

the dark after each use. It does have to be handled carefully or it will tear.

DON EMBREE: Do you find any difference if the foliage is laid under rather than over the container.

FRANCIS GOUIN: Yes, if it is laid under the container we get foliage rot; if it is laid over, the plants come out in excellent condition.

PRESIDENT TUKEY: Thanks to all our speakers for an excellent morning's program.

### **WEDNESDAY AFTERNOON SESSION** **December 5, 1973**

The afternoon session convened at 1:35 p.m. in the Saddlebrook-Washington Rooms. Mr. Ralph Shugert served as moderator.

### **SEEDLING PROPAGATION SYMPOSIUM**

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We are fortunate to have five members who will share their expertise with us in the vast and complex field of seedling propagation. To illustrate the point, in Vol. 20 of the Proceedings, G.B.&I. member McMillan-Browse said, "Little information has been forthcoming on the propagation of viburnums from seed and all that comes to light from surveying the literature is confusion!" I can well appreciate his statement because all of us who have attempted sexual propagation of various species will understand the "confusion". In reviewing the literature for a background of a Seedling Propagation Symposium, there is data available in virtually all of the 21 volumes of our Proceedings. As I mentioned to the Manitoba nurserymen on Thanksgiving of this year, we must read all available data — and then learn from practical experiences.

For the information of our new members and guests, I hold the office of Historian on the I.P.P.S. Board, and in my files I have the Proceedings of the National Association of Propagating Nurserymen for their June 23, 1926 meeting held in Louisville, Kentucky.

P.W. Zimmerman from the Boyce Thompson Institute presented a paper on seeds and seed germination in which he care-

fully summarized seed development and structure. The purpose of mentioning this is a comment he made regarding the term "after-ripening". Quoting, "We do not know what all goes on within the seed during this period, but strangely enough it takes place at a fairly low temperature". His paper also commented on seed source and the amount of worthless seed planted every year by nurserymen. That paper was presented over 47 years ago to an assembly of plant propagation-oriented nurserymen attempting to find answers to age-old problems. Today, do we really know and understand any more about after-ripening than our predecessors did in 1926?

The challenges of seed propagation shall perhaps always be with us, but we have all learned much just within the past decade. The major portion of this knowledge has been generated by the marvelous word, "SHARING"!

If I wished to learn the proper technique for germinating *Fraxinus nigra* seed, I would turn to our member Bill Cumming from the Morden Research Station in Manitoba and he would guide me step by step. The same would apply if I were puzzled with seedling propagation of *Helleborus nigra*, but turning to our member Case Hoogendoorn, again the guidance and counsel would be there for the asking. One could go on and on through the membership and the assistance is there for the asking! The creed of our beloved Society is "To Seek and To Share", and it is indeed a beautiful, meaningful motto. It is meaningful because it is practiced in today's nursery community.

I can well appreciate the thought undoubtedly going through some of your minds asking "what can I read to gain a background of knowledge until I attain practical experience"? The "Bible" of seedling propagation has been the USDA Woody-Plant Seed Manual. While the words of this publication have been fervently devoured by propagators, it was printed in June, 1948, and is now out of print. Work on the revision has been underway for several years and the updated publication is eagerly awaited by all interested in seedling propagation. This is a valuable reference without question, but the commercial seedling propagator needs more.

The next turning point would then be to the Proceedings of our Society, to carefully digest the words printed in regard to seedling propagation. We can, and should, profit from the experiences reported and the profit is truly two-fold. In a commercial endeavor, profitability is mandatory — we must show a profit — and the consistency of seed stands, season after season, will aid us in reaching this common goal. With some plant species this seems to be impossible, but we must keep trying to solve the problem on hand. Dennison Morey commented at the first meet-

ing of the Western Region in this light by saying, "It is my belief that if there is any one general principle involved in plant propagation, it is this: significant progress will only be made when all possible knowledge is brought to bear in the most effective way. In connection with plant propagation, I am convinced that this objective can best be achieved by bringing all observations, regardless of how minor, into a common pool of knowledge." No one could make a stronger generality since we are all here really to help each other, and in so doing, to truly help ourselves more-so.

To our junior members, the challenges of seedling propagation can be vexing and frustrating, but at the same time, quite stimulating. I am a sentimentalist, and I say this unashamedly. There are very few things in this world that give me the comparable inner feeling of peace than watching seedlings growing in the spring of the year. It is a great and marvelous feeling, and I know that sensation has been appreciated by many in this room. It makes it all worthwhile because the birth of a plant heralds the spring. It is a tremendous feeling.

I suppose what I am trying to say to our newer members is that learning is achieved by reading, to obtain a background of knowledge, and then by application. Lastly, we have peers and mentors who patiently guide us in the proper direction. Peter Vermuelen used some words of free verse at one of our meetings that I have never forgotten:

"To weigh our fate, communicate;  
Matriculate; participate;  
Educate and elevate;  
Create, collate and circulate;  
Relate, debate, articulate;  
Perpetuate; illuminate;  
Generate, not imitate;  
Innovate, then instigate;  
Stimulate and propagate;  
Reiterate — communicate."

So with Pete's words, we emphasize the deep need of communication — at work, at home, at this meeting. It is so very vital if we are to be that uncommon man.

This afternoon we are all going to experience the sharing by benefitting from the sage words of five good friends of mine, and devoted I.P.P.S. members. It is our fervent wish that you also shall share with your questions at the conclusion of these papers. We have allowed 30 minutes for questions and sincerely request your participation. The first speaker of our symposium will be Al Fordham from the Arnold Arboretum and recipient of our 1971 Award of Merit, discussing "Seed Dormancy".