

Introduction

A native of New Zealand, the small, glossy, bright unmarked foliage is what the customer demands. The stems are used as 'fillers' in mixed flower bouquets, supplying an increasing export market to specialist bouquet companies in the UK and Holland, who in turn supply the major supermarkets and other retail outlets.

Site & Soil Requirements

The site must have a mild microclimate and not be susceptible to severe frost. It must be well sheltered from prevailing winds and salt sprays if near the coast. An elevated south-facing aspect is desirable but not essential. The site must be accessible.

The soil must be deep and well drained. Aim for a pH of 6.5 and a good balance of phosphate, potash and magnesium. A soil analysis is recommended prior to cultivation.



Ideal site location for Pittosporum production

Varieties

The main variety cultivated is *Pittosporum tenuifolium*. There are other cultivars of *P. tenuifolium* but these don't tend to be as popular with main markets. *Pittosporum t.* 'Silver Queen' or *P. t.* 'Garnettii' would be the preferred selections where variegated leaves are cultivated.

Plants

Plants can be raised from seed or from cuttings. The best selections are from cutting material.

Cuttings are taken in the autumn and good bushy 9 cm plants should be ready for planting out 18 months later, in the spring period.



Pittosporum plants in modules ready for planting out

Soil Preparation

It is critical that the site has first been cleared of perennial weeds by spraying off, using Glyphosate (Roundup).

Young trees are planted on the flat in most cases following the standard cultivations of ploughing and rotovation. Contact your adviser for specific recommendations on base fertilizer dressings, following soil analysis.

Plant density

Planting is carried out in rows 2m apart, with plants 2m apart in the row. This gives an overall plant density of approximately 2200 trees per ha. A 3m wide tramline should be left every 10-12 meters, depending on tractor and sprayer widths, to facilitate tractor operations and ease of harvesting. Higher density systems can be used but a more intense level of plantation management is then required.



Pittosporum root development 6 weeks after planting



2-year-old Pittosporum plantation on plastic mulch with cultivated strip between rows.

Weed Control

It is very important to keep plantations free of weeds, particularly in the first few years of establishment, after which the developing crop canopy smothers out most non-perennial weeds.

While the use of mypex or a plastic mulch on the planted row in conjunction with a mowed grass or cultivated strip between rows is sometimes recommended as a weed control measure, the most common method is the use of carefully chosen residual and selective contact herbicides. The choice of herbicides to maintain clean plantations depends on the weed spectrum, but products such as Stomp Aqua (pendimethalin), Ronstar liquid (oxadiazon), Venzar (Lenacil) and Kerb 50 W (Propyzamide) have label recommendations for overall or directed application.

Spot treatment of perennial weeds with Roundup or hormone weedkillers is sometimes necessary in foliage plantations, even when crops are well established.

Safety, legal and economic considerations dictate that herbicides must be used with great care in following the manufacturer's recommendations of timing, dosage and accuracy of application. Contact your adviser for the most suitable method of weed control for your site and up-to-date herbicide recommendations.

Nutrition

The use of nitrogen will result in good growth response. Apply up to 70 - 100 kg/ha nitrogen in the Spring.

Some growers apply a compound fertiliser such as 7-6-17 to maintain a balance of nutrients.

Pruning

Centre stem type of plant is now favoured. Centre of plant can be cut out in the second winter to form an open centred bush. Some cut the third winter and then fairly freely.

Cut hard and leave enough growth to harden and grow for next year. If there are too many spindly shoots, these should be thinned out.

Pests and Diseases

Aphid can occasionally cause problems to new growth, but rarely requires insecticidal treatment.

The Pittosporum Psyllid (*Trioza viteoradiata*) can damage foliage by causing small pale yellow indentations on the leaves which can render the stems unmarketable. Insecticidal treatment may be warranted on some sites to cope with this problem – contact your adviser for up-to-date recommendations on prevention and control.

A black spotting which appears in the late winter/early spring can be unsightly and in some cases can render stems unmarketable. While the disease Phomopsis is thought to be the cause, the problem is most likely to be physiological. Seed raised plants appear to be most susceptible to this spotting.

Harvesting and Processing

Pittosporum is normally harvested during October through April. Research has shown that a bonus summer harvest can also be taken between mid June and early August.

All harvesting is done using a hand held secateurs. Generally well-furnished stems, 60cm in length, should be carefully selected for quality of leaf and shoot balance. The crop reaches full cropping potential from the fourth year onwards, when up to 150,000 stems per hectare can be harvested. Cropping can continue for a further 12 years if plantations are well maintained and managed.



Harvesting Pittosporum



Bunched Pittosporum in the field

In most cases all grading is carried out in the field. Stems are bunched in 10's and then transported to the packing shed where they are stood in water overnight and kept cool prior to packing. The processing operation consists of tying the 10 stem bunches in bigger bundles of 150 stems and placing in buckets containing 1 inch of water. These buckets are then placed on a danish trolley prior to transport.

Post harvest treatment

It has been common practice for the past number of years to treat the stems harvested during the summer period and those cut in the early part of the season (Sept/Oct) with a post harvest preservative in order to maintain quality and subsequent freshness of the foliage. The most common pre-treatment used is Chrysal RVB Clear, which is added to this post harvest immersion of 48 hours duration, prior to boxing for shipping.



Pittosporum on Danish trollies being loaded on to refrigerated container for export.

Costs & Returns



With Pittosporum, some stems are harvested in the second and third years (15000 & 60,000 stems/ha respectively) but full economic yield (up to 150,000 stems/ha) is not reached until the fourth year. The crop continues to yield for

a further 12 years if managed correctly. For a crop grown on a bare soil system, from an initial investment of €3000 per ha, a gross return of €6000 per ha is achievable from the fourth year onwards. Net return depends on the grower's involvement as most of the annual plantation cost is labour (maintenance & harvest). Even when labour for harvest is included a net return of €1750 to €2000 per ha is achievable.



Pittosporum in a flower bouquet arrangement (L) and its use in a mini template to which flowers will be added (R)