

THE CARE AND PREPARATION OF PLANTS FOR EXPORT

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Exporting of plant material can be a difficult and frustrating business if not carried out carefully. There are several factors making this so; for instance, exporters of plant material must meet the following requirements depending on what country the consignment is to be sent. These are:

- Arrangement of International Health Certificates
- Custom Clearance
- Delivery Schedules
- Insurance
- Correct point of entry into country
- Growing media
- Correct packaging
- Preparation of plants for inspection prior to despatch

From my experience in exporting plant material a high standard of plant health is essential and standardization of product is well observed. Selection of suitable stock should be arranged well in advance of despatch. Plants should be assembled and isolated from further saleable stock and marked clearly for export only. Regular examination of plants to ensure that they are free of pests and disease is essential.

Plants must be free from pests such as aphids, scale, mealy bugs, caterpillars and mites. It is always wise to inspect some of the plant's roots for such things as canker, root rot and galls while they are at this pre-export stage.

Most countries will require the plants to be free of soils or peat from their roots. However, some countries will accept sterile media such as peat or sphagnum moss. If these are used I suggest that a dressing of Osmocote N/18 P/6 K/12 and Uramite fertiliser be applied three months prior to despatching.

For countries that need their plant material bare-rooted, I suggest that all excess growing medium is removed and all roots washed thoroughly in water to make sure the roots are vested of all growing media. Make sure, at all times, that these freshly exposed delicate plant roots are not exposed for any duration of time, as this will be extremely detrimental to most plants. I personally prefer to cover the roots with sphagnum moss whilst awaiting for all of the consignment to be executed.

Once you have completed this procedure it is necessary to

treat the plant material with a fungicide and insecticide or it may require fumigation. When a fungicide and insecticide is required I suggest the dipping method, using a vat allowing total immersion of the plants for a period of 20 minutes, using Captan at a rate of 1½ oz to 4 gallons of water, and Malathion at a rate of 1½ oz to 4 gallons of water.

After this procedure has been completed all plant foliage must be allowed to dry thoroughly and be labelled. I prefer to label each item individually to avoid any confusion at the place of destination. It is at this stage you will require the presence of an Officer of the Ministry of Agriculture & Fisheries to personally inspect the plant material for export and issue you an International Plant Health Certificate, which must accompany your consignment to its destination.

The next procedure, after clearance by the Agriculture Officer, is to commence assembling the items into their correct genera and the bundling of the plants into convenient sizes for packaging. The packaging is done by placing damp sphagnum moss on appropriate sized sheets of polythene film. Sphagnum moss is spread on half the polythene film, next step is laying the plant's roots on top of the moss followed by another layer of moss. Then by folding the plastic over, commence to roll into a bundle and tie. These bundles are then placed into waxed cardboard cartons using a filler of woodwool.

I find it essential to allow maximum ventilation in containers as this eliminates the possibility of the plants "sweating" and being totally useless on arrival. Cartons and containers must be securely tied and clearly marked, "URGENT LIVE PLANT MATERIAL, PERISHABLE, THIS SIDE UP." Prior arrangements should have been made with your custom agent to handle your consignment ensuring that the flight connections are not missed in other countries as well as New Zealand.

If you are exporting plant material that needs fumigation treatment with "48 c/m³ methyl bromide" the procedure is the same as above excepting that the necessity to dip the plants in a fungicide and insecticide is not required; but there still is inspection by an Officer of the Agriculture & Fisheries Department. Once this has been executed you proceed to pack the material, this time leaving the cartons untied. Then you make contact with your fumigation station and make necessary arrangements for the fumigation of the stock. This usually takes a period of approximately two hours. When plants have been released you are required to seal down the cartons within the fumigation station and address and label same as in the former.

Once again I must stress the importance of good packaging, care of flight connections, and ensuring that consignments do not

arrive at place of destination on weekends and public holidays. Also make sure of correct documentation.

If these rules are followed carefully, exporting plant material can be rewarding and profitable.

THE "SWISS ROLL" METHOD OF RAISING CUTTINGS AND SEEDLINGS

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Every nurseryman and plant propagator is looking for propagation methods which will be: cheaper, easier, more efficient, can utilize unskilled labour.

Potting young seedlings or rooted cuttings requires skill and dexterity which takes a long time to master. This new method fulfills all the above criteria and gives a consistently good result.

Pautti Nissula of the Forest Research in Finland used this idea for growing conifer seedlings and took out a patent. This system was further developed by the Merrist Wood Institute in the U. K. and it was from their system our nursery developed a technique for New Zealand conditions. We saw a big potential for rooting cuttings this way and this was the idea we developed.

The Method. A strip of polythene 4 metres long, 300 millimetres wide with a thickness of 50 microns is laid out on a bench 3.5 metres long and 12 mm thick with side strips of wood 300 mm apart. A 12 mm layer of rooting medium or potting compost is placed over the polythene and firmed by hand. It should come level with the top of the board. The roots of the seedlings or the cuttings are laid along the compost on each edge the roots facing inwards and the tops to the outside. The plants are spaced so as to give the correct distance apart when rolled up. The polythene is then carefully rolled up, keeping the bundle tight and firm. The end is fastened with polythene tape. An ordinary wood saw is used to cut the bundle of plants in two down the middle. Normally we have rolled up 30 plants each side giving 60 plants per roll. We count on each ½ roll to produce 25 saleable plants.