Pittosporum for Cut Foliage
Factsheet 3/20

Pittosporum tenuifolium (*syns. P nigricans, P.mayi*), native to New Zealand is a mainstay of outdoor cut foliage industry where it grows rapidly in coastal areas where its rather tender disposition is rarely affected. The small glossy foliage with wavy margins must be bright and unmarked and plants therefore require protection from strong winds, especially where salt laden. 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. This factsheet has been prepared from the results of Teagasc trial work and recorded experiences of growers in the South of Ireland.

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 free draining. A pH of neutral to slightly acid is preferred ie 5.5-6.5.

SPECIES & CULTIVARS

The main species cultivated is the green *Pittosporum tenuifolium*. Selected cultivars such as *P. t. 'Purpureum* and *'Silver Queen'* are also cultivated but in smaller quantity. Continuous selection has given rise to preferred forms eliminating those prone to leaf spotting, a disorder not fully understood but clearly associated with type and aggravated on soils low in potash and phosphate and of poor physical condition.

Pittosporum tenuifolium 'Purpureum (L) and P. t. 'Silver Queen (R) can be cultivated for cut foliage

PLANTS

Plants can be raised from seed but the preferred method of propagation is now from cuttings. Cuttings are taken in the autumn and good bushy 7 cm liners in peat modules should be ready for planting out 18 months later, in the spring period.

Plants ready for field planting

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.

PLANT DENSITY

Planting is carried out in rows 2m apart, with plants 1.5-2m apart in the row. This gives an overall plant density of approximately 3000 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.

WEED CONTROL

Having first cleared the field of perennial weeds using Glyphosate (Roundup) it is very important to keep plantations free of weeds particularly in the first few years of establishment for the developing plant canopy smothers out all but perennial weeds. The use of a non-woven mulch such as mypex/daltax on the planted row in conjunction with a mowed grass or cultivated strip between rows is recommended. Carefully chosen residual and selective contact herbicides can also be used.

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

The choice of herbicides to maintain clean plantations depends on weed spectrum and while some full and off label recommendations exist, choice is limited. Safety, legal and economic considerations dictate that herbicides must be used with great care both in following the manufacturer's recommendations regarding suitability, timing, rate and accuracy of application. Contact your adviser for the most suitable method of weed control for your site and up to date herbicide recommendations.

Inter-row mowing is widely used to maintain plantations clear of weed infestations.

NUTRITION

Little is known on the nutritional requirements of the species and very little experimental work has been carried out on Pittosporum for foliage. It does appear that a good balance of Phosphate, Potash and Magnesium is recommended and soil analysis is necessary to determine if the levels of nutrients are satisfactory prior to planting. The species does benefit from topdressings applied in the spring. The use of nitrogen will result in good growth response and apply up to 70 - 100 kg/ha nitrogen in the Spring. Later applications of Nitrogen should be applied in the form of foliar applications so as not to encourage too much soft growth going into the winter period.

PRUNING

Pittosporum can take up to four years before it reaches economic cutting yield.Generally a centre stem type of plant is favoured. The 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.
Recent trial work in Teagasc Kildalton has evaluated pruning systems that aim to deliver high yields of spray stems to meet the specification standards demanded by processors for supermarkets. A system where the trees are cut back hard to 1.2 m from ground has been found to deliver high numbers of suitable stems bi-annually. This pruning system also helps control the shape of the vigorous growing species which otherwise can quickly get out of shape.

Hard pruning every two years on established Pittosporum gives high yields of suitable sprays for the market.

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PESTS AND DISEASES

The Pittosporum Psyllid (*Trioza viteoradiata*) is by far the most damaging pest of the crop and can damage foliage by causing small pale yellow markings on the leaves which can render the stems unmarketable. Damage can be seen as early as April on new growth so timely insecticidal treatment may be warranted to control this problem. Contact Teagasc for up to date recommendations on timing and suitable insecticides.

A black spotting which appears in the late winter/early

Leaf damage caused by the sap sucking Pittosporum Psyllid

spring can be unsightly and in some cases can render stems unmarketable. Seed raised plants appear to be most susceptible to this spotting. Continuous selection has given rise to preferred forms eliminating those prone to leaf spotting, a disorder not fully understood but clearly associated with type and aggravated on soils low in potash and phosphate and of poor physical condition. While the fungus *Phomopsis pittospori* has been shown to be implicated it is thought to be a physiological disorder.

HARVESTING AND PROCESSING

Pittosporum is normally harvested during October through to 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.

In most cases all grading is carried out in the field. Stems

Field harvesting of Pittosporum and transport of bunched stems to warehouse on a quad.

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 a box plastic bucket (aquapack) containing 1 inch of water. These aquapacks are then placed on a Danish trolley for transport to market.

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 packed on a Danish trolley

COSTS & RETURNS

Pittosporum stems are harvested in the second and third years with the crop reaching full economic yield (up to 120,000 stems/ha) from the fourth year onwards. The crop continues to yield for a further 12 years if managed correctly.

Returns depend on market outlet. While a small but rewarding local market exists, over 90% of Irish foliage is exported. From an initial investment of €6000 per ha, an average gross margin of €8000 per ha (net €2000/ha) is achievable annually from the fourth year onwards.

Agriculture and Food Development Authority

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