

Foliage Ireland

New Cut Foliage Species

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Kerry, Waterford & Wexford
Report prepared for Foliage Ireland Group

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Escallonia species
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Hebe 'Mrs Winder'
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Olearia traversii
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Phormium 'Platts Black'
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Physocarpus opulifolius 'Diablo'
Pinnacle Mint
Pittosporum tenuifolium 'Abbotsbury Gold'
Pittosporum tenuifolium 'Garnettii'
Pittosporum tenuifolium 'Purpureum'
Pittosporum tenuifolium 'Silver Queen'
Pittosporum tenuifolium 'Wendel Channon'
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Purple Sage
Raphiolepis x delacourii
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Restio - Rhodocoma capensis
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Senecio greyii
Skemmia japonica
Stipa gigantea
Stipa tenuissima (Pony Tails)
Thyme
Viburnum opulus 'Notcutts Variety'
Viburnum opulus 'Xanthocarpum'
Viburnum x bodnantense 'Dawn'

Executive Summary

The aim of this project was to evaluate the commercial potential of a range of plant material for the cut foliage market.

To do this, early market feedback was used to make an initial selection of over sixty species.

Vase life experiments investigating basic shelf life, field trials to ascertain production characteristics, and further market assessments during the project were used to select species for further development and commercialisation.

Vase life experiments showed clearly that those species recommended for commercialisation had a vase life of over two weeks. Some had a vase life of longer than three weeks and the vase life of a few was longer than four weeks.

Field trials were conducted in two areas.

They showed that climatic and soil considerations will need to be taken into account, should growers from other regions adopt any of these species.

Field trials indicated that the species evaluated tend to form a good branching structure as the basis of later secondary growth, and produce lateral growth and stem production quite readily in response to pruning.

Apical dominance is still evident in some of the species, and pruning techniques or shoot selection may be required to enhance stem production.

Damage from disease will potentially be of greater concern than insect damage for foliage production from some of the selected species.

While field trials showed that the species were generally quite vigorous and responded well to pruning for stem production, detailed information regarding yields, time of pruning, species specific pruning, fertilisation requirements need to be produced.

Market feedback on foliage products harvested from the field trials indicated that a number of species did have potential as new products in the market, and also indicated that the domestic and export markets have different requirements. Feedback varied between agents. The range of comments was extremely useful, however, for discerning the potential of the species studied.

Using the feedback from the buyers, field trials and vase life results, a number of species were chosen for further development and potential commercialisation.

The species include: *Rosemary*, *Aristotelia*, *Arbutus*, *Olearia* sps, *Senecio*, *Pittosporum* cvs, *Restios*, *Elaeagnus* and *Bupleurum*.

Introduction

New flower and foliage products are in continual demand by the flower industry. Over the last 10 years, non-traditional products have become increasingly popular.

The unique climate of the south of Ireland with its mild moist summers and winters has the ability to grow many species which would otherwise be damaged in most of the rest of Northern Europe.

The selection criteria for new foliage species are interesting colours, leaf shapes and forms, a long vase life, and being economically viable to produce.

Whilst a large proportion of species have attractive foliage it's usually that only a small number fulfill the above criteria and furthermore have the advantage of succeeding best in the south of Ireland.

The existing cut foliage industry is worth €3million to the economy. There are three main suppliers to a growing European market. One company in the south west clearly dominates as it accounts for 80% of the export sales. The main species currently exported include Eucalyptus, Pittosporum, Ozothamnus and Viburnum. Important wild and woodland species are Noblis, Rhododendron and Birch.

Considerable interest in expanding the flower and foliage industry exists in Ireland. This may be tied to the huge changes taking place in Agriculture in Ireland at this present time due to the fishler proposals and the downturn in other sectors of the rural economy. With a clear need for new rural industries and a constant need for new products by the flower and foliage industry, evaluation of a range of species would seem timely.

After identifying a species with attractive foliage that may be of market interest, the vase life and the ability to survive dry storage and maintain vase life post harvest are fundamental to the commercialisation of any species. Neither of these criteria has been investigated in most species tested in this project.

Objectives

1. To identify species with market potential based on the
2. To establish field plots in three three geographically and climatically different sites across the south f Ireland
3. To monitor and observe the plants in these plots for growth, susceptibility to pest and disease attack and suitability to each site.
4. To strategically prune and fertilise the plants to encourage branching and vigorous growth from a young age.
5. Tp partially determine the market demand for each species in both the export and domestic markets.
6. To determine the base vase life of selected species
7. To communicate the project results to industry.
8. At completion of the project, species deemed to have commercial potential will be put forward for further trialing to complete a blueprint for commercialisation.

Methodology

A series of discussions took place between the main foliage exporting company in Ireland and various plant experts and leading nurserymen on how species for testing should be selected and those eventually chosen.

The criteria used were leaf colour, leaf shape, known potential stem length and productivity information to select species for investigation.

Table 1 outlines those selected for trials.

Propagation

Most of the plant material was purchased from the trade. It varied from liner size to 2 litre containers.

Establishment of field trials

Three sites were selected:

1. Joe Arthurs, Chute Hall, Tralee, Co. Kerry
2. Sean O Sullivan, Mayfield, Lismore, Co. Waterford
3. Emmett O Connell, Foulksmills, Co. Wexford

The three areas are currently the main foliage production areas and represent different climatic conditions.

Wexford/Waterford in the South East is noted for its dry, low rainfall and sunlight hours.

Kerry in the South West has a wetter and more humid climate with lower sunshine hours.

Trial Design and layout

The trial design was a randomised block design with three replicates of each species. Each replicate was made up of 12 individual plants of each species. Row spacing was 1 metre with 1 metre in row spacing.

Site preparation and planting

Herbicide (Glyphosate) was applied to kill weeds prior to overall ploughing and rotary cultivations. A base fertiliser was applied according to soil analysis. A fine tilth was produced and planting took place on clearly marked out rows in May/June 2002.

An overall application of Simazine was applied post planting and this was repeated in Autumn 2002 and annually thereafter. Further herbicide treatments consisted of direct spraying with paraquat and or glyphosate depending on weeds present.

Field Trial Management

Observations were taken every 4 months and recorded. Where appropriate, stem numbers and lengths were recorded. Observations of pest and disease incidence were noted.

In the second year, initial basic pruning trials were set up. Records were again made at regular intervals and details of pest and disease incidence noted.

Pruning

The aim of the pruning activities was to encourage branching at an early stage of growth. Pruning was conducted to ensure the maximum number of stems or leaves were produced in the future.

Pruning was conducted after the plants were well established and showing vigour – this mainly took place in the first spring following establishment – 8/9 months from planting. Most were cut back to a height of approximately 30-40cm from an original single of double stem.

Some species were not pruned as it was clear that they would not withstand harsh cutting back.

Some tip or summer pruning was carried out periodically during 2002 to encourage further branching on some species.

Market assessment

On a couple of occasions during 2003/03 visits by arranged to the sites by current and prospective buyers – mainly packers for supermarkets in UK and Holland.

Comments and suggestions made by these people on various species were noted.

Samples of stems from guard plants were taken regularly by staff of Forest produce Ltd for observation and comment from their customers.

Clear thoughts on a number of species quickly emerged as to their suitability in the cut foliage trade

Results and Discussion

The results of the evaluation of the range of species is outlined in the following pages.

The format used is that of summary comments and a picture of the relevant species.

Species were rated under the following headings and were assessed using the following key:

Availability period – month of the year

Yield – whether low, medium or high

Market use – commodity or design

Shelf life

The key below should be used in interpreting the comments.

Key – Availability period: Month of year **Yield:** L – Low, M – Medium, H - High
Market category: C – commodity, D - design **Shelf Life:** 1 – Poor, 5 – Good
Overall rating: 1 – Not fit 5 – Fit for expansion

***Arbutus unedo* ‘Rubra’**

Availability period: 8-5

Yield potential: M

Response to pruning: G

Market category: C & D

Shelf life - 5

Overall rating - 4

Foliage can be spotty after winter period. Need to cut prior to christmas. Some plants on both sites clean. Watch flowering as cultivar may not be ‘Rubra’ but a collection of unedo seedlings showing variations in leaf type and stem colouration. Propagation and establishment slow. Adj – could be considered in native woodland forestry scheme.



***Aristotelia chilensis* ‘Variegata’**

Availability period: 7 - 5

Yield potential: H

Response to pruning: G

Market category: C

Shelf life - 5

Overall rating - 4

Has performed very well. Stronger variation in Kerry. Better quality stems in Wx but may be because no pruning imposed. Easy to establish from cuttings Further pruning work necessary.



***Astelia chathamica* ‘Silver Spear’**

Availability period: 8-5

Yield potential: L

Response to pruning: G

Market category: D

Shelf life - 5

Overall rating - 3

Mixed performance in trial site. Very poor in Wx. Has done better in Ky. Fully grown leaves have habit of breaking in centre and falling over. Designers must decide.



Astrantia major

Availability period: 6-8
Yield potential: M
Response to pruning: None req'd
Market category: D
Shelf life - 5
Overall rating - 3

Trouble free. Good flower crop but does not fit into the foliage business.
Abandon



Aucuba japonica

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: D
Shelf life - 5
Overall rating - 3/4

Very slow to establish, prone to leaf spotting
Location critical. Shade hall to be erected
Further trialing required



***Azara microphylla* 'Variagata'**

Availability period: 8-5
Yield potential: P
Response to pruning: P
Market category: D
Shelf life - 4
Overall rating - 4

Slender one dimensional conformation.
May be useful for design work as a backdrop for other items.
Abandon !



Bay Laurel

Availability period: 7-5
Yield potential: P
Response to pruning: P/G
Market category: D
Shelf life - 5
Overall rating – 4/5

Appears slow in Kerry.
Growing has really only just commenced so access
in Autumn.



Bupleurum fruticoum

Availability period: 8-5
Yield potential: H
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating – 5

Good prospects. Easy to establish from seed. No
major pest or disease problems so far.
Hard pruned plants in Ky have not responded to
treatment.



Carex pendula

Availability period: 6-10
Yield potential: M
Response to pruning: none required
Market category: D
Shelf life - 5
Overall rating - 4

Thought at one stage to suitable for design work.
Easy from seed and readily establishes on any soil
type. No major pest or disease problems. Is
showing signs of severe tip burn (dirty)
Abandon



***Chamaecyparis lawsoniana* ‘Goldcrest’**

Availability period: 8-5
Yield potential: M
Response to pruning: Unknown
Market category: C & D
Shelf life - 5
Overall rating - 5

One of the better scented conifers.
Slow to establish.
Trouble free from p&d.
Expansion programme in train.
Need pruning information



Choisya ternata

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating -
Decision up to designers but this plant has many excellent attributes. It's cultivar 'Sundance' also shows promise.
It is aromatic, but some don't like his.
Also allegedly poisonous – check this.
Decide in Autumn



Cornus alba

Availability period: 8-5
Yield potential: M/G
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 3

Grows well in south west
Twig market only
Assess colour of twigs in Autumn.



Cytissus battandieri

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: D
Shelf life - 5
Overall rating – 3/4

Very vigorous once established
Mixed opinion from trade
Abandon



Drimys lanceolata

Availability period: 8-5
Yield potential: L
Response to pruning: G
Market category: D
Shelf life - 5
Overall rating - 4

Slow to establish and slow growing but in excellent condition. 30-40cm stems available in numbers. No major pest or disease problems. Very suitable for design work.



***Elaeagnus angustifolia* ‘Quicksilver’**

Availability period: 5 - 10
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life – 3/4
Overall rating – 4

Readily establishes itself – underground suckering. A summer species. Further work on post harvest required. Decision in Autumn.



***Elaeagnus pungens* 'Maculata'**

Availability period: 8-5
Yield potential: L - M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 3

Unimpressive. Slow to establish. Could be suitable for design work.
Slower to revert than Limelight



***Elaeagnus x ebbingei* 'Limelight'**

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 4

V. slow to establish - first stems year 5
Serious reversion
Free of major P&D
E. ebbingei 'Giltedge' similar but slower growing



Euonymus europaeus

Availability period: 8-5
Yield potential: L
Response to pruning: Poor
Market category: D
Shelf life - 5
Overall rating - 2/3

Slow to establish and slow growing.
Abandon



Escallonia species

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: C&D
Shelf Life - 4
Overall rating - 3

Discard all except *E. macrantha*. This has best role on account of its fine large, glossy and aromatic leaves and fast growing habit (make sure only the good form of this species is cultivated).



Gaulteria shallon

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 5

Good in suitable location and soil type
Additional use of flowering product in summer time.
Appears trouble free. Shade hall tests required.



Fennell (bronze & green)

Availability period: 5-8
Yield potential:H
Response to pruning: none needed
Market category: D
Shelf life - 1
Overall rating - 3

Easy to establish.
Needs further work if decide to continue



Hebe 'Mrs Winder'

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: D
Shelf Life - 5
Overall rating - 4

Prone to spotting. Is useful because of its colour and leaf habit. Easy to establish
Review in Autumn



Hebe 'Purple Prince'

Availability period: 8-5
Yield potential: M
Response to pruning: Appears good but more work needed
Market category: C & D
Shelf life - 5
Overall rating – 3/4

Easy to establish
Prone to spotting post Christmas
Location appears to be critical with cultivars
Decide later in year.



Leucothoe 'Rainbow'

Availability period: 8-5
Yield potential: M
Response to pruning: Unknown
Market category: D
Shelf life - 4
Overall rating - 3

Vigorous once established.
Not very favourable market response.
Need nutrition work if continued.
Decide in Autumn



***Libertia periginans* ‘Gold Leaf’**

Availability period: 8-5
Yield potential: L
Response to pruning: Unknown
Market category: D
Shelf life - 5
Overall rating – 2/3

V. specialised item. Growth unimpressive in Kerry. Severe tip damage very noticeable. May need moist site. Designers like this.



***Ligustrum lucidum* ‘Yellow Wax’**

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 1

Slow to establish. Although it grew fairly well, this subject has a poor appearance overall. No interest from market buyers so suggest abandon.



Mahonia japonica

Availability period: 8-5
Yield potential: L
Response to pruning: Untried
Market category: D
Shelf life - 5
Overall rating – 2/3

Not suitable - Abandon



***Myrtus luma* ‘Glamleam Gold’
(now *Luma apiculata* ‘Glamleam
Gold’)**

Availability period: 9-7

Yield potential: L-M

Response to pruning: G

Market category - D

Shelf Life - 4

Overall rating: 4

Modest grower in Wx. Poor in Kerry. Good leaf
colour. Continue to observe and assess in Autumn



Myrtus ugni

Availability period: 8-5

Yield potential: M

Response to pruning: G

Market category: C

Shelf life - 5

Overall rating - 5

Does well in south west but is
too common so suggest abandon



Nepeta cataria

Availability period: 6/7

Yield potential: H

Response to pruning: G

Market category: D

Shelf life - 2

Overall rating – 3

Assess in Autumn



Nepeta darkei

Availability period: 6/7
Yield potential: H
Response to pruning: G
Market category: D
Shelf life – 3
Overall rating - 3

Assess in Autumn



Olearia macrodanta

Availability period: 8-5
Yield potential: M/H
Response to pruning: G
Market category: C
Shelf life - 5
Overall rating - 5

Expand according to market demand in south west.
Good for painting.
Leaf spot may cause concern - watch



***Olearia traversii* ‘Tweedle Dum’**

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: D
Shelf life - 5
Overall rating - 3

Cultivar of traversii
Reverts badly, no real advantage over traversii
Abandon



Olearia traversii

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 4

Good in south west
Some capsid damage evident early summer
period but can be controlled by insecticide in
Spring/early summer



Olearia zennorensis

Availability period: 8-5
Yield potential: L
Response to pruning: Poor
Market category: D
Shelf life - 5
Overall rating - 3

No real market interest so abandon.



***Osmanthus heterophyllus* 'Variagatus'**

Availability period: 8-5
Yield potential: L
Response to pruning: P
Market category: D
Shelf Life - 4/5
Overall rating - 3

Although very slow, would be suitable where short
stems are required. Continue to observe until
Autumn



Phalaris coerulescens

Availability period: 5-7
Yield potential: H
Response to pruning: None required
Market category: D
Shelf life - 5
Overall rating – 4

Easy from seed
Nothing special
Designers to decide in Autumn



Phormium 'Platts Black'

Availability period: 8-5
Yield potential: M
Response to pruning: P
Market category: D
Shelf life - 5
Overall rating - 3

Dainty cultivar compared to other flaxes
Appears to have low yield and could be troublesome – leaf damage.



Photinia x fragerii 'Red Robin'

Availability period: 8 - 3
Yield potential: M
Response to pruning: G
Market category: D
Shelf life – 4
Overall rating – 3/4

Needs very favourable location with plenty shelter. Prone to blimishes which appear to be physiological. Aim to develop for Valentines Day in quantity and the specialist trade. Further trials necessary.



***Physocarpus opulifolius* ‘Diablo’**

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: D
Shelf life - 5
Overall rating - 3

Easy to establish for hard wood cuttings
Flowering product of good value from design aspect.
Decision in Autumn



Pineapple Mint

Availability period: 8-5
Yield potential: M/H
Response to pruning: none necessary
Market category: C & D
Shelf life - 5
Overall rating – 4/5

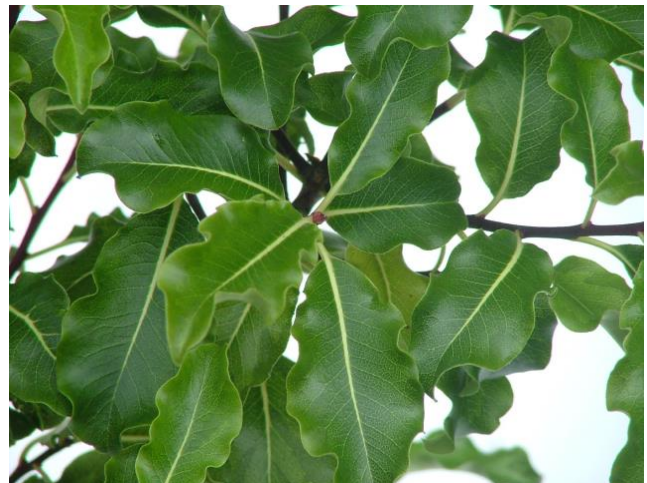
Can be scaled up quickly if necessary



***Pittosporum tenuifolium* ‘Abbotsbury Gold’**

Availability period: 7-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 5

Slow to establish
Lower yielding than other tenuifolium cultivars
Expansion programme in train - Scale up south east.



***Pittosporum tenuifolium* ‘Garnettii’**

Availability period: 7-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 5

Good versatile bigger leaved species
Tends to have an off putting purple spot on
circumference of leaf. High yielding.
Decide in Autumn.



***Pittosporum tenuifolium* ‘Purpureum’**

Availability period: 7-5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating – 4/5

V. slow to establish. Premium product. Trouble
free. Site important.



***Pittosporum tenuifolium* ‘Silver Queen’**

Availability period: 7 - 5
Yield potential: M
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating – 4/5

Easy to propagate from cuttings
Spotty post christmas
Excellent in mid summer, interest from trade is
poor.
Abandon



***Pittosporum tenuifolium* 'Wendel Channon'**

Availability period: 7-5
Yield potential: H
Response to pruning: G
Market category: D
Shelf life - 5
Overall rating - 4/5

Good volume filling capacity. Versatile product.
Generally clean during harvest season
Decide in Autumn



***Prunus laurocerasus* 'Etna'**

Availability period: 8-5
Yield potential: H
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 5

Slow to establish
Easy to propagate
Expansion programme in train



***Prunus laurocerasus* 'Marbled City'**

Availability period: 8-5
Yield potential: M
Response to pruning: G
Market category: D
Shelf life - 5
Overall rating - 3

Slow to establish but performed much better in Kerry than Wexford. May produce economic yields for designer goods. A plant to be shaded to test response.



Purple sage

Availability period: 6-8
Yield potential: H
Response to pruning: none required
Market category: D
Shelf life - 2
Overall rating - 3

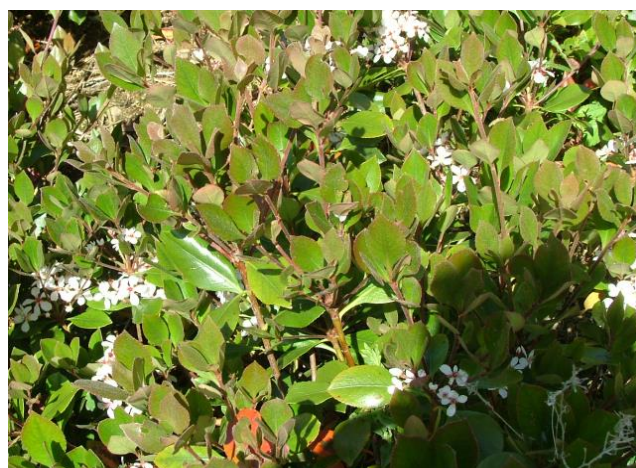
Shelf life a problem. Goo coloured herb.
Decide in Autumn.



Rhaphiolepis x delacourii

Availability period: 8-5
Yield potential: M
Response to pruning: unknown
Market category: D
Shelf life - 5
Overall rating – 3/4

Appears slow to establish. Modest annual growth.
Liked by some market buyers. Excellent spray confirmation. May have Biedamyer potential.
Insert assessment grid to measure yield.
Continue and carry out some further pruning work.



Restio – Calopsis paniculata

Availability period: 8-6
Yield potential: H
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating – 5

Cheap to establish from seed
Not tolerant of severe heavy frosts (< -7C)
Appears to be free of any major pest or disease
Try tipping in late summer to help bush stems



Restio – *Rhodocoma capensis*

Availability period: 8-6
Yield potential: H
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating – 5

Cheap to establish from seed
Not tolerant of severe heavy frosts (< -7C)
Appears to be free of any major pest or disease
Try tipping in late summer to help bush stems



***Rosmarinafolia officinalis* ‘Miss Jessops Upright’**

Availability period: 8-5
Yield potential: H
Response to pruning: G
Market category: C&D
Shelf life - 5
Overall rating – 5

Excellent at both sites trouble free in the main,
pruning management essential.
Rolands cultivar superior.



***Sambucus* ‘Black Beauty’**

Availability period:
Yield potential: M
Response to pruning: G
Market category: D
Shelf life - 1
Overall rating - 1

Poor shelf life renders it unsuitable
Abandon



Senecio greyii

Availability period: 8-5
Yield potential: G
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 5

Easy to establish
Would appear to suit south east soil and climate
Scale up in Wexford if commodity sales are on.



***Skemmia japonica* ‘Rubella’**

Availability period: 10-2
Yield potential: Appears poor
Response to pruning: Not known yet
Market category: D
Shelf life - 4
Overall rating – 2/3

Slow to establish in Kerry trials.
Site and soil are critical. Had done better on other sites in the area. Seed head is very useful though.
Decision in Autumn.



Stipa gigantea

Availability period: 5-6
Yield potential: H
Response to pruning: G
Market category: C & D
Shelf life - 5
Overall rating - 5

Impressive
No pest or disease problems of consequence
Did loose 70% of initial planting (may have been accidental)



***Stipa tenuissima* (Pony tails)**

Availability period: 6-8
Yield potential: Unknown as of yet
Response to pruning:
Market category: D
Shelf life - 5
Overall rating – 3/4

Easy to establish from seed
Very specialised
Decision time !



Thyme

Availability period: 9-5
Yield potential: H
Response to pruning: G
Market category: D
Shelf life - 2
Overall rating – 2/3

Shelf life and stem length a problem.
Easy from seed.
Assess in Autumn



***Viburnum opulus* ‘Notcutts Variety’**

Availability period: 8-5
Yield potential: L/M
Response to pruning: Unknown as of yet
Market category: D
Shelf life - 5
Overall rating - 4

Red berry is main attraction in the Autumn
Has white flower in May which is attractive
One line of plants in one replication was tip pruned
to see if better stem branching will occur.
Access in Oct.



***Viburnum opulus* ‘Xanthocarpum’**

Availability period: 10-2
Yield potential: L
Response to pruning: Unknown
Market category: D
Shelf life – 5
Overall rating – 2/3

Prospects for yellow berries of most interest in Autumn.
Too early to make a final decision on future



***Viburnum x bodnantense* ‘Dawn’**

Availability period: 10-12
Yield potential: L
Response to pruning: G
Market category: D
Shelf life – Untested
Overall rating – 2/3

Prospects for flowering on bare wood interesting.
Too early to make a final decision on future

