

Horticulture Training for the Nursery Industry

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The Horticulture Industry Training Organisation was set up in 1992 and as a leader in the Skill NZ strategy was part of a group of four, ironically named, early harvest Industry Training Organisations. Our ITO represents all sectors of Horticulture, including production sectors like fruit, nursery, and vegetable; but also service sectors like amenity and landscape. The nursery sector has been represented on the ITO from the outset (and still is) by the current President of the Nursery and Garden Industry Association, Mark Dean. I mention this because it is important to realise that the ITO is a nonprofit incorporated society owned and operated by the horticulture industry through sector organisations such as NGIA.

To date our ITO has built training numbers to 760 apprentices in 10 sectors and we are aiming for 850 people in our mixed on- and off-job training programmes by the end of this year (1997).

Three Hundred unit standards, Ten National Certificates, and a National Diploma of Horticulture have been established by the ITO on the NZ Qualifications Authority National Qualifications Framework for horticulture learners. More recently 20 credit traineeship taster programmes have been introduced for employers and employees alike.

The ITO has also trained in excess of 600 industry people in occupational safety and health compliance procedures through our one day "Health and Safety in Horticulture" programme.

All our workplace assessors undertake a thorough training programme with the ITO before they can assess apprentices for competency credits in horticulture unit standards.

The Horticulture ITO is seen by the relevant government agencies as a leader among the 52 industry training organisations that have been established and we have certainly made more rapid progress than most. The competency-based training reforms which the NZ Qualifications Authority and ITOs have been implementing over the last 4 to 5 years are not without the usual detractors and I am sure some of you will have heard from this vocal minority who are always present in times of substantial change. Regardless of this negativity, which often arises from vested interests, the programme is succeeding in many industries. In horticulture this ITO is expanding and in August will introduce a new programme for the forest nursery industry.

Before I finish I would like to leave you with two things to consider:

Firstly, New Zealand's competitive advantage will increasingly depend on the human resources it has and the quality and flexibility of the training programmes that those people have access to. The Skill NZ programme now has over 35,000 people across the majority of our industries in structured training programmes, the highest number of apprentices and industry trainees in formalised training ever in this country's history.

That is a major turn around from the situation which existed with less than 12,000 people in training at the end of the 1980s.

The second thought I will leave you with is this:

Employers sometimes say to me about becoming involved in the training programme. “What if I go to the time and expense of training someone and they leave?” My reply is always. “What if you don’t train them and they stay?”

Containerized Forestry Seedling Production from a Historical Perspective

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The following is a subjective report based on discussions and meetings with nurserymen and researchers around the world, scientific reports and my own experiences.

The North American Indians were probably among the first container growers in the world. They used small fish as containers which they threaded on a rope and hung between two trees. They put a seed in the throat, germinated it and let the seedling grow as long as nutrients and moisture were available in the “container”.

Containerized nursery production systems have evolved during the past 50 years from simple tar paper pots used in the 1930s, plastic bags used in the 1950s, to the wide variety of rigid-walled containers in use today. In the beginning the containers were placed on the ground and very poor growing media was used, often topsoils or mixes with very low air-filled porosity. This resulted in a lot of problems with pathogenic fungi causing damping off and root dieback. It also resulted in very poor field performance with low survival and bad establishment.

Dividing up the “container growing history” in 15-year periods can look like the following:

1950 - 1965

A period of trial and error with quite low success according to field performance. The containers were mainly made of different types of paper during this time.

1965 - 1980

The breakthrough for containerized production came during the mid 1960s when countries like Canada, Sweden, and Finland received the system. Paper pots, hard plastic multi and single pots, and in the beginning of the 1970s even styrofoam trays were used in large-scale forest seedling production. The outer dimension of the trays differed depending on whether the seedlings would be shipped directly in the tray or extracted in the nursery and shipped in paper boxes. Characteristic to all these tray models were small drainage holes in the bottom and no ribs on the inside walls. This design of course, with today's knowledge, caused problems with root spiralling. It also caused continued problems with root diseases even if the growing media were improved and peat-based substrates used. Some nurseries alleviated this problem by using frames or table systems for the trays. This step also made air pruning in the bottom of the container possible. Fertilizing regimes were not developed during this period and inappropriate bareroot regimes were adopted which caused prob-