

ment of new synthetic rooting hormones, but also to the development of the new type propagation blocks.

We have had some evidence from Bovre's work that certain types of phenol-formaldehyde foams did not appear to present toxicological problems in the rooting of cuttings. This was confirmed in the modified phenol-formaldehyde foam blocks, free of nutrients and growth promoting substances, which have been evaluated at the Pershore College of Horticulture.¹ We were surprised at the rooting performances in these blocks. Having established that there do not appear to be problems of phytotoxicity, various nutritional and growth factors have been introduced into the blocks, and most promising results have been achieved. We will be reporting further on this work when all the results have been assembled.

LITERATURE CITED

1. Information supplied to us by B.C.M. Van Elk during our visit to the Research Station for Arboriculture, Boskoop, Holland in 1971.
2. Bøvre, O. 1972. *Statens Forsøgsvirksomhed i Plantekulture* 74, (9th March).
- 3 Orum, P., and Wilde, J., 1971. *The Plant Propagator*, 17 (3):5.

QUESTION BOX

JOHN GAGGINI: Could Mr. Purcell elaborate on *Hamamelis mollis* budding? What percentage take did he get?

G.B. PURCELL: The stocks were *H. virginiana* which came from the U.S.A. Budded in August with traditional 'T' cut with the wood removed from the bud. The time of budding varies with the availability of the budwood which can be as late as October; you will still get a good take so long as the sap is still rising in the stock. The percentage in 1970 with 250 stocks was about 90%. The varieties were 'Jelena' *Hamamelis x intermedia* 'Jelena'), *H. mollis* 'Pallida', 'Gold Crest' and a variety we call 'New Red'. In 1971 we budded about 150 stocks with about the same take, and this year we hope to do about 200. I would like to obtain 20 or so *Distylium racemosum* stocks in the next month or so to try budding them and to compare the results.

G.B. PURCELL: Is it not true that there is a big demand for standard Japanese maples in variety, but that the trade has not shown the ability to produce a good quality product?

¹These were exhibited at the Conference.

DAVID CLARK: We have a few standard *Acer palmatum* 'Dissectum' for which there is a limited demand, but they are very expensive. If it were possible to produce them more cheaply I am sure there would be a larger demand, but frankly I prefer to see them as a branched plant, which is its more natural habit.

MISS ANSTEY: Can anyone tell me please how to make *Magnolia soulangeana* and *Magnolia stellata* cuttings grow on? We take them in July, they root easily but fail to grow on in most cases.

A MEMBER: It is important that the cuttings should come from vigorous stock plants. The stock plants should be fed, cut back and mulched annually to produce long vigorous shoots. We use 2% IBA for rooting. It is a help to have supplementary lighting to ensure good results.

C.D. DEMPSTER: It is important to pot the plants up immediately root initials form. Many plants may be lost if the roots are too fully developed. Rooting into a Jiffy pot, even as late as August, can assist overwintering.

A MEMBER: Can I ask Douglas Harris if he has any information on the germination of seeds on a sterilized seed bed? He has mentioned the difference in growth after sterilization, but does sterilization have any effect on the percentage germination?

D. HARRIS: It increases the germination — or rather the emergence; the actual germination may be the same in both cases but, without sterilization, we have been losing some of the plants in the soil after germination, but before emergence.

P.J. WISEMAN: The traditional tree which the public buys in this country is a standard or half-standard. We heard from Dr. Robinson that in Japan there is much demand for very bizarre shapes. Is there a tendency in this country to consider a multi-stemmed tree or even a tree furnished to the base?

D. CLARK: Landscape architects are asking for this type of tree now. Nurserymen are slow to change, but some are beginning to meet this demand. Dr. Robinson used the term "character trees" which is a term I like very much, and I think there is a demand for them.

D.C. LEAMAN: These "character trees" will have to be planted where the public will leave them alone. Multi-stemmed trees are much more vulnerable to vandalism.

A. POSTILL: Is there a way to stop weed seeds from germinating under polythene tunnels filled with cuttings? Are "pre-emergent" sprays feasible?

A. CARTER: Yes, certainly. First, it is important to get rid of the weed seeds in the ground before inserting the cuttings and secondly (as some seeds may be brought in on the leaves of the cuttings) it is worth considering black polythene on the floor and

inserting cuttings through this so that you have a mulch. Against this, of course, you have the disadvantage that the soil temperature in the spring will be lower under the polythene. I cannot recall any trials of herbicides specifically designed to test pre-emergence materials against hardwood cuttings.

G. THORBURN: I have evidence that if the top pairs of leaves of *Acer palmatum* cuttings are removed from the nearly rooted cuttings the plants will grow away, whereas those not so treated remain dormant. Can anyone comment on this?

A. CARTER: I believe this has been shown to be true with *Vitis* cuttings, but is not the case with *Hydrangea petiolaris*.

C. A. BOND: Does the constant use of herbicides around nursery stock plants have any effect on the rooting of cutting material?

A. CARTER: I think that somewhere in the West Midlands, where a hedge had been treated, cuttings gave bad results.

C. SALTER: We had trouble with *Daphne x burkwoodii* where Casoron was used. Before using it we averaged 75-80% take; afterwards — and I am talking about two years after — the take was about 25%. Since we have used new stock the percentage is back to its original. There are reports also, I believe, of trouble with *Picea*, which might be attributable to the stock plants having been treated with Casoron in the seed bed.