Maintaining Your Collection

Repotting Time

Early October in Sydney is the time that you should be doing the majority of your potting as most of the spring flowers have finished and all the young plants are starting to put on new growths, or will be soon. It's time to look at a maintenance program for your plants to bring them forward for next years flowers.

Fertilising

To start with let us look at a fertilising program. It's not what you use, but to have a balanced program, that will constantly and regularly nourish and build your plants.

Plants cannot get by without food just as we cannot. They must, and do get nutrients from somewhere. However depending on the potting media they are in, or on, and the type of plant they are could determine the best type of food suitable for them to obtain optimal growth. Optimal growth is what we strive for to get a good healthy root system that will generate the biggest pseudobulbs so the plant can have strong fat healthy inflorescences loaded with beautiful flowers. Look after the root system and the plant will look after itself.

All fertilisers are designed to give plants a boost in one direction either growth, or fruit so they can grow and reproduce through their flowers, and flowers is what we are aiming for.

You see the words **N:P:K** on fertiliser labels. Do you know what they stand for and what they do for your plants?

Nitrogen (N) Gives leaf, stem and fruit growth. Gives dark green colours to foliage, and improves the quality of the leaf. It produces rapid growth and increases protein content of plants.

Phosphorous (P) Stimulates early root formation and hastens maturity and gives a rapid and vigorous start to plants. Also stimulates blooming and aids fruit formation.

Potassium (K) Gives increased vigour and decisive resistance to plants, improves seed quality and is essential to formation and transfer of starches, sugar and oils in the plant system.

As well as this you might see calcium **(Ca)**, which influences absorption of plant nutrients, neutralises acid condition in soil or compost, it promotes early root growth and formation and neutralises toxic compounds produced in the plant.

Types of Fertilisers

Chemical

Peters, Phostragen, Campbells, Aquasol, HSO
All of these are basically the same, chemical salts, which are prepared in quantities by the manufacturer according to the plants to be fed and the potting mix used. Trace elements may be added to make a more balanced food. All these must be mixed with water and sprayed or watered over the plants, using a flow proportioner and hose or a watering can.
Advantages. These are easily mixed with water, most are completely soluble. They are easily dispensed over a plant and absorbed by the root system and foliage.
Disadvantages. Very little used by the plant. The majority will go into the soil or down the drain unless you use a drip system.

Natural or Organic

Garden party, Seasol, Maxicrop, Chicken Pellets, Cow or Horse manure, Feathers 'N' Fins, Blood 'N' Bone.
All organic based can be used dry as a dressing or soaked in water as a concentrate and mixed in a watering can.
Advantages. More readily taken up by the plant.
Disadvantages. Some may smell!!!

Slow Release

Osmacote, Nutracote.
A pelletised mix more suitable to Cymbidiums and dense potting mixes but can be successfully used with bark mixes. 3, 4, 5, 6 or 9 month variations available. Uses a combination of water and warmth to slowly wear down the coating and release the nutrients to the plant.
Advantages. Easy to apply, and when it rains it fertilises as well.
Disadvantages. Easy to over dose and may release more than you intended to at one time.

When to Fertilise

Morning, Evening? Depends on the time of year. I have had many discussions on this subject and I won't go into the technical reasons here except to say that I water and fertilise in the morning when the plants are more receptive to take in nutrients through their root system and the leaves. I will continue on hot days to spray the leaves on dusk or early evening on hot summer days to cool the plants and water under the benches for added humidity.

Media & Mounts

Bark, Bark and Styrene Foam, Sphagnum Moss, Stones, Absorba Stone, Sand. Mounts of hardwood, Australian treefern, and cork.

Media that contains a large amount of bark is constantly decomposing due to microbial activity and is accelerated by watering and fertilising, this causes a reduction of soluble nitrogen in the mix, called 'Nitrogen Drawdown'. To combat this some people advocate a higher nitrogen content in the fertiliser. Whatever you use, that is suitable for your area, it is better if all your collection is in the same type of mix and pots.

Additives

Trace Elements (a good fertiliser will not require any additives), Lime for pH correction, Calcium see above, KDL (Liquid Potassium), root starters (hormones). These are used to revive plants and stimulate root activity.

Water

Must have it! Life will not exist without it. Rainwater for preference, from the sky or from a drum collected from rain. If this is not available then I can tell you that Sydney water is some of the best in the world for your plants and you. The crunch is this, no one can tell you how often to water your plants. This will depend on the microclimate in your back yard. How much sunshine you get during the day and how much wind your plants receive. The quicker your plants dry out the more water your plants can and should have. You may even have to change your mix to suit your conditions. If the mix stays too wet use a more open mix. The most important thing is to make sure that your plants roots can breathe. They must not remain wet and saturated or like you they will stress and expire.

Use of a Wetter

If you want to get more out of your fertiliser and have more of it taken up by the plant, as well as paying for less water, I recommend the use of a good wetter. WA100 is one and Chemspray have one and others are available. You don't use much, but could cut your water bill by as much as 25%.

Our program for 2002 - 2003

October: Starting the first weekend I will give all our plants and orchids a good solid watering with a solution of 'Garden Party' at a week ratio of 1.5 ml per litre then follow this up every weekend (rain or shine) for the rest of the month with Peters 'Blossom Booster'

November: First weekend all our orchids receive a good watering with a solution of 'Garden Party' at a week ratio of 1.5 ml per litre then follow this up every weekend (rain or shine) for the rest of the month with Peters 'Excel Hi-Mag'.

December: First weekend all our orchids receive a good watering with a solution of 'Garden Party' at a week ratio of 1.5 ml per litre then follow this up every weekend (rain or shine) for the rest of the month with Peters 'Blossom Booster'.

January: Cut out the 'Garden Party'. We are back to the Peters 'Excel Hi-Mag' again (rain or shine), every weekend.

Febuary: We are back to the Peters 'Blossom Booster' again (rain or shine), every weekend.

March: We are back to the Peters 'Excel Hi-Mag' again (rain or shine), every weekend.

April: 1st weekend Lime the plants with Microfine Lime at the rate of 1.5 gms per litre. You will have to get somebody to help here to stir the tank as it won't stay suspended, or mix in a watering can and water over the plants. This is done to stop any acid build-up in the potting mix and bring the mix back to a more even pH, which will help the plants absorb more nutrients. You can mix fertiliser with this as well.

We are back to the Peters 'Blossom Booster' again (rain or shine), every weekend. As well as this when we repot we sprinkle a small amount of Yates 'Nutricote' on top of the pot and tap it in. This is a 9 months slow release which has a good N:P:K.

Bugs and Fungus

In November, hopefully you will have finished potting, you should spray for bugs Carbaryl or similar. Do it on a windless day and watch for photo-toxicity. Leave it for 2 weeks and spray with Mancozeb to protect new growths for diseases. Follow up the bug spray in 3 to 4 weeks. Keep Cinnamon and Fongarid handy for rots.

I nearly forgot. With each fertilising I make up a batch of concentrate and use a proportional sprayer. To the fertilising concentrate I add 'Condys Crystals - Potassium Permanganate' at a rate of 50 ppm or 15 mils this equates to 15mls per 300 litres of water from the spray head. This acts as a bactericide, helps oxygenate the roots and the plant can take up the potassium a well.

Lastly a mix that I have been using that I learned when I was helping repot with Phil Spence. Before potting Wet the bark and sprinkle a little 'pinch' over it and mix the bark around thoroughly till all is covered. The roots love it. (Unfortunately you're going to have to crush the super phosphate)!

2270 gms	Hoof and horn or blood meal.
115 gms	potassium nitrate.
115 gms	Potassium sulphate.
1135 gms	Single super phosphate.
3400 gms	Dolomite lime.
1135 gms	Calcium carbonite lime.

Good luck with the new season and watch those plants grow. Hope to see them on the bench next year.

Bill Dobson