

# SATURDAY AFTERNOON SESSION

December 12, 1959

The final session convened at 1:35 o'clock, President Nordine calling the meeting to order.

**PRESIDENT NORDINE:** This Saturday afternoon program has become a tradition with this Society. The papers given by our members are very short. There will be time at the end of the session to answer some of the questions.

Our Moderator this afternoon will be Jack Blauw.

**MODERATOR BLAUW:** Ladies and gentlemen. Because we have very little time this afternoon and because we have a great number of speakers, I will now present Mr. Walter Grampp to speak on "Propagation Records."

Mr. Grampp presented his paper on the essential aspects of keeping accurate propagation records. (Applause)

## PROPAGATION RECORDS SYSTEMS

W. F. GRAMPP

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Some time ago there appeared in the *American Nurseryman* a list of comic definitions, in which a propagator was described as "the fellow who runs through the greenhouses pulling out the dead cuttings before the boss comes around. In the event the boss is the propagator then he does the same before his friends come around."

Now later in the season, at a winter meeting in Cleveland or Philadelphia perhaps, when this fellow is questioned on the results of a particular strike, he will calmly reply, "Oh, 85-90 per cent." What he really means, of course, is that he stuck 12 or 13 hundred, guessed it was a 1000, rooted 700 and figures he was doing pretty well. I am sure that any of you in this audience, who have had the experience of keeping an accurate record for one season, of an operation that was deemed highly successful in years past, can testify to the shock that is in store for the grower who has been guessing at his very comfortable percentages.

I feel that the main reason more records, particularly propagator records, are not kept by nurserymen, both large and small, is that many people think that to keep these records is too time consuming and really not worth the effort. This type of thinking could not be further from the truth.

A *good* system of propagation records entails three considerations, simplicity first and foremost; continuity and accuracy. I put simplicity first because I feel that it is the essence of a *good* system. A great many people who endeavor to keep propagation records start out all fired with enthusiasm and lay out an elaborate scheme only to find that they

have created a rod for their own back. They quickly give it up for it is too troublesome and more important, too time consuming. This is probably the greatest pitfall in the whole concept of keeping propagation records.

The second consideration in keeping good records is continuity. To keep a really comprehensive record all elements of the propagating process must be recorded. Anytime the particular crop is worked on, an entry should be made; such as a spraying or drenching, etc. To simply enter the number stuck and then the number rooted is not enough. Entries made along the way will tell the story of the final figure, be it good or bad. If the strike is a good one, then conditions can be duplicated next time. If it is a poor one then the reasons why should show up in the entries made during the propagation process. In order for the necessary entries to be made, the records must be readily available, which means they must be kept as close to the bench as possible. We keep ours right in the shed.

The last consideration is accuracy. All is for naught if the figures are not true. Anyone who goes to the trouble of keeping records and then makes mistakes or forgets an entry is simply wasting his valuable time and would be better off to make a few extra cuttings. We have found that the greatest source of errors comes from neglecting to record an entry, or arrive at a final total when the particular operation is over and past. This is most easily corrected by making one person responsible for the records and having him make all entries. With this scheme there is no doubt as to who is to make a particular entry.

I am sure that there can be as many good systems as there are individuals in this room. Everyone should decide for themselves what type of record will best fulfill this particular need. I am going to explain our system in detail; not that any one should emulate our methods, but simply as an example of a propagation record system.

Our system, like all things created by man; had very humble beginnings, but none the less was a start.

The next year we made entries into an extension pad, which is now the basis of our system. Each group of plants to be propagated, whether by cuttings, grafting or seed, is assigned a number which stays with the group throughout the propagation process. If the same group is going to be treated in two or more different ways, i.e., with different hormones or in different mediums, then a dash number is added. This number, along with the varietal name, the date, the number propagated and the treatment is entered into the extension pad. The same information is also written on a 12 inch white plastic label.

This label stays with the group until they are either sold or set out into the field. All comments, notations, etc. are put into this extension pad during the propagation process. One of the things we have found is that we did not allow enough space for remarks and were writing all over the pad, which leads to confusion. About two entries per page of this size is maximum. At the end of the season we go through these pads, add up the totals, figure the final percentages, analyze any

tests made and generally finalize the day to day comments. All this information is then condensed and entered into a master record book.

Each plant we propagated has a page and a year to year account of our results with it. We try to keep the entry to a maximum of one sentence since the extension pads are kept and we can always refer back if the need arises. These books are preserved a little more carefully than the shed books, for here is the essence of all our findings. The extension pads are simply bolted together along with an index and kept handy.

This then is our propagation record system. We think that it meets the requirements, or being simple, continuous, and reasonably accurate. It has worked well for us in the past and is presently working well. I hope that it may serve to help some of you to start and maintain your own propagation record system.

MODERATOR BLAUW: Thank you.

The next speaker on the program was to be Dr. Waxman. He has asked me to delay his talk and our speaker will be Vincent K. Bailey of the J. V. Bailey Nursery, St. Paul Minnesota. Mr. Bailey.

MR. VINCENT K. BAILEY: My subject is entitled, "Propagation of *Prunus cistena* and *Prunus triloba* and their Storage Overwinter."

We use a comparatively large greenwood cutting for this purpose. As you can see from our exhibit, the cutting is 10 to 15 inches long. We like this large cutting because we think that it stands up better in the operation of planting directly from the propagation bench to the field.

I might state here that we do not do any potting of rooted greenwood cuttings or for that matter of rooted conifer cuttings. We plant everything directly into the field.

Now the *Prunus* propagation wood is taken from a stool block of certified virus-free stock, a program which our state, along with many other states, is sponsoring. This certified stock, I presume, is a little better than the other stock. However, I am sure you could get similar results from uncertified stool blocks. The main thing is the condition of the material when you take the cutting. We like a medium green cutting, not too ripe. This is then prepared and put in an air-conditioned greenhouse.

Now I am rather partial to sunlight and contend that as much sunlight as possible should be used in the propagation of any greenwood or conifer cutting. I think sunlight is a source of all our energy and within certain limits it is beneficial in the propagation of cuttings.

We got by count in 1957, seventy-eight per cent rooted on the basis of roughly 9,000 cuttings while in 1958 we had a 75 per cent stand out of that planting. This year, I haven't had time to tabulate the results. Now this is far from the 100 per cent that we would like, of course, but we do think it is satisfactory and it pays over the other method of propagation of *Prunus*, that is by budding on *P. americana* understocks.

We feel rather proud that these cuttings are well-rooted. They are rooted up and down the stem for at least two inches. There are enough roots on them so that they will stand, as I said before, planting out

directly in the field. They will go on and make salable plants in a minimum of time.

You might ask, why do we propagate *Prunus cistena* and *Prunus triloba* from greenwood cuttings? In the first place, we think it is a little better with the advent of canned or potted nursery stock. Those nurseries that are using this method for sales much prefer the own-root plant. I think the landscape men are coming to realize, too, that they are much more valuable because of the reduced trouble with various types of understocks that might be used. The customer isn't continually wondering what is coming up around his ornamental plants.

Now we store these cuttings in a polyethylene wrapping. We put about 200 per bale and roll them up. First, we take them out of the bench when they are rooted and mature which in our locality is around October 20 to 25. By this time they are well hardened and can be put in the refrigerated storage room where the temperature is kept between 32 to 34 degrees F. Here, they are kept, wrapped up in this polyethylene without any packing or moisture until May, which is our season for planting out. Occasionally we do have adverse weather conditions, so we hold them until as late as the middle of May, when we find we get nearly as good a stand as by early planting.

The survival in the field is not 100 per cent. We are quite well satisfied, however, with the survival. I am sure we could get a greater survival if we would pot these plants, but the much reduced cost of handling under these conditions I think more than pays for the slightly reduced survival in field planting.

We are quite interested in costs. While I do not keep records we think that this matter of going directly into the field has given us a tremendous saving in labor. We don't have to have a truckload of plants going out every hour or two to the planting machine. We can load enough in the pickup, to keep a reasonably good-sized planting crew busy planting the whole day. There we think we are saving a considerable amount just in our trucks.

This polyethylene we use is a low-cost product. In our case, we get it for carrying it away from the wholesale candy company that has it as waste material from their retail packaging operation.

In summary then, we believe that the light in the air-conditioned greenhouse is one of the main factors that is responsible for our moderate success in the rooting and planting of this plant material.

MODERATOR BLAUW: Next on the program is Leslie Hancock. I think we have heard about the Burlap Cloud Method and we would like to hear from Mr. Hancock again but he believes that he has already explained the essential details of this procedure.

We will next have a paper read by Dr. Mahlstedt.

DR. JOHN MAHLSTEDT: These two techniques are described or at least outlined in the demonstration exhibit displayed in this room. Some of you have had an opportunity to look at them. The papers have been prepared by Mr. Donald B. White, a graduate student in our department at Iowa State University.