

# Perennials for Cut Flower Production

## Factsheet 17/20

### INTRODUCTION

The fact sheet 16/20 covered the important annual and biennial species for commercial cut flower production. This fact sheet deals with hardy perennials which constitute an equally important branch of commercial flower growing as they produce the bulk of flowers produced in the open ground in late spring, summer and autumn. Most of the plants are garden favourites, though in many instances types or varieties especially suitable for the flower trade have been developed for commercial culture.

Although there are well established or standard types of perennials used as cut flowers, examples being alstromeria, peony and scabious, the fashion in floral decoration and consumer choice is continually changing, therefore there is a wide range mentioned in this note.

Most of the subjects dealt with maybe treated similarly as regards propagation, plant spacing and general culture.

### SITE

A south-facing aspect is desirable but not essential, however shelter from prevailing winds is important. Returns for flowers mentioned in this note can be increased considerably if the flowers can be produced a week or two earlier. Early sowing is the main factor but if one has a protected structure such as cloches or a tunnel, earlier flowering can result. Protection may also be helpful during the flowering period to shelter the blossoms from rain and wind.

### SOIL & PH

With one or two exceptions, to which reference is made later, hardy perennials thrive in any deep soil which is light to medium in texture, provided it is well cultivated and adequately supplied with organic matter to ensure suitable aeration, friability and moisture retention. Aim for a pH of 6.0-7.0 for most subjects.

### LAYOUT AND PLANTING SYSTEM

Careful planning is required for commercial culture of perennial flowers. Plant spacing for instance should be adapted to suit not only the needs of the plant species but also the cultivation equipment on the holding. If mechanical cultivators are to be used, the rows of plants should be wide enough to accommodate them and also permit the use of spraying machinery. A further important consideration is that many flowering plants will flower earlier if given some protection during part of their life, eg use of cloches or mobile protected structures. This should be borne in mind when planning and planting. Crops can be planted on drills or on raised beds. Specifics are mentioned under the crop species.

### NUTRITION

Little experimental work has been carried out in relation to specific fertilisation of perennial cut flowers, however general principles apply so it is important that in order to obtain the desired length and strength of flower stem, suitable size and form of flower and to maintain a healthy stock, a high rate of soil fertility is required. This would particularly apply to organic matter and nitrogen levels. A soil test is necessary to accurately determine rates of Phosphate (P) and Potassium (K). There are specific recommendations for some of the key species, therefore consult your adviser.

### PROPAGATION

The majority of hardy perennials are propagated by division of roots. Generally this is done in the period immediately after flowering, especially when it allows the plants to become established before the winter sets in. For plants that flower late in the season, it is better if they are divided the following spring. A few perennials do better if propagated by seed, which is normally sown in April or May.

# Perennials for Cut Flower Production

## Factsheet 17/20

### PLANTS

It is vital to use high quality healthy plant material. Plant material is available from a number of specialist suppliers in UK, Holland and elsewhere.

See factsheet 23/20 or consult your adviser for specifics in relation to individual species.

### WEEDS

It is critically important to keep plantations free of weeds. It is vital that the site has first been cleared of perennial weeds by spraying off, using a mixture of *Glyphosate* (Roundup) and *Carfentrozone-Ethyl* (Spotlight Plus). Some growers rely on inter-row cultivations to keep crops clean. There are limited herbicides recommended for use on perennial cut flowers. There are a couple of residual herbicides with 'off label' approval which are used at growers risk. Consult your adviser for specific recommendations and updates on herbicides.

### CROP SUPPORT

Some subjects require support system based on poles and wire mesh to keep stems upright and maintain quality.

### PESTS & DISEASES

Slugs are a universal pest of most perennials particularly in wet seasons with damage seen from early spring right through to the Autumn. Rabbits/hares could pose a threat and site may have to be fenced. Depending on species grown other pests and diseases may be problematic so consult your adviser for specific details.

### HARVEST

Depending on the species, generally stems are cut early in the morning and moved to the cold store to maintain quality. Most species are generally sorted into lengths 40-50 cm. Stems are bunched in 5's. Chill at 1-3 C.

### SUITABLE SPECIES

#### ACHILLEA

*Achillea* spp. Family - *Compositae*

The achilleas generally grown are derived from two species. All are hardy herbaceous perennials and comparatively easy to grow. They are not particularly important commercially but are popular with flower arrangers.

The more important species are:

*Achillea millefolium* and hybrids – usually available from mid-June to end of July. Rootstock has a spreading habit and requires dividing frequently to maintain stem length and size of flower head.

*Achillea filipendulina* (syn *A. eupatorium*) – vigorous species with attractive foliage. Large flat corymbs of golden flowers heads. Flowers from August to October. Can also be grown from seed. Achilleas may be grown on most soil types but prefer a light to medium soil type in an open sunny position.

#### ALSTROMERIA

*Alstromeria aurea* & *A. ligtu* Family - *Amarydillidaceae*



The alstromeria, or Peruvian lily, is an extremely useful & profitable perennial possessing most of the desirable qualities of florists flower except scent. Modern varieties are available in a wide range of colours. The species takes 2-3 years to attain full bearing. It thrives well in sheltered, moist situations in well drained soils. With the addition of protected structures, cropping can be extended over 5 months. Field grown crops are planted at 30-45 cm square. Soil must be well drained and well fertilised. The crop will require a wire support structure.

#### ANTHEMIS

*Anthemis* spp Family - *Compositae*



The anthemis, or chamomile produces daisy like flowers with stems 30-50cm long between late May and autumn. Anthemis is propagated by division or basal cuttings in spring or early autumn. Thrives in a sunny position.

#### ASTER OR MICHAELMAS DAISY

*Aster* spp. Family - *Compositae*



A succession of flowering from June to November maybe obtained by choosing appropriate species and varieties. Those in the *Aster novi-belgii* group are best for cut flowers. Asters are divided in spring retaining the strongest outside shoots for replanting. A moist deep well manured soil is preferred.

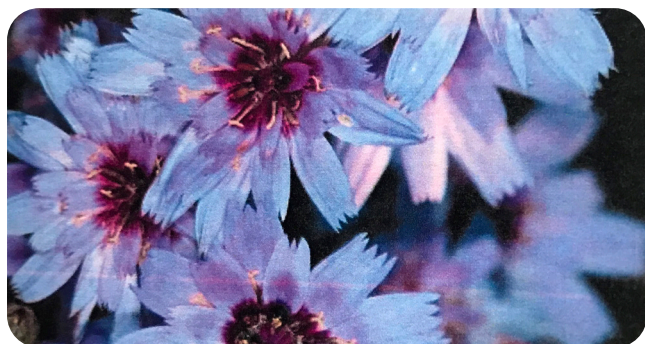
# Perennials for Cut Flower Production

## Factsheet 17/20

### CATANANACHE

*Catananche Caerulea* Family - *Compositae*

The long lasting qualities and graceful habit of the catananche or cupid's dart, make it a useful plant for cutting with flowers in July and August. There are blue and white varieties available. The flowers maybe used as dried decoration when harvested fully open. Plants are generally raised from seed sown under protection and later transferred into their permanent position. They can also be propagated from root cuttings taken in November-December which are stored in peat and later planted out. They do best on well drained soils. Best spaced at approximately 30 cm square.



### COREOPSIS

*Coreopsis grandiflora* & *C. auriculata*

Family - *Compositae*

A summer flower of the margurite type. *C. grandiflora* has golden yellow flowers and is vigorous compared to the dwarf natured free flowering *C. auriculata*. Likes a well drained sunny position. Propagated from seed and can be treated as a biennial. Cuttings can also be taken in late summer. Plant at 30 cm square with 4-5 rows in a bed.

### DAHLIA

*Dahlia pinnata* & *D. coccinea* Family - *Compositae*

The dahlia is a half hardy, herbaceous perennial and a very popular garden flower for garden and for cutting. There are many types and varieties some of which are not suitable for cut flowers. The small and medium-sized flowers in the decorative, cactus and pompon classes are chiefly grown for cutting. Most are hybrids from crosses between *Dahlia pinnata* & *D. coccinea*. Dahlias maybe propagated from seed, division or cuttings. Cuttings is the method generally used commercially. Use only healthy plants given the risk of virus infection. The species requires a well drained medium loam soil which should be well fertilised. Several nitrogen top dressings are made during the season. Over wintered or divided tubers are planted out in late April but rooted cuttings should not be planted outside until all risk of frost has passed. Pant in double rows at 60 cm square with 1.2 m between beds. Support is required for most varieties apart from the

dwarf types. With some varieties, stopping will be necessary to delay production of flowers. Pinch out the growing points after the first three pairs of leaves are formed to encourage the laterals to develop and flower.

Plants are usually cut back to about 15 cm of ground level as soon as tops have been blackened by the frost. Rootstocks are lifted and carefully cleaned and dried before storage in a well ventilated frost free shed usually in dry peat or straw.



### DELPHINIUM

Family - *Ranunculaceae*



The delphinium flowers from early June to mid-July. There are many varieties suitable for cutting with the clear light blue and bright blue flowers most popular in the market. They are propagated vegetatively by division or cuttings. Division is done in the autumn or spring depending on soil conditions. Cuttings are taken from basal shoots and inserted into cold frames. They like deep fertile soil in an open sunny position. Plants are usually lifted and replanted every two years. Plants are spaced 45 cm apart in rows with 45 - 60 cm between rows depending on variety.

### DIANTHUS

Family - *Caryophyllaceae*



In addition to the perpetual flowering carnation which is mainly grown under glass, various species and varieties of dianthus are grown for the cut flower trade. *Dianthus barbatus*, the sweet william is dealt with in a separate fact sheet grown as a biennial. The 'allwoodii' hybrids which are not fully hardy are well known cut flowers with a wide range of different colours flowering from late spring untill autumn. They are usually propagated from cuttings soon after the plants have flowered. They can planted out in spring in a well drained, good fertile soil with a favourable southern sheltered location. They are usually planted at 30 cm square in 3-4 row beds.



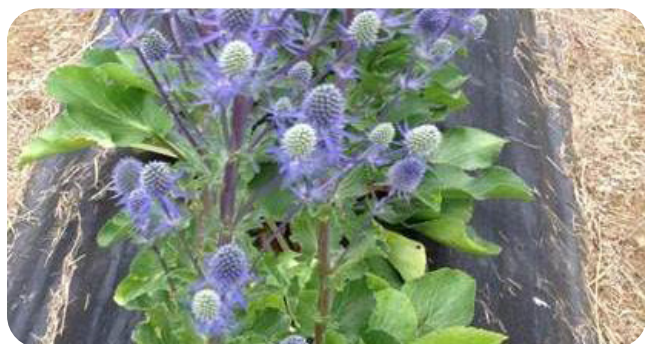
# Perennials for Cut Flower Production

## Factsheet 17/20

### ERYNGIUM

*Eryngium amethystinum* Family - Umbelliferae

The eryngium or sea holly is grown mainly for its decorative foliage and bracts which are stiff, spiky and silver blue in colour with a marbled appearance. A light well drained soil is best in a sunny position. There are a range of modern varieties with spikes in a range of shapes and sizes providing continuity for cutting from end of July to September. It is also sometimes dried. Propagation is by division in autumn. Root cuttings can also be taken in the autumn when plants are dormant – placed in a cold frame and planted out the following spring.



### GYPSOPHILA

*Gypsophila paniculata* Family - Caryophyllaceae



The perennial gypsophila is widely grown. The plant which is much branched, produces in June –August a great many small flowers in the form of loose panicles. Both single and double forms are grown. Pink forms are also available. Plants of varieties which may be raised from seed are grown in the same way as other hardy perennials. They generally planted out at a spacing of approximately 60cm square as

plants become large and spreading. Support is often needed. Any ordinary well drained soil with a pH of 6.5 is suitable.

### HELLEBORE

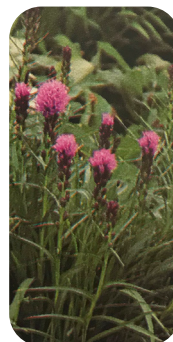
*Helleborus macranthus* & *H. niger*

Family - Ranunculaceae

Forms or varieties of the Christmas and lenten roses are used for market cut flowers. Propagation is usually by division in April after new leaves have developed. Each piece should have a leaf and a few roots attached. A moist well drained partially shaded position is favoured. There are a number of newer varieties available from Dutch suppliers.

### LIATRUS

*Liatrus pycnostachya* Family - Compositae



Flowers of liatrus sometimes known as kansas feather are produced in wand-like spikes or racemes in late summer and autumn.

Of the several species only *Liatrus pycnostachya* is used for cutting. Liatrus maybe propagated by offsets from the corm-like bases. It thrives in almost all soils and even performs well in poor soil.

The spike begins to flower at the tips and should be cut when a few flowers have opened.

### PEONY

*Paeonia* spp. Family - Ranunculaceae

The herbaceous peonies are the most useful for cutting. They have increased in popularity in recent years owing to their hardiness, large size, colour and fragrance of flowers, comparative freedom from pests and diseases and the ease with which they are grown once established.

Varieties of the double chinese peony (*P. lactiflora*) are the most popular as cut flowers. 'Sarah Bernhardt' is by far the most popular but there are a range of varieties used commercially to give continuity of supply from late May through to early July. Propagation is by division in the autumn. Allow an eye to each tuber and they should not be planted too deeply: 5-8 cm of soil over the crown is sufficient.

The crop thrives best on a heavy cool soil which is deep and fertile.

Plants are usually spaced 60 cm in rows or drills 90 cm apart. They are prone to *Botrytis paeoniae* which damages leaves and flower buds. The flowers are cut while still in bud just before the outer petals begin to roll backwards and with as few leaves as possible.



# Perennials for Cut Flower Production

## Factsheet 17/20

### PHLOX

(*Phlox paniculata*) Family - *Polemoniaceae*



A wide range of colours is available of this scented popular perennial. Grows on a good medium loam soil. Plant at 60 cm square in beds. Wire support is usually required. Propagation is by division of rootstocks in the autumn. Harvesting can commence once a few of the flowers start to open on the spikes.

### SCABIOUS

(*Scabiosa caucasica*) Family - *Dipsacaceae*



The perennial scabious is widely grown. It is a hardy, strong growing plant which flowers from June to September. There are a number of varieties, the colour of flowers ranging from light blue to deep mauve with the lighter shades in more demand.

Scabious should be propagated by division in autumn or spring – spring being better as the plants continues blooming until

quite late in the autumn, and on heavy soils the plants may not survive the winter. Division should take place every two to three years if quality flowers are required. Scabious are relatively easy to grow – they prefer a medium to light loam soil with good drainage. pH should be maintained high up to 7.0 by annual liming. In a bed system for planting, aim to plant 30 cm square with 4-5 rows in a bed. Wider spacing may be necessary to facilitate mechanical cultivation. No support is necessary as flowers arise directly from the ground.

### SOLIDAGO

(*Solidago Canadensis*) Family - *Compositae*



Solidago or golden rod is a common perennial widely distributed. There are a number of modern varieties that can give continuity of supply of flowers from July to September. Propagated by division in the autumn with small plants showing 2-3 growths being suitable for replanting. Spacing in beds at 60 cm square. No support is necessary. They suffer from powdery mildew in a dry summer. Spikes

should be cut once the tiny jelly buds start to show colour.

### SEDUM

(*Sedum spp*) Family - *Crassulaceae*

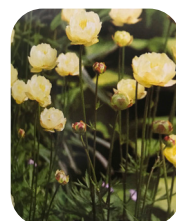


Sedum is a perennial plant with thick, succulent leaves, fleshy stems and clusters of star shaped flowers. It is gaining popularity as an autumn flower being available from mid August to early October. Choose the upright species such as '*Spectabile*' for cultivation. Propagate through division in late autumn. They do best in full sun in a free draining loam soil. Plant at 45 cm square in 3 row beds.

Flowers can be picked even when the buds are unopened and little or no colour showing extending the period of supply.

### TROLLIUS

(*Trollius europaeus*) Family - *Ranunculaceae*



The trollius or globe flower is a hardy herbaceous perennial comprising several species which mostly occur in moist marshy situations. It is useful for cutting as it flowers early in the year. The flowers which resemble a large double buttercup are globular and vary in colour from pale yellow to deep orange. The dark green leaves are also attractive. *Trollius europeas*

is the most commonly grown for market. The trollius forms a clump with a mat of thick fibrous root which can be divided easily at anytime from October to April the best time being in autumn. They thrive in any good garden soil that does not lack moisture but it will not tolerate dry conditions. Division and replanting should take place every 2-3 years spacing plants 30 cm apart in rows 30 cm apart. Cut the flowers when the buds are just showing yellow.

**Other species worth considering include *Astrantia*, *Alchemilla mollis*, *Cortaderia*, *Enchinacea* and Perennial Grasses.**