM OF PROGRAMING MEETINGS TO INTEREST RESEARCH AND PRACTICING FORESTERS, AND INDUSTRY MANAGEMENT

With the exception of the 2nd, 4th, 12th, and 18th meetings, almost every conference has evoked some criticism that the program was too technical to maintain the interest of practicing foresters and forest managers.

A total of 227 papers (exclusive of the 30 Committee Reports) have been presented to the past 19 conferences. On the basis of subject matter interest and intelligibility, I have rated these 227 contributions in two categories:

1. Primarily research

2. Research and/or practice.

Eighty-eight (39 percent) of the papers have been rated as Primarily Research and 139 (61 percent) as Research and/or Practice. The bar diagram (fig. 1) shows the number of papers in these two categories for each of the 19 Conferences. There were no research papers in the 2nd, 4th, and 12th Conferences.

The 2nd Conference was devoted to Technical Committee reports, discussions of these reports, and reports on tree improvement in the South and in the Lake States.

The 4th Conference at Johnsonburg, Pennsylvania, in 1956, was a Marking Symposium in an Allegheny hardwood stand. There were independent markings by 9 foresters: two public service foresters; two silviculturists; three forest geneticists; and two industry foresters. These individual markings were described by the markers and subjected to on-the-ground discussion by the Conference members.

The report of the Marking Symposium in the 4th Proceedings attracted more attention in Europe than in our Northeast. For example, it was reviewed in considerable detail in a Polish article titled "A different approach to selective thinning" by Eugeniusz Ilmurzynski (Sylwan 9:7-12, 1958). The author's English summary follows:

> "Selective thinning is an effective means of preserving the most valuable stand constituents.
>
> The way in which thinning is scheduled and its results depend upon interests of those responsible for implementation of the operation and who represent various professional groups i.e, silviculturists, exploitators, practicians and scientists.

"The Johnsonburg, (Penn., USA) Conference and Symposium held in August, 1956, is given by the author as instance of multifarious approach to the problem of improvement thinning."

"The author suggests that the need for a like convention followed by a practical performance of thinning is urgent in Poland and would facilitate the exchange and adaptation of views upon economic objectives set up for particular stands and connected silvicultural treatment."

The 12th Conference (1964) was completely practice oriented. There were 19 reports on the status of seed production areas, seed orchards, and other tree improvement programs in the Northeastern Region, and one paper on seed production areas and seed orchards in California.

The 18th Conference (1970) was primarily practice oriented and included a panel discussion on "The Application of Tree Improvement in the Northeast--Why or Why not?" by Gordon F. Weetman, Research Forester, Pulp and Paper Institute of Canada, Donald F. Strout, Industrial Forester, International Paper Co., and George W. Weiland, General Manager--Timberlands, Dead River Company.

THE PROBLEM OF INDUSTRY INTEREST AND SUPPORT

The three members of the panel on "The Application of Tree Improvement in the Northeast--Why or Why not?" at the 18th Conference presented an excellent discussion of the reasons for "Why Not" in the past and the present. In my opinion, they also provided a sound basis for optimism in the future application of tree improvement in this Region. I will first summarize their reasons for "Why Not."

Why Not

Forest management of any degree of intensity has not been needed in the Northeast for the following reasons:

1. The extensive forest ownerships and the low values placed on forest lands. It has been possible to buy land and timber cheaper than trees could be planted and grown on land already in ownership.

2. Total mill requirements in terms of today's mills were very modest. The species required were in surplus both on company lands and in the market place; in fact markets did not exist for all of the wood that was being grown naturally, without any silvicultural management.

3. The impact of reasonable and stable transportation rates encouraged procurement of wood in areas remote from the mills. It was always possible to get any additional wood needed by paying a modest increase in the transportation cost.

With reference to industry's lack of interest in tree improvement, Gordon Weetman expressed the opinion that "...a contributing factor is the lack of instruction in this subject in Canadian forestry schools in the last 30 years." This statement has led me to excerpt the following from

my "Challenge for Forestry Schools" with which I ended my 1950 Journal of Forestry Paper on "Genetics in Relation to Forestry."

> "To my knowledge, forest genetics is not an undergraduate requirement in any forestry course. ...elementary forest genetics is an important complement to the technical education of the professional forester, and as such it should be an undergraduate requirement. A one-hour, one-semester lecture course would be sufficient for the present. ...to make clear those concepts which will be essential to the genetical improvement of our managed forests."

I did not receive comment from any forestry school that they were, in 1950, offering instruction in this field. Since 1950 there has been a boom in forest genetics graduate study; but how effective have the forestry schools been in providing, and requiring even a minimum one-hour forest genetics course to provide "...an important complement to the technical education of the professional forester,..."?

George Weiland remarked that "Since coming back to New England--some 3½ years ago--I've heard very little about tree improvement at the S.A.F. Section meetings." During the General Session of the S.A.F. New England Section on March 13, 1969, I called attention to the fact that "Research on genetic improvement of forest trees and the role of such tree improvement in silviculture appears to have been omitted from both the research and silviculture sessions." I believe this lack of interest in tree improvement at Section meetings reflects a serious "blind spot" in undergraduate forestry education. For future foresters this should be eliminated by the schools; for practicing foresters probably the best solution will be tree improvement workshops.

The panel members were in accord that forest geneticists have something to sell, and that they have not sold their wares well enough. They indicate that there were two principal customers:

1. The members of the forestry profession.

2. Those in top private and public management who set policy.

In view of my previous statements on undergraduate instruction in forest genetics, I must agree with item 1, but I question the validity of item 2. In my opinion, the professional foresters and managers below the policy-making echelon, share the responsibility, with top management, for the future of their establishment. I submit that it is primarily their responsibility--with the help of research where needed--to sell their establishment's policy makers.

Gordon Weetman commented that "Most tree breeders are paid to do research and not to organize programs. As I see it, it is up to you to get together to propose and sell such a program." As a geneticist, I have been paid to do research, but I estimate that during the past 38 years at least 20 percent of my time has been spent trying to "activate and promote" tree improvement for fiber and timber production, and for amenity planting. I suggest that State and Private Forestry has the best possibilities--through cooperative funds--to successfully activate and promote the application of tree improvement.

Future Prospects

The 1970 panel discussion indicated that changing conditions in the Northeast have brought about a somewhat more active industry interest in tree improvement.

Within the last five years, there has been a major change in land values. The era of cheap land is past; forest land is rapidly becoming scarce and any that is available is expensive with the price escalating rapidly. Manufacturing processes have changed bringing with it new plants with expanded wood and operation requirements. The new mills are creating serious wood procurement problems:

1. It is becoming more and more difficult to recruit the necessary woods labor to produce the necessary wood requirements. Each year logging costs are increasing faster than productivity and forest managers are experiencing cyclical woods-labor shortages.

2. It is becoming necessary to procure wood from greater distances from the mill and the cost of such wood is rising rapidly because of increasing freight rates. These escalating freight rates are beginning to make this remote wood look economically unattractive.

3. Both hardwood and softwood sawlogs are diminishing in size and quality. There are reasons to believe that the demand for hardwood pulpwood will accelerate much faster than the supply and in a decade could outstrip the present hardwood yield capacity of the land.

4. "Complicate this further with all of the people who will want to walk around and look at trees, listen to loons, breath clean air, and swim in unpolluted water, and you realize we have an interesting time ahead." (George Weiland, 18th NEFTIC Proceedings, 1970, p. 29.)

The answer to the problems resulting from these changes is not simple. One answer that seems obvious is to find methods for producing more fiber per acre closer to the mills. This should be a two-step approach:

1. A short-term approach; what can be done to immediately increase production per acre?

2. A long-term approach; what steps can be taken now that will assure increased fiber production per acre in the future?

Tree improvement is only one of the many areas needing intensive promotion to answer the problems resulting from our changing conditions. Obviously it does not fit under the short-term approach.

For the short-term approach there are interesting developments in equipment design that offer hope for increased yield through more complete utilization. For total tree utilization, research has not yet solved the bark problem. On the other hand, planting begun today, would require at least a 20-year waiting period before any increased yield could be realized; the problem of bark separation will probably be solved much sooner.

Accessibility through more and better roads, a more aggressive marketing program to encourage utilization of all of our native species, the use of small diameter timber both topwood and smallwood, would lead to more fiber production from the present forests and would augment silvicultural regimes that will most likely be employed in the future.

Although tree improvement is not in the category of short-term possibilities, all of these short-term aspects will lead to an intensity of management that will require some form of even-aged culture and the use of genetically superior planting stock.

Industry has taken some initial steps that should lead to more activity in tree improvement: for example, a study on the advantages of planting larch on lands within reasonable trucking distances from the mill; a small trial of mini-rotation management for hybrid poplar, larch, and Norway spruce; and a cooperative program on plus tree selection and establishment of seed orchards of white spruce and balsam fir. Although industry in the Northeast is not yet ready for a major spruce-fir planting program, if improved seed or planting stock were available, industry could be expected to experiment with it on a modest scale.

Gordon Weetman expressed his optimism as follows:

> "I feel that the time is riper now than it has been for a long time. Wood demand projections, rising wood costs, plus the current environmental awareness are all causing reassessments of long-held industrial attitudes to silviculture in general and the economics of reforestation in particular. If companies can see a way in which they can jointly and without great expense to individual companies, organize and support a tree improvement program, then they will probably buy it."

Pilot-Scale Tests and Demonstrations are Needed

Forest and abandoned farm lands constitute one of our country's valuable natural assets. In the Northeastern Region, the full productive capacity of our lands was not needed in the good-old-times; but those times will soon be gone forever. Within the predictable future there will be increasing need to bring much of our land in the Northeast to full productive capacity for both forest products and amenity values. This will necessitate intensive mini-rotation management of genetically superior trees for fiber and timber, and for amenity uses.

Research on tree improvement in this region is at least 25 years ahead of application to practice. Pilot-scale tests and demonstrations of intensive culture are urgently needed; they should be established at least 15 years before application becomes inevitable. This will require the cooperation of industry, administrators of public forest lands, and private forest land owners.

I suggest that the time is right for NEFTIC to consider the appointment of Committees of One to promote (to sell, if you prefer) the establishment of pilot-scale trials and demonstration plantings in their home territory. At least 6 Committees of One would be required, one for each of the

following areas: Maine; New Hampshire and Vermont; Massachusetts, Connecticut, and Rhode Island; New York; Pennsylvania, New Jersey, and Maryland; West Virginia and Kentucky. Eventually a Committee of One for each State probably would be most effective.

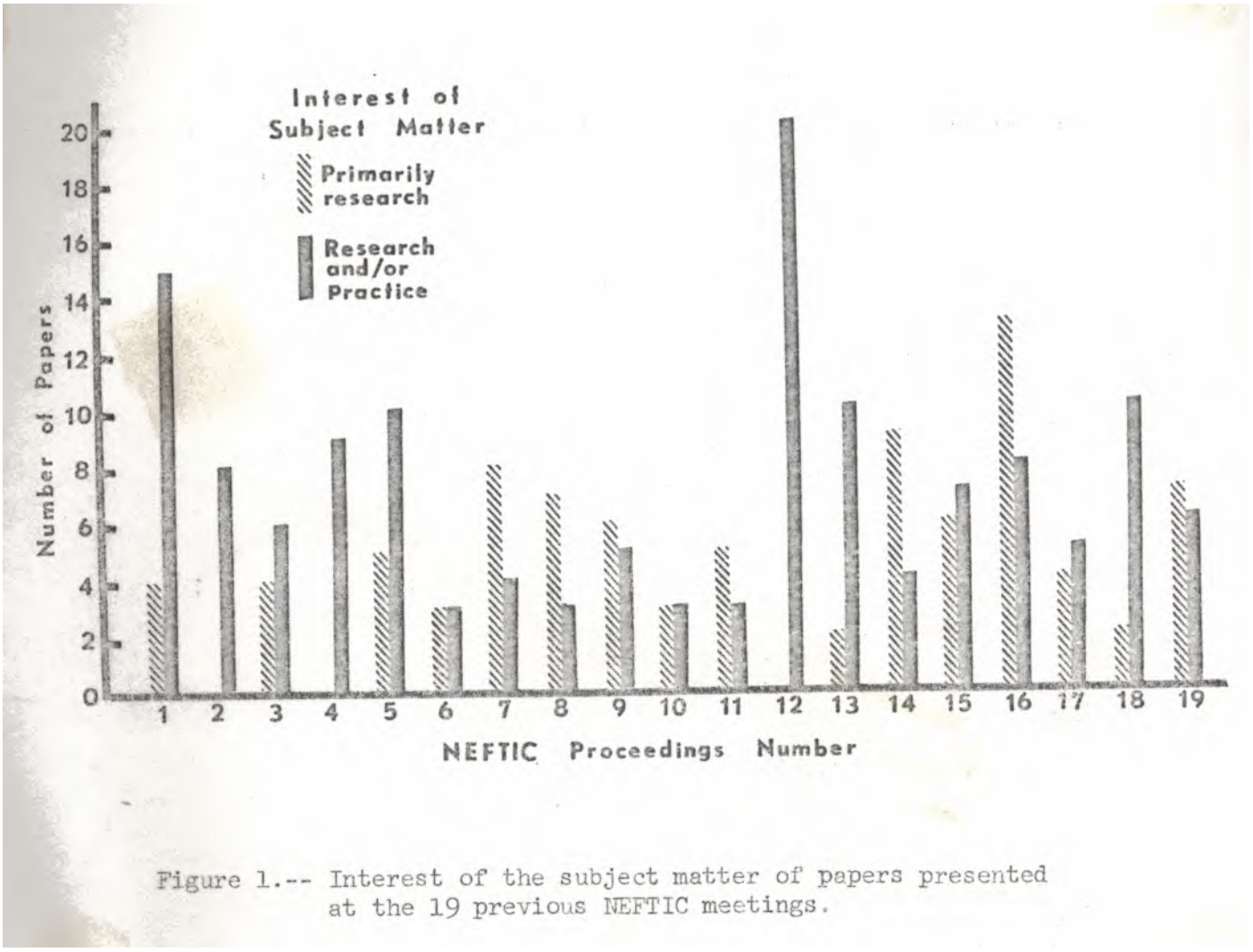

Figure 1.-- Interest of the subject matter of papers presented at the 19 previous NEFTIC meetings.