

Special growing conditions



Propagation

Scotts have the solution for you when propagating or growing in punnets or small containers under 20 mL. You have a choice of Scotts fertilisers in controlled release mini prills – Osmocote Exact Mini, Osmocote Mini, Osmocote Start and slow release powder formulation Peters Unimix Plus III Plug Starter.

Hardwood cutting

Hardwood cuttings are generally struck in communal trays on a heat bench, or increasingly direct struck into growing-on pots. Common practice for general production is to not include nutrients in the striking media to allow callus formation and initial root emergence prior to fertilising with a WSF.

Scotts research results and commercial implementation experience have shown that a low rate of a long term CRF, such as Osmocote Exact Standard 12-14 month, gives significantly better results than no nutrition.

Peters Professional and Excel products contain B group vitamins, enzymes and cytokinins that enhance fine root hair development and an NPK selection suited to any requirement.

Forestry seedling

There is a wide range of seedling production systems used by the forestry industry. Systems range from direct seeded forestry tubes placed on the ground with overhead fixed irrigation, to highly sophisticated environment controlled moving roof greenhouses, ebb and flow

or gantry irrigation systems and rolling benches. In addition to this there is a lot of variation in the potting media and the water quality used.

It is important then to have nutritional products and advice available to allow the design of a production program that will meet the increasing demands of the forester in the quality and specifications for the seedling.

The ideal nutritional package is to incorporate 50% of the required nutrition in the pot using a controlled or slow release fertiliser as detailed below, to control growth use Peters water solubles on a bi-weekly or weekly basis. This method allows continuous feeding from the Osmocote irrespective of the amount of rain or irrigation received.

Where the seedling cell size is smaller than 80 cc, the distribution of Osmocote Exact Mini in the cell may become uneven. Osmoform is a finer prilled slow release NPK plus trace elements alternative, and Peters Unimix

Plus III is a fine powdered slow release NPK fertiliser with trace elements and a wetting agent. It also has a low 10% N and 2.2% P.

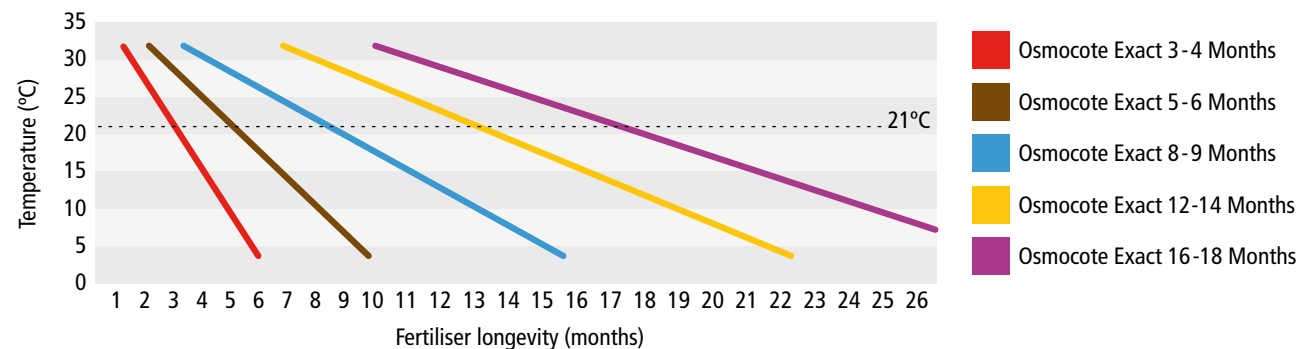
A typical liquid feed program would use Peters Professional Plant Starter for weeks one and two, then until three weeks prior to sale Peters Professional Winter Grow Special, finishing with Peters Professional Combi-Sol.

Outdoor

Hot and cold climate

Due to higher temperatures, the longevity of your controlled release fertiliser will be shorter. Rates should be adjusted downward to accommodate nutrients being released over a shorter period of time, therefore less Osmocote Exact is required per m³ of substrate. By selecting the correct product you can achieve ideal nutrition and longevity for the life of the crop (see chart below).

Temperature influences on longevity





For example, for a seven month crop use a 12-14 month release product i.e. use Osmocote Exact Lo-Start formulations when potting at the peak of Summer.

Lower temperatures also require consideration due to the longevity being longer. Rate should be adjusted upward to ensure the correct daily release of nutrients. As nutrients are released over a longer period of time more Osmocote Exact must be applied per m³ substrate.

Phosphorus sensitive production

Commercial cut flower crops from the Proteaceae group are generally of South African origin. Many Australian plants from this group have similar soil and nutritional requirements, that is, they generally prefer lower (acid) pHs (5-5.5), well drained soils, are intolerant of frosts and sensitive to moderate phosphorus levels in the soil. As always, broad generalisations are not accurate for every species, and variations between individuals (especially with seedlings) can be considerable.

Scotts has completed many studies in Australia that have broadened our understanding of the nutrition of Protea and Phosphorus sensitive Australian native plants.

In response Scotts has created Osmocote Plus Low P in 8-9 and 12-14 month longevities. For the very sensitive crops or when there is some P in irrigation water, use the slow releasing 12-14 month formulation even if the crop time is much shorter (e.g. 5 months). Add gypsum at 1.5kg/m³ to help immobilise any free P and Iron to increase the plants tolerance to P.

Large container production (>25L)

From research and grower experience it is clear that fertiliser placement and rate clearly influences the quality of the root system and desired growth pattern of large container crops. To encourage a 'buttressed' root system to prevent 'lodging' of the tree on plant out the Osmocote should be placed as outlined on page 2.05.

When re-potting large containers a lower rate of long term product is desirable, for fast growing species that may become 'leggy' e.g. Eucalyptus, reduce recommended rates by 30%.

Greenhouse

In the controlled environment of a greenhouse performance of your controlled release fertiliser is closely regulated and therefore a more precise selection can be made to minimise wastage and optimise plant performance. Without the cleansing action of rain the close monitoring of the water quality and potting soil nutrition interaction needs to be carried out.

Flowering pot production

1. Annuals

For fast turnover annual crops, a fast start to seedling growth is required followed by sustained nutrition for sale and shelf life – Osmocote Exact 3-4 month or Osmocote Plus 'Potted Colour' are ideal in this situation.

2. Perennials

With the wide range of natural habitats of perennial crops including the Mediterranean and South East China the addition of Magrimax (slow release Mg) is desirable. Couple Magrimax with incorporated gypsum for calcium and a medium term Osmocote Exact such as 5-6 month standard.

3. Florist crops

Many florist crops have specialist nutrient needs and with the combination of Osmocote Exact and a selection of Peters products (particularly Peters Excel CalMag) allows the astute grower to meet the crops needs.

Plant hire

The process of acclimatising a hire plant from production to a successful indoor hire can be achieved by a combination of incorporated long term Osmocote Exact 12-14 month with the use of additional Peters water solubles to encourage recovery growth and then withheld for hardening off.

Retail stock maintenance

In retail nurseries stock can be kept for extended periods prior to sale. To maintain crop quality and to produce dark green, glossy foliage a weekly application of Peters foliar feed at 3g/L will achieve this. For recovery of tired stock, topdressing at recommended rates with Osmoform Topdress achieves excellent results.