

# Cut Foliage Production

## Factsheet 1/20

### INTRODUCTION & BACKGROUND

Cut foliage production is a new, innovative market led sector of commercial Irish horticulture. It is vegetation used in large quantities as a source of decoration on its own or in association with flowers in bouquets and floral arrangements to provide texture, interest and fill. The range is large and evergreen plants with green, silver or variegated leaves are usually used but subjects with attractive flowers, buds, bark and berries are also used.



Selection of cut foliage

Worldwide demand in developed countries is increasing. The European Flower Industry is worth €2.5 billion with foliage estimated at 10% of this or €250million. UK and Dutch packers and distributors require high volumes all year round with peak demand at the key Christmas, Valentine's and Mother's Day periods.

The South of Ireland has long been recognised as an ideal location for the production of foliage because of its mild moist climate. A plentiful supply of water, rich organic soils and the short distance to market are all major advantages Ireland has over competitors from Israel, Italy and developing countries. By selecting sheltered sites and suitable soils, the relative freedom from severe frosts and cold winds means growth starts earlier and continues late into the year giving rapid growth rates and high yields of healthy quality foliage. The Irish industry is valued at €7m with over 200ha of production concentrated in counties Cork, Kerry, Waterford, Wexford, Wicklow and Dublin. Eucalyptus, Pittosporum and Prunus are the predominant species cultivated with a range of other species also grown in smaller quantity.

This factsheet covers the range of species that is classed as cut foliage which can be field-grown. It does not include hardy herbaceous perennials, foliage grown under protection, woodland foliage such as *Abies nobilis* (Noble Fir), Pinus, Moss and value added foliage including dried, painted, glittered and dyed material.

### MARKET REQUIREMENTS

Whilst traditional high street florists continue to use large quantities of foliage, the most significant change in recent years has been the rapid increase in supermarket, mail order and on-line sales.

Important requirements in accessing markets are:

- Regular supply of a fixed volume.
- Good consistent quality with fixed specification.
- Fixed price.

For the producer, foliage plants must be:

- Capable of rapid regeneration after cutting.
- Have low susceptibility to pests and diseases.
- Long vase life.

Satisfying the above criteria have been the focus of the industry in Ireland to date and continuing to meet the changing requirements of the market will be the greatest challenge going forward. Customers are constantly looking for something new and different so it is essential to have constant contact with buyers and regular market monitoring. Ireland's unique climate is able to offer new species of interest to customers and to that end there is a program of research and development in Teagasc supporting this fledgling industry.



Teagasc Kildalton species screening trials

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### CHOICE OF SUBJECTS

Table 1 lists a wide range of suitable woody cut foliage species. Some of these are cultivated commercially and others have been trialled successfully in Teagasc Kildalton and other locations in Ireland. Unless otherwise stated, the plants listed are fully hardy in the Irish climate.

Table 1. List of woody plants suitable for outdoor field production in Ireland.

<b>Aucuba (spotted laurel)</b>	Evergreen, yellow spotted leaves of <i>Aucuba japonica</i> used in design work. Vigorous and hardy shrub.
<b>Azara</b>	<i>Azara microphylla</i> - double rows of small evergreen leaves of a dark shade and minute lime green vanilla scented flowers. These are followed in autumn by small red berries.
<b>Buxus (box)</b>	<i>Buxus sempervirens</i> and cultivars. Dark green or variegated leaves. Popular in wreaths.
<b>Brachyglottis</b>	<i>Brachyglottis greyii</i> (syn. <i>Senecio greyii</i> ) and the cultivar 'Drysdale' which has a grey tone, gently serrated margin and velvety undersides.
<b>Camelia</b>	<i>Camelia japonica</i> & cultivars – grown for glossy green foliage, white, red & pink flowers. Slow growing & low yielding.
<b>Cotinus (smoke bush)</b>	<i>Cotinus coggygria</i> – grown for its pink to purple panicles, some with purple leaves. 'Magic Green Fountain' and 'Royal Purple' trialled with success at Kildalton.
<b>Cryptomeria</b>	<i>Cryptomeria japonica</i> 'Elegans' maintains juvenility throughout its life. Short, soft spreading needles, grey green in summer and changing to bronze red in autumn. <i>C. japonica</i> 'Barabits Gold' was notable in Teagasc trials.
<b>Cupressus Incl Chamaecyparis</b>	Can be sold all year round but in greatest demand in autumn & winter. <i>Chamaecyparis lawsoniana</i> 'Yvonne' and 'Pembury Blue' popular yellow and blue types. <i>Cupressus macrocarpa</i> 'Goldcrest' – scented rich yellow adult branches well furnished are sought after. <i>Cupressus arizonica</i> var. <i>glabra</i> 'Blue Ice' has showy silvery grey-blue foliage in dense sprays. The waxy, scale-like needles are spirally arranged and retain their frosty grey-blue colour all season.



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<b>Danae (Alexandrian laurel)</b>	<i>Danae racemosa</i> – grown for its deep green evergreen leaves. Requires shade.
<b>Erica</b>	Stems in bud or in full flower of <i>Erica erigena</i> 'Maxima' or 'Superba' are amongst the most useful for cutting.
<b>Eucalyptus</b>	One of the most popular of the cut foliages demanded all year round. Not all species fully hardy in Ireland. <i>Eucalyptus parvula</i> , <i>E. cinerea</i> and <i>E. glaucescens</i> are amongst the key species cultivated. Pollarded or coppiced to maintain juvenile foliage.
<b>Gaultheria</b>	<i>Gaultheria shallon</i> is popular for its leathery leaves with clusters of pink berries.
<b>Grevillea</b>	<i>Grevillea longifolia</i> is demanded and will only survive in the mildest and most sheltered locations.
<b>Hedera (Ivy)</b>	The leaves or branches with fruit are in demand by the trade. Several species are suitable especially <i>Hedera helix</i> and 'Arborescens'. Much of the ivy on the market is harvested from the wild.
<b>Pittosporum</b>	<i>Pittosporum tenuifolium</i> and cultivars 'Garnettii', 'Silver Queen' and 'Purpureum'. One of the most widely grown species and only in mildest areas as it's not fully hardy inland.
<b>Prunus (laurel)</b>	Cultivars of <i>Prunus laurocerasus</i> are a key cultivated foliage species in Ireland. <i>P.l.</i> 'Rotundifolia', 'Etna', 'Caucasica' & 'Novita' are amongst the most popular. <i>Prunus lusitanica</i> – the Portuguese laurel is also cultivated but to a lesser extent.
<b>Hydrangea</b>	<i>Hydrangea macrophylla</i> and its many cultivars – flowers in pink, blue, red, white and yellow 'mop head' types maybe preferred to and its range of cultivars, flowers in shades to lace – caps. <i>H.macrophylla</i> 'Magical Black Pearl' is popular for its distinctive black stems.
<b>Hypericum (St. John's wort)</b>	<i>Hypericum androsaemum</i> with range of berry colours in pink, red, green & white. The 'Magical' series has performed well in Teagasc trials.



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Figure 1: Selection of cut foliage species suitable for cultivation in Ireland.



*Eucalyptus pulverulenta*



*Rosa 'Magical Pearls'*



*Ozothamnus 'Threave Seedling'*



*Photinia x fraseri 'Vulcano'*



*Brachyglottis greyii 'Drysedale'*



*Myrica gale* (Bog Myrtle)



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Figure 1: Selection of cut foliage species suitable for cultivation in Ireland.



*Weigela florida* 'Sunny Fantasy'



*Olearia macrodanta*



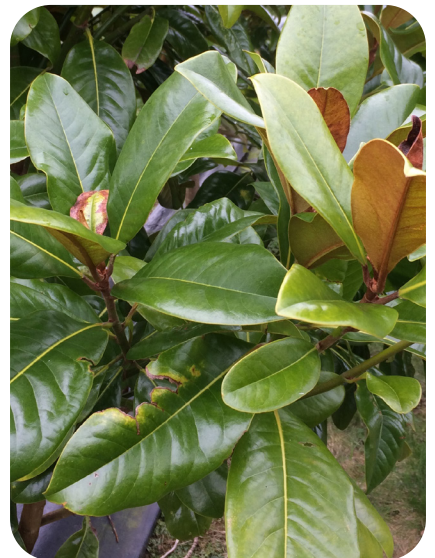
*Hydrangea macrophylla*  
'Black Steel'



*Hypericum androsaemum*  
'Magical fall'



*Erica erigena*



*Magnolia grandiflora*  
'Ferruginea'



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<b>Ilex (Holly)</b>	Deciduous species <i>Ilex decidua</i> , <i>I. serrata</i> and <i>verticillata</i> and cultivars – non spiny with yellow, orange and red berries. Evergreen species such as <i>I. aquifolium</i> and its many cultivars often with variegated but often spiny.
<b>Magnolia</b>	<i>Magnolia grandiflora</i> 'Ferruginea' grown for its large leaves and velvety undersides.
<b>Myrica</b>	<i>Myrica gale</i> (bog myrtle) with its scented buds in Autumn/Winter is popular and can be cut from the wild or cultivated.
<b>Nandina</b>	<i>Nandina domestica</i> – is used for its foliage, flowers and fruit.
<b>Olearia</b>	<i>Olearia macrodonta</i> – thrives in coastal areas. Used for added value painting and glittering.
<b>Ozothamnus</b>	<i>Ozothamnus rosmarinifolia</i> 'Silver Jubilee' <i>O. selago</i> 'Sussex Silver' and <i>O.</i> 'Threave Seedling' used for their grey/silver colour stems and sometimes decorative flowers.
<b>Photinia</b>	<i>Photinia x fraseri</i> 'Red Robin' is a common cultivar. The cultivar 'Vulcano' with its serrated edges is gaining popularity.
<b>Quercus (oak)</b>	<i>Quercus palustris</i> and <i>Q. rubra</i> with green and red autumn coloured foliage. Slow growing and low yielding.
<b>Rosa</b>	A number of <i>Rosa</i> species and cultivars – produce particularly attractive fruit (hips) in the late Autumn /winter period.
<b>Rosemary</b>	<i>Rosmarinus officinalis</i> and in particular the long stemmed cultivar 'Miss Jessup's Upright' demanded for its scented foliage.
<b>Salix</b>	<i>Salix caprea</i> and <i>discolor</i> are grown for their soft furry catkins (grey, grey pink and purple black). <i>S.</i> 'Golden curls' – grown for their contorted stems (coloured golden with orange-red tips) <i>S. alba</i> 'Snake' – contorted with distinctive red tips. <i>S. sachalinensis</i> 'Sekka' - flattened, fasciated and contorted stems

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### **Symphoricarpos (snowberry)**

*Symphoricarpos albus* var. *laevigatus* – grown for its pure white fruits; its cultivars including 'Magical Charming Fantasy' and 'Magical Avalanche' bare pink and white fruits.

### **Viburnum**

*Viburnum tinus* and the cultivars 'Gwenllian', 'Eve Price' and 'Purpureum' are all useful for cutting.

*Viburnum opulus* 'Roseum' is cultivated for its bright red fruit that follow flowering in the Autumn period.

### **Weigela**

*Weigela florida* & cultivars including 'Shining Fantasy' and 'Sunny Fantasy' especially selected for long stems and purple and variegated foliage colour.

### **ESTABLISHMENT**

Given a suitable local climate for the species to be grown, the site should be readily accessible and sheltered. For the majority of subjects the land must be well drained, yet sufficiently retentive of moisture and nutrients to maintain steady growth. Neutral or slightly acidic soils are preferable for most species grown for foliage.

Most plant material is raised from cuttings with planting taking place during the late spring or early summer period.

Plant density varies from 2250 to 7000 plants per hectare depending on the species and market outlet. A higher density normally adopted for small shrubby plant material grown on an intensive bed system with the main tree species on a more extensive system.



Plant material ready for field planting.



**LHS:** Intensive cultivation of cut foliage using a weed control fabric.



**RHS:** Extensive Eucalyptus plantation on bare soil pruned hard to maintain annual stem production



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The site should be cleared of perennial weeds prior to planting and a program for sustainable weed control implemented.

Annual pruning is essential for most species to help maintain health, vigour and plant shape and to ensure annual production of saleable stems. Some species can be susceptible to particular pests and disease and programmes for control may sometimes be justified. Regular crop walking and monitoring is therefore necessary to ensure quality stem production.

### HARVESTING & PROCESSING

All harvesting is done by hand using a secateurs. Well-furnished sprays 45 to 70 cm long with stems pencil thickness are ideal and should be carefully selected for quality of leaf and shoot balance. Stems are either bunched in 10's in the field if destined for the processing market or alternatively cut rough and graded in a warehouse into bunches weighing 200 or 400 grams if destined for wholesale florist market. They should be stood in water overnight where possible and kept cool at 1-3°C prior to packing and transport.



Field harvesting of cut foliage

### COSTS AND RETURNS

It is important to bear in mind that whilst some species reach economic cutting size after two growing seasons, most subjects require three or up to four growing seasons in the field.

Levels of annual production varies according to subject, age and vigour of the plantation and returns/ha will depend on market outlet. While a small but rewarding local market exists, over 90% of Irish foliage is exported for the mass bouquet market. Eucalyptus cut foliage for example produces on average 100,000 stems per ha from the third year onwards and has a life span of at least 12 years if managed correctly. Capital investment of €6000 per ha will deliver a gross margin of €8000 per ha and after the biggest cost; labour for harvest is accounted for, a net average return of €2000/ha is achievable annually.



Graded cut foliage on Danish trolley's ready for transport to market