

stock instead of 'Quince C' and, likewise, myrobalan is no substitute for 'Pixie' when allocating space in the garden for a plum tree.

British Standards is, therefore, not merely an advertising scheme to trade doubtful material but, properly conducted, will build confidence in the trade. It is a skilled and highly complex trade. We must not try to run before we can walk. Let us begin first with the most clear-cut fruit plants, the most detailed, the most frequently inspected in regard to trueness-to-name and health. Then, when we have perfected these schemes we can adapt them to a wider range of trees and shrubs.

Remember, the British Standards Scheme is purely voluntary. If we wish to trade doubtful material we can still try to do so, but surely this is not in the long term interests of the industry.

MY VIEWS ON NURSERY STANDARDS

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Not many years ago it would have been frowned upon to have a session such as this at an I.P.P.S. Conference. In fact, at the inaugural meeting at Syon Park I remember being worried as to whether I would be granted membership when our first president defined "propagators" as, "those who put roots on cuttings and grafted in a controlled environment" or some such words, as against "despised" field workers and growers. Being in the latter category, I never really forgave him and the hurt must have been deep for me to remember his words. Greenhouse propagation has always had a certain mystique, unwarranted in my opinion, about it and those engaged in it tend to consider themselves superior to the peasants who graft in the fields. However I rejoice in the words of John Steinbeck in his book, "The Grapes of Wrath". He says, "The men who graft the young trees, the little vines, are the cleverest of all, for their's is a surgeon's job, as tender and delicate, and these men must have surgeon's hands and surgeon's hearts to slit the bark, to place the grafts, to bind the wounds, and cover them from the air. These are the great men."

When I first agreed to take part in this session it was, I thought, to discuss with our second illustrious President, Robert Garner, the standards of nursery production today. That

could have been great fun and, to me, a great privilege for he is a man of great wisdom whom I have always admired and revered.

Looking at the nursery trade I think it must be conceded that in the last decade there has been a decline in standards, particularly of field-grown stock. There are still nurseries, usually the more specialist ones, which attain superb standards year after year. On many other large nurseries there are craftsmen of the highest calibre, but many of the most skilled people are now carrying managerial responsibilities and are less able to spend time working among their crops and passing on their skills to younger employees. These skills are precious and I fear that insufficient intelligent young people are taking them up and practising them to their highest standards. It is not just a matter of learning to bud, or to graft, or to stake; it requires a long period of experience of producing a crop in our strange climate when there are so many unpredictable elements. It is a matter of having foresight, of knowing how to apply one's knowledge to best advantage to achieve maximum response from plants and employees, of being self disciplined and pretty single minded, intent only on producing a crop as near perfection as is humanly possible.

Before I attempt to give reasons for this, I hope, "temporary decline in standards of field-grown stock", I think it right to say that the introduction of British Standards to tree crops has greatly improved the quality and grading of material received by the customer. It is the lower percentage of the crop which is marketable about which I am concerned.

Now for a commercial view of why standards for tree crops have declined:

- 1) Over-expansion of tree growing by the trade in the 1970's.
- 2) Decline in demand from New Towns and local authorities; also a period of reduction of orchard planting.
- 3) Inflationary costs allied to uncertain demands.
- 4) Growth of container production.
- 5) Several difficult growing seasons.
- 6) Methods of training/educating young entrants.

My first two points can be bracketed together; most nurseries have now come through the period of over-production, a period which has had a very bad psychological effect on persons who have spent time in producing and then wasted time in clearing drifts of unwanted stock. It is far better to be slightly under-produced and feel that each tree will find a market. Clearing unwanted stock is expensive and an extra

burden on those who are already overstretched during most of the year.

3) Inflationary costs allied to overproduction and falling demand have created a position where prices have failed to keep pace with inflation. There has been uncertainty over income and profitability and, consequently, a reduction in recruitment into the trade. Despite higher than usual annual increases in wages the trade is still low in the wages league and skilled staff are very poorly rewarded by comparison with others in far less onerous occupations.

4) Rise of containerized tree and shrub production, with its high labour input, tends to draw staff from field work, especially in April and May. The peak sales season for Garden Centres is the spring. Garden Centres buy in response to demand, often in smaller quantities, but more frequently; while these sales are welcome they do occur at a very busy time of the year.

5) I am sure that most growers would agree that we have had, on top of other problems, a series of difficult seasons for field production. I could give several instances of very poor stands of rootstocks and transplants, part of our own plantings this year being a good example. We have a local rose grower admitting to weeping over his field of lost briars and roses and saying that it is the worst he has had in 50 years. These are all problems to be sorted out by the trade but my point has been that through various pressures over recent years, the burden has increased on key staff and the very best men have a point where they have to compromise standards in order to get through a work programme.

Earlier I said that the skills are still there but were being overstretched and that the real problem was to see that these skills are passed onto intelligent young people who have a love for growing and will not shy away from work.

6) There is no shortage of young people wanting to take up horticulture as a career. There must be something radically wrong with the industry and the method of training when so few become qualified to take responsible jobs in practical horticulture. A man, who many of you know, recently told me that he was under no pressure in his job and certainly would not want the pressures of commercial horticulture. Many young people must be learning that this is true and so they look for the easier road.

I still believe that growing is a great way of earning a living and gives great satisfaction and fulfillment among the heartbreak and frustration. I also believe that few good field growers will come out of the college system unless that system

is radically changed. In my opinion, college staff are not qualified to train young nurserymen. Over and over again I have seen, during National Proficiency Test Council standard setting sessions, standards accepted by college examiners which would not be acceptable to the trade. Taking proficiency tests at college is a soft option and should no longer be tolerated by employers.

What is required is for the trade to spend more time in "on the job" training, backed by lectures on the theory of growing, with a further raising of the standards of proficiency tests so that the word "craftsman" once again has a true meaning.

My conclusion is that the trade must make haste to see that the skills of senior employees are not lost; it is no use relying on any other source for the craftsmen of the future.

At the same time it is necessary to ease the burdens which have been placed on the people on whom we rely for the maintenance and improvement of the standards of nursery production.

B. RIGBY: I agree with Steve, colleges are not the best place to train students as craftsmen. It needs to come in the "sandwich" year, or as part of pre- or post-college training in the industry.

J. STANLEY: The training board does use examiners from the industry.

D. CLARK: Mike Dunnett's I.P.P.S. project on rates for cutting production are an example of I.P.P.S. involvement in improving standards. As an industry we need to see standards are set and maintained in proficiency tests, and to feed information back to colleges and to give them some objectives.

L. DICK: May I make a plea from the colleges to the nurseries taking sandwich students, to allow the students to participate in budding and grafting?

D. WEGUELIN: Why not let students add a second bud higher up on worked stocks to give them practice without jeopardizing the bud take?

R. EVISON: Young people need to have more time for in depth practical training; they need four to five years to gain real experience, and not to flit from job to job.

B. HUMPHREY: Students now are of higher calibre and interest, and we expect more of them in a short time.

I would also suggest that the fact is that our standards have risen, which would account for less stock reaching the required standards.

N. DUNN: Standards haven't improved compared to improved techniques; we could have done better.

A. WOOD: In an age of specialization, we should concentrate on one aspect to improve quality.

D. WHALLEY: We cannot afford to grow poor stock. In the 1970's there was an increase in area of stock, but not in the amount of available labour.

GRAFTING OF PINUS, PICEA, AND ABIES

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STOCK PLANTS FOR SCIONS

The most important procedure before any grafting can be undertaken is the establishment of stock beds of true-to-name cultivars. Stock plants need to be planted with plenty of space for full development. Even the dwarfs can soon fill out to take more space than allocated. Good cultivation is important, as is a regular spraying programme, for the control of conifer spinning mite on spruce and adelges on *Pinus sylvestris* forms. It must be appreciated that, with the dwarf cultivars especially, some years must elapse before commercial quantities of scions become available, dependent upon the number of each cultivar planted.

UNDERSTOCKS

We produce a few of these ourselves because of the wide variety of cultivars we produce and a need for stocks of varying thickness. The bulk are bought-in and can be acquired, graded for grafting purposes as two-year transplants. These arrive in spring and, after potting in 3" pots, are placed in a net tunnel. We use *Pinus sylvestris* for all two-needle pines, *Pinus strobus* for five-needle pines, and *Abies grandis* for *Abies*. I suspect that *Abies alba* is a better understock, but it is not grown much now because of disease and is, consequently, difficult to obtain from forest tree nurseries. *Abies* are, however, compatible within the range and do not present much of a problem.

Methods. Somehow the idea that understocks should be dried off appears to be fairly widespread and, although this may or may not be true with angiosperms, it is not in our experience a critical factor with conifers.