

I am encouraged by aspects of the present situation by:

- (a) Numbers of bright young people coming into the field, who are interested and who show growing awareness of plants and agriculture.
- (b) Interest by faculty in innovations in teaching and not being bound by old methods. To some extent a shift in faculties is taking place as a new generation is occurring all over the country with present and upcoming retirements.
- (c) Attitudes and interest of the industry in encouraging students to come into nursery and agriculture program and, most of all, to look towards college-trained students as recruits for their industry.

MODERATOR BROWN: Thank you, Dale. A very nice presentation. Our next speaker came a great distance to talk with us. I want to allow him full time for the message he has. He has been introduced to you previously. He is principal of the Pershore College of Horticulture, Pershore, England, and was a prime mover in the formation of the IPPS GB&I Region. He is President this year of GB&I. Speaking on the topic of, "The Educational Gap" is Mr. Richard Martyr.

THE EDUCATIONAL GAP¹

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I have taken this title from two articles in the "American Nurseryman" which reported the considerations of the Point Committee on 'Focus on the Future — Education'. Here a number of prominent nurserymen and two academics discussed many aspects of education and training for the industry and, in particular, looked at the lines of communication between the industry and the training establishments.

¹See also page 440.

All agreed that there is a gap between what the grower expects of his employee and what the institutions are apparently prepared to teach their students. The sum total of all these deficiencies — whether of inadequate knowledge, lack of practical skills, poor motivation, no basic preparation for management or just plain technical inadequacy and lack of confidence — all these shortcomings which the grower feels the college ought to have prevented from, I assume, the educational gap.

There will be some academics who will say, “so be it”. The College educates and the nurseryman trains; of course to some extent this is true. The educationist is concerned with the overall potential of the young person; the nurseryman understandably wants to fit him into a specific slot in his own enterprise and, to some extent, may consider that a young man’s wider education is, at best, irrelevant and, at the worst, detrimental in that it opens up ambitions beyond his immediate employment.

This is a perfectly natural difference of outlook, an antagonism, if you like, between College and Employer and both sides should recognise its existence if the resultant gap is to be as narrow as possible. Dr. Roy Mecklenburg of Michigan State University in a recent NLA symposium put the problem succinctly, “The school”, he said, “prepares students to become nurserymen; the nurserymen themselves train graduates to be nurserymen”.

It would be easy (especially for the Colleges) to leave it at that. Yet I wonder. And I wonder even more when Dr. Mecklenburg goes on to say, “There has been an amazing growth of the horticultural programs in the country during the last 5 years and in a year or two there will be a supply of horticulturally-oriented graduates that will exceed the demand for such talents”.

No doubt the “high-flyers” will find their way into research and the extension services but what of the remainder? Will it not make for frustration and the consequent loss of potentially good material if the gap into industry is too wide?

In the discussions in the *American Nurseryman* to which I have referred there was some evidence that the larger firm accepted the necessity of a large measure of “in-service” training before the graduate could become an effective member of the enterprise. The smaller the enterprise, I suppose, the less the time available and the willingness to undertake the task. It is not an easy task, for sometimes the grower and the young graduate are not on the same wavelength. Nurserymen in the U.K. are more and more demanding a fair degree of field competence in their recruits and I think they are justified in demanding it.

Clearly we must deal with two different educational systems which, in the U.S., is summarised by the 4 or 5 year University course on the one hand and the two year vocational school on the other. The division is not quite so sharply defined in the U.K. be-

cause we have a greater range of sub-graduate courses which carry a reasonably high status, some of which would come within your graduate course levels.

I am concerned with various levels of sub-graduate training and my remarks are mainly directed at this level though I feel that they have relevance at all levels.

Do we not generally find it is more difficult to train or get a foreman than a manager? It is significant that the only evidence I have seen in the U.K. of horticultural unemployment or dissatisfaction during the past 12 months has been with young graduates of one or two universities. With the present boom in the plant nursery industries any keen, technically competent, business-oriented young person is quickly snapped up at good initial salaries and with every prospect of increasing responsibility. But most young graduates are not equipped to take over this kind of responsibility; their training has not been directed towards such practical competence or basic labour management (and I mean just that — not economics). Too often they are woefully lacking in confidence when faced with a normal everyday field situation. Not surprising, they are unhappy about working at low wages in order to gain this competence and confidence and, even if they did, it is by no means certain that they will overtake the technically trained non-graduate in the industrial race.

I am not seeking to decry University teaching. Of course the industry can only benefit from having the very best graduates for research, for the extension services and for teaching. And indeed there will be a number needed in industry itself with those firms large enough to carry such research and development programs. My criticism only starts if a Horticultural faculty takes such a wide spectrum of young people that it includes many of a calibre quite unsuited for a scientific career yet does not prepare them or motivate them for a career in industry. No one course can, at the same time, provide the optimal training for a research worker on the one hand and a commercial nurseryman on the other. I feel that any training establishment has the overall responsibility of telling their students just what are the limitations of their courses so far as future employment is concerned.

“Should nurserymen encourage their sons to study horticulture or to pursue a business course?”, asks the American Nurseryman in a leading article in their issue of July, 1974. This then goes on to state “four year College courses in horticulture do not, in themselves, prepare students to enter business as a full-fledged nurseryman” Cannot all the resources of modern education and industrial training produce at least a respectably fledged, business-oriented nurseryman after 4 years of intensive effort? If not, why not?

May I summarise what I feel are the basic essentials for “closing the gap”.

(1). The young person must have some basic experience in the industry and have proved his motivation for it before starting full-time training. In the U.K. we insist on one year of full-time practical work — even for the sons of nurserymen. Often on the Continent they require more. They are more mature for this experience and they have the right slant on their training.

(2). There must be an improved status for the non-graduate who undergoes technical and technological training — otherwise you are giving the industry a bad image and will not recruit the right young people. This means a recognised national qualification (I would dearly like to see an *International* one). In the U.K. qualifications like the National Diploma in Horticulture (administered by the Royal Horticultural Society) and the nationally assessed Higher National and Ordinary National Diplomas have provided a big boost for this level of training. Surely I.P.P.S. is a living example of the fact that Horticulture is a discipline in which the academic and the practical man meet on equivalent terms. A nationally recognised Diploma, jointly planned and accepted by industry and assessed by the educational authorities, in which technical skills, business methods and scientific principles rank as equally important components would provide a standard qualification worth working for.

(3) One must realise that conventional courses do not provide this sort of training and perhaps they are not the places to provide them. It is however interesting to note how successful the University of Bath in England has been in designing a technological “sandwich” degree course in Horticulture quite different from existing courses. In my experience it is necessary for any such teaching establishment to have an adequate, realistic commercial enterprise on its campus, otherwise it cannot offer realistic commercial practical training.

(4). The industry itself must be involved in the teaching/training process. It must not be content to take on the product of a College and then graft on its own separate training and experience. The two processes should be integrated from the start. The formula for encouraging this which we have found most successful is that of the integrated sandwich course. The sequence is as follows:

After the year of pre-Course practical employment (described previously) the student starts his 3-year sandwich course. There are several variants of this but the one we have found best at the technical level is the so-called “thick sandwich” — one year in college, one year in industry and final year in College. The first year is a full concentrated year of theoretical and practical training. At Pershore it includes two additional courses and certificates within the main course testing student’s competence in the use and care of machinery and of basic horticultural records and accounts.

After the first year they have a full year of employment on a selected holding whilst still remaining under the tutorial guidance of the College. The employer agrees on a training schedule outlining the range of work and responsibility he or she will have during the year. They agree on a measure of help and supervision as unobtrusively as possible for we do not want the sandwich student to be a specially privileged employee. He must earn his keep and learn at the same time. Wherever possible he is visited by his College Tutor at least once in the year; this is as good for the Tutor as it is for the student and helps the close association which must exist between the college and their cooperating employers. Those within convenient distance are recalled in the early fall after they have taken up employment so that we can see whether the scheme is working satisfactorily or whether there are any square pegs in round holes. The student has to undertake a project connected with his work on the holding, which is jointly planned by the student, the employer and the College Tutor; this is included in the final course assessment. But the student is assessed at the end of this practical year, both for his practical skill and employability. His work and his attainments are recorded on his log-book forming an invaluable reference if the record is good! If his practical year is not satisfactory the student can be asked to work a further year with another employer or may be refused permission to continue the course.

Then comes the final year of the Course, more advanced, more specialised and with a strong leaning towards basic management principles. At the final examination, which includes a one day practical field test, independent external assessors comprise one nurseryman and one educationist. Industry participates at the planning of the course, throughout its progress and at the final assessment. In this way there should be no educational gap.

REFERENCES

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VICE-PRESIDENT BATCHELLER: For the second part of this morning's program we will have Tok Furuta as moderator. Tok, would you now take charge please?