RUNNING AN ORGANIC NURSERY

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INTRODUCTION

I recall my university days on the subject of ''Management'' and the process of ''Decision Making'': Observe, Analyse, Decide, Action. At that time it seemed rather abstract, but now that I am running my own business it is much more real. It made quite an impact on me at that impressionable age. Since then observation has always been an important part of my life. As a plant propagator and retailer, I keep a very large working diary.

The commitment to becoming organic arrived through this observation process about ten years ago when I was foreman on a large orchard. I started thinking about the massive amounts of poisonous sprays that went onto the fruits and into the environment, and the consequences of that. I concluded that we must work towards enhancing and sustaining our world, taking out only what is put back at a renewable pace. If we are not prepared to confront the environmental problems of today they will be visited upon our children.

COMPOST OR GROWING MIX

The key to my success in organic production is the growing medium, and for this the art and science of compost making has to be well understood. Too often the composition of a planting medium is determined by the availability of the bulkiest and cheapest products and, as a consequence, plant health, quality, and survival are at the bottom of the priority list. I have a proven organic compost recipe (Table 1) for the base of my potting mixes. The compost must reach 70 ° C (170 ° F) for three weeks to be sure that all pathogens and seeds are destroyed. It has to be turned for the correct amount of aeration every three to four days.

To make the mixes I add sand, peat, liquid fish, and pumice, the proportions depending on the plants I am potting. For the lower pH plants such as rhododendrons and azaleas I make a different compost; I replace fowl manure with leaf litter and use a larger bark size.

Table 1. Ingredients of an organic compost

Material	Cubic meter
medium grade bark	6
sheep manure (with some wool)	2
fowl manure	2
sawdust	1/2
pine needles	2
seaweed	1
fresh cut grass	6
house scraps	as available

PROPAGATION

The principle of organic propagation is that you replace interventionist methods of using fungicides and insecticides to ensure plant health with more observation, and a greater awareness of the plants' requirements. By doing this the plant becomes stronger and able to resist pests and diseases on its own. Most of my stem-propagated plants have some organic compost mix in the medium right from the beginning. Humidity is controlled by observation twice a day when the cuttings are either covered or uncovered. Bottom heat ranges from 19° to 20° C, which is turned off during the summer. I use flat trays for large volumes and Root-Trainers for lesser numbers of plants.

PEST AND DISEASE CONTROL

Once the air and ground temperature in the greenhouse is raised problems such as aphids and white fly become apparent. In this situation infection can be controlled by either removing plants outside or cooling the temperature inside. This I do by air flow and sun protection. Oil sprays are very effective in pest control. I use Thuricide (*Bacillus thuringiensis*) and derris to keep brassicas clean. It is important to understand that pest and disease control happens over a long period as predatory populations become established.

WEED CONTROL

General weed control is done using a gas burner. It runs on LPG and is very cost effective, provided burn-off is repeated and at an early weed growth stage. For inside nursery areas, weeding is done by hand.

CONCLUSIONS

Managing a nursery along organic lines is a great challenge. The methods are sometimes more difficult and the income not as great, but the results are much more satisfying. I may make decisions not necessarily based on economic analysis but I believe that becoming an organic plant propagator is a start towards environmental sanity.