





An Enion Talmhaischta, Eis agus Marx Department of Agriculture, Ecoal and the Marine



The European Agricultural Fund for Rural Development: Europe investing in rural areas

Plant identification key for the Results-based Environment-Agri Pilot Programme

Phoebe O'Brien and Fran Giaquinto

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Illustrations: ©Joshua Brown, Phoebe O'Brien Designed and printed by iSupply, Creative Media Solutions, Galway April 2021

Acknowledgements

The authors convey their thanks and appreciation to the Department of Agriculture, Food, and the Marine (DAFM) for funding this flower guide. Special thanks to Tara Challoner, Agricultural, Environmental and Structures Division, DAFM, for her expert guidance and feedback, and to Peter Foss for his photographs.

Published by:

Department of Agriculture, Food and the Marine Johnstown Castle Estate Co. Wexford Ireland Y35 PN52

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How to use this guide

We have organised the plant species into groups that have similar features.

- 1. Positive indicators
- 2. Negative indicators
- 3. Sown legumes and herbs
- 4. Invasive alien species

Each section is arranged by flower colour, with red flowers first, white and green flowers second, and purple and pink flowers last. Flowering times for each group are shaded in gold on the calendar.



- Keep this guide in a clear plastic bag.
- Bring the guidebook to the plant rather than picking the whole plant to bring home.
- Compare flower shape and colour first, then confirm by matching the leaf shape.
- Read the description to check flowering time, habitat, and other features.
- Pick one flower or leaf to check their sizes.
- Always choose a leaf from as close to the ground as possible. Leaves on flowering stems are different.
- Compare with other plants as indicated.

Glossary

4	Basal leaf	A leaf at the base of a plant closest to the ground
带头	Bract	A small scale or leaf-like structure at the base of a simple flower or compact head. May be numerous as in thistle and daisy flowers, or thin as in Large Umbels
35 J. S.	Cluster	Several flowers held in a group
	Compact head	Many small flowers held together tightly, so it looks like one flower
-Alle	Leaflet	The small leafy segment of a larger leaf
A. W.	Legume	A member of the pea family
	Lobed	A strongly wavy edge
*	Notched petal	Petals which are partially split into two lobes

R	Pea-like flower	Flowers in the Pea family have five petals: a large standard petal at the top, two wing petals at the sides, and two lower petals fused into a boat-like keel.
£	Petal	The inner circle of leaves which surround the flower. Often coloured
The state of the s	Pinnate	Leaves divided into segments arranged in a ladder-like pattern
*	Rosette	Leaves in a flattened circular arrangement on the surface of the ground
*	Sepals	The green parts behind the flower which cover the petals in the bud
3,600	Stipules	Leaf-like structures where a leaf stalk joins a stem. They are often very small.
E3	Toothed	A zig-zag edge
12/00/00	Umbel	Many flowers at the top of spoke-like rays radiating from a central point

Key

Flower shape and colour	Leaf	Name	Page
***	李本本	Carline thistle	32
No.	*	Marsh cinquefoil	11
	386	Burnet	67
*		Common sorrel	12
*	<i>→</i>	Sheep's sorrel	12
樂	100	Kidney vetch	13
æ	-	Marsh marigold	17

Flower shape and colour	Leaf	Name	Page
图	***	Tormentils	20
A Pro		Cowslip	18
R		Yellow rattle	23
学	410	Ragwort	52
- AN	*	Goat's beard	21
43	X	Lady's bedstraw	30
级	Sign	Primrose	18

Flower shape and colour	Leaf	Name	Page
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	াপন্তিত	Cat's-ear	21
EB	1	Meadow vetchling	15
B	84	Bird's foot trefoils	14, 59
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ST.	· de	Pignut	28
深	- 100	Wild Carrot	28

Flower shape and colour	Leaf	Name	Page
4	-6	Sweet clover	63
app.	~ass0	Hawkweeds	21
零	-3148	Meadowsweet	24
**		Yarrow	28, 69
	· 美之中	Angelica	26
樂	%	White clover	61
4	- 50	Sheep's parsley	70

Flower shape and colour	Leaf	Name	Page
经		Eyebrights	25
×*	**	Bedstraws	30
Service .	磐	Hogweed	26
季		Marsh pennywort	31
**	0	Stitchworts	30
X	4	Sedges	34

Flower shape and colour	Leaf	Name	Page
中华		Lady's mantle	33
茶	- Aller	Bracken	57
J.	-44/50	Curled dock	54
y	_	Broad leaved dock	54
He	-0	Nettle	55
200	1	Perennial rye grass	56
	-Ah)	Chicory	66

Flower shape and colour	Leaf	Name	Page
1	***************************************	Spike rush	35
A	_	Ribwort plantain	68
The same of the sa	1	Woodrush	35
88	~	Forget-me-nots	50
P	8	Harebell	49
彝	0	Mints	47
*	-	Selfheal	44

Flower shape and colour	Leaf	Name	Page
EST	-	Bugle	45
-	-1116-	Field scabious	43
*	-8	Violets	48
1	Mg.	Tufted vetch	15
	100	Devil's-bit scabious	43
*		Marsh thistle	40
-	1	Bitter vetch	15

Flower shape and colour	Leaf	Name	Page
	also	Lucerne	64
		Meadow thistle	40
ES		Lousewort	38
樂	R	Red clover	60
	1	Common knapweed	41
TO THE	*KK*	Greater knapweed	42
7	***	Spear thistle	53
港	~	Ragged Robin	39

Flower shape and colour	Leaf	Name	Page
*	ESTATE OF THE PARTY OF THE PART	Orchid	46
MAN TO SERVE	-weighte	Creeping thistle	53
		Bee orchid	46
类		Wild thyme	37
4	200	Lady's smock	36
· Pa	- LANGE	Valerian	26
1	44(W)	Sainfoin	65
樂	%	Alsike clover	62

Positive Indicators

- Positive Indicator plants are used to rapidly assess if grassland is in 'good' condition; the plants themselves are not good or bad.
- Positive Indicators are a sign that grassland is semi-natural. It is not managed intensively and it has received only small amounts of fertilisers, herbicides, and other improvements.

Marsh cinquefoil

(Comarum palustris)

J F M A M J J A S O N D

This species is found in damp habitats in or near ditches. Marsh cinquefoil has unusual dark red, star-shaped flowers, with small narrow petals and larger sepals. It has many fertile parts held in a central spiky button. The leaves have five toothedged leaflets. It tends to sprawl and root at leaf junctions.







Sorrels

Common sorrel (Rumex acetosa), **Sheep's sorrel** (Rumex acetosella)

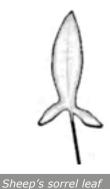
J F M A M J J A S O N D

These two species look alike. They grow in grassland with tall reddish flowering spikes in late summer. The flowers are so small that you are more likely to notice them when their seeds have developed, and they are so light and feathery they can appear like a reddish haze across a meadow.

They can be separated by their leaf shape. Common sorrel has pointed bottom corners on its leaves near the stem. Sheep's sorrel has points which turn out like sheep horns. The leaves taste sour. These two species may be confused with docks (Negative Indicators, p54).









Kidney vetch

(Anthyllis vulneraria)

J F M A M J J A S O N D

Kidney vetch is found in coastal and limestone habitats. It has tight clusters of hairy pea-like flowers which open from red and orange flower buds. Its leaves are grey green with tiny lobes on the stalk that grow larger as the plant matures.









Bird's foot trefoils Bird's foot trefoil (Lotus corniculatus), Greater Bird's foot trefoil (Lotus pedunculatus)

J F M A M J J A S O N D

Bird's foot trefoils have yellow pea-like flowers and similar leaves. Their seed pods look like a bird claw. Their leaves have three leaflets at the tip and two held further back near the stalk.

Bird's foot trefoil likes quite dry habitats. It has solid stems and three to six flowers in a cluster.

Greater Bird's foot trefoil likes damper habitats. It has hollow stems and five to ten flowers in a cluster.

These two trefoil species may be confused with Meadow vetchling (Positive Indicators, p15). Also see Bird's foot trefoil (Sown legumes and herbs, p59).







Vetches and vetchlings

Meadow vetchling (Lathyrus pratensis)
Bitter vetch (Lathyrus linifolius),
Tufted vetch (Vicia cracca)

J F M A M J J A S O N D

These species are stragglers with tendrils or short points at the ends of their pinnate leaves. They have pea-like flowers in clusters.

Meadow vetchling flowers are bright yellow. It sprawls through grass and other taller plants. It is the only species in this group with just one pair of leaflets to each leaf. It has a short needle-like point in between these two leaves.





Bitter vetch has pink flowers which fade to greenish blue. Its stems are winged and each leaf has two to four pairs of leaflets. It also has a point at the end of its leaves.

Tufted vetch has bluish purple flowers. There are 10–40 flowers in each spike. Its leaves are made of many fine parallel-sided leaflets with a long tendril at the top which it uses to hold onto the stems of other plants.









Tufted vetch leaf

Marsh marigold

(Caltha palustris)

J F M A M J J A S O N D

Marsh marigold is found in slow moving streams and ditches. It has bright yellow flowers in spring and early summer. They look like oversized buttercups. They have five large yellow sepals that look like petals and many fertile parts in the middle. The leaves are large and heart to kidney shaped with small teeth along the edge.







Marsh marigold leaf

Cowslip & Primrose

Cowslip (Primula veris), Primrose (Primula vulgaris)

J F M A M J J A S O N D

These two species have five-petalled yellow flowers in spring with a basal rosette of crinkled leaves. The petals join at the base to form a tube.

Cowslip prefers dry grassland. Its dark yellow flowers are held in a loose umbel and they smell of apricots. Each wrinkled leaf has a constricted point near the bottom as if a cow's lips have pressed around it.

Primrose prefers woodland habitats but it can be found in grassland. It has larger, paler yellow flowers, with one flower on each hairy stalk which emerge from the rosette of basal leaves. The leaves taper gently to their base.

Cowslip and primrose can cross, producing some intermediate looking flowers known as False oxlips. If you find flowers with pinkish petals it may be a cross with a garden plant.







Ox-eye Daisy

(Leucanthemum vulgare)

J F M A M J J A S O N D

Ox-eye daisies (or Dog daisies) are found in dry grassland, flowering all through summer.

Each flower is made up of many smaller flowers. In the centre, there are yellow tube flowers whose tops have star-shaped tips. On the outside, there are larger white tube flowers that look like petals.

Unlike the Common daisy, which has basal leaves only, the Ox-eye daisy grows tall with leafy stems. Its lower leaves are spoon like and deeply toothed. It does not have a strong smell. Another distinguishing feature is the dark bracts at the back of the flower.







Tormentils

Common tormentil (Potentilla erecta), English tormentil (Potentilla anglica)

J F M A M J J A S O N D

These low growing, yellow-flowered species are in the Rose family.

Tormentil straggles among grasses, spreading but not rooting from the tips of its stems. The many flowers are held in finely divided sprays. Each has four slightly-notched petals which fall off easily. The leaves are attached to the stem without leaf stalks and they are split into three-toothed leaflets. There are two extra leafy stipules on the stem. The leaves close to the base of the plant have five leaflets.

English or Trailing tormentil is similar but has larger flowers than Common tormentil. It can root from the tips of its stems. Its flowers have five petals, its sepals have ten points. The basal leaves are more likely to persist at flowering time.











Common tormentil flower size

Yellow Composites

Cat's-ear (Hypochaeris radicata),
Hawkweeds (Hieracium spp.),
Smooth Hawk's beard (Crepis capillaris),
Beaked Hawk's beard (Crepis vesicaria),
Goat's beard (Tragopogon pratensis)

J F M A M J J A S O N D

This a complicated group of dandelion-like flowers. They have fluffy seed heads called clocks and white latex sap. Dandelions have hollow flower stems. The toothed leaves form in a basal rosette low on the ground.

The other species in this group have solid flowering stems.

Cat's-ear has a basal rosette of distinctive leaves. Leaves higher up the branching stem are reduced to tiny scales.

Hawkweeds are quite hairy, with almost untoothed leaves. Their clocks are brownish.







Smooth and Bearded Hawk's beard species are tall and slender, with small leaves up their stems. Bracts behind their flowering heads point upwards except for a row of small spreading bracts at the base. Their leaves are very similar to Dandelion.

Goat's beard has long narrow leaves which are almost grass like. Eight long bracts surround the flowers.







Yellow rattle

(Rhinanthus minor)

J F M A M J J A S O N D

Yellow rattle, sometimes called Hay rattle, parasitises the roots of grasses and reduces their vigour. This is beneficial for biodiversity because more wildflowers can flourish when grasses have low vigour.

The flowers are yellow with an upper overhanging lip and a smaller lower lip. Its green bracts are large and form a pouch which becomes more noticeable as the seeds mature, eventually letting the seeds rattle around inside. The leaves are toothed and held in pairs directly on the stem.







Meadowsweet

(Filipendula ulmaria)

J F M A M J J A S O N D

Meadowsweet grows in damp soil. The leaves are distinctive with small leafy bits between each pair of leaflets. They have a medicinal smell when crushed. It grows tall quickly and makes cream-coloured sprays of tiny white flowers. The overall shape of these sprays is like a champagne flute.

Meadowsweet may be confused with species in the Carrot family but their flowers are whiter with a more rounded overall shape. (Large Umbels, p26–27, Small Umbels, p28–29).







Meadowsweet leaf

Eyebrights

(Euphrasia sp.)

J F M A M J J A S O N D

There are many species of Eyebright which can be abundant in grassland, each species favouring a slightly different habitat. They are all annual and can parasitize other plants. They are short (not more than 20 cm tall), branched plants with many small white flowers with purple and yellow markings inside. Stalkless toothed leaves are held in opposite pairs up the stem. The leaves can look purplish.

The flowers are two lipped but the lower petal is lobed into three parts, each of which is notched. This makes a very pretty flower but it can be confused with other species. Check that the stem is round, not obviously square, and the leaves are toothed.







Eyebright leaf

Large Umbels

Angelica (Angelica sylvestris), Hogweed (Heracleum sphondylium) Valerian (Valeriana officinalis)

J F M A M J J A S O N D

Angelica and Hogweed are both tall plants (1–2 m) with tiny white flowers in branched umbels. Valerian is similar but slightly shorter. They can all be abundant in wet grassland.

Angelica has ball-shaped flower heads and smooth, hairless purple-brown stems with a whitish bloom. The flowering head has 20–30 rays. The large, divided leaves have toothed leaflets that are fully separated from each other.

Hogweed flower heads are quite flat on top, and they have fewer rays than Angelica. The stems are green, ridged, and finely hairy. Their huge leaves have leaflets that are not separated from each other.







Angelica leaf



Hogweed leaf

Valerian does not have the same umbrella shape as members of the Carrot family. Its flower buds look pink and the leaves are distinctive.

Compare with Giant hogweed, p74, and Small Umbels, p28–29.







Small Umbels

Pignut (Conopodium majus)
Wild carrot (Daucus carota),
Yarrow (Achillea millefolium)

J F M A M J J A S O N D

There are several medium height species with branching heads of tiny white flowers which are found in grassland.

Pignut grows at woodland edges. The feathery leaves show early in the spring. It has nodding young flower heads, which turn upwards as they mature. It flowers early from the beginning of May.







Wild carrot has thin forked bracts surrounding its flower heads. The flowerheads can look pinkish when young, and sometimes they have a single red flower in the middle. The leaves look and smell like carrot.

Yarrow is known to flower through to New Year. It has flowers in compact heads which look like small all-white daisies. These are held in tight bunches. Yarrow is related to Daisies and has very feathery leaves.

See Sown legumes and herbs, p69 for more information.









Bedstraws and Stitchworts

Lady's bedstraw (Galium verum), Small bedstraws (Galium spp.), Stitchwort (Stellaria spp.)

J F M A M J J A S O N D

These species have small yellow or white flowers. They straggle through grass on thin stems. The flowers of Bedstraws have four tiny petals. The leaves are placed in whorls around the square stem.

Lady's bedstraw is found on alkaline soils. It is the easiest species to recognise in this group because it has tiny yellow flowers in clusters. Other bedstraws have tiny white flowers and may be found in more damp and neutral pH habitats.

Stitchwort flowers have five white notched petals which are slightly larger than bedstraw flowers. They have leaves in pairs with no stalks.







Marsh pennywort

(Hydrocotyle vulgaris)

J F M A M J J A S O N D

Marsh pennywort is easily identified in very wet places. It has round leaves with long stalks in the centre like a shield. Its stems are long and they can root several times. The flower clusters are less noticeable, being greenish white and very small. It is related to umbellifers (See Large Umbels, p26-27; Small Umbels, p28-29).







Marsh pennywort leaf

Carline thistle

(Carlina vulgaris)

J F M A M J J A S O N D

Carline thistle grows in dry alkaline grassland. It is a biennial and rosettes can be seen growing near the previous year's dead flowers. It reaches 40 cm tall. Its flowers differ from other thistles. They are straw coloured with small purple tube-like flowers in the centre. It has spiky sharply-toothed leaves.







Lady's mantles

(Alchemilla spp.)

J F M A M J J A S O N D

There are three native and fairly common Lady's mantle species found in grassland, which are sometimes grouped together as part of a larger aggregate called *Alchemilla vulgaris* agg. The flowers are small and yellowish green, held in clusters. The lobed leaves are sometimes hairy and have toothed edges.

A species of Lady's mantle which has escaped from gardens may be found in grass verges, but those in fields are likely to be native.







Lady's mantle basal leaf

Sedges

(Carex spp.)

J F M A M J J A S O N D

Sedges are a large group of plants that resemble grasses superficially. Some of the more noticeable species in grassland have bluish-green leaves. The leaves can look as if they are coming out in three directions. The flowers are arranged in linear groups called spikelets and there can be several spikelets arranged up a three angled stem.

In Carex species, male and female flowers are on separate spikelets. Often, male flowers are at the top and will look fluffy with anthers at first, while the female spikelets are lower down on the stem and get broader as the seeds develop. The individual flowers have no petals or sepals. Seeds are often used to distinguish the different species.







Woodrushes (Luzula sp.), Spike rushes (Eleocharis sp.)

J F M A M J J A S O N D

These are grass-like plants with simple flowers. Only Woodrushes are strictly in the Rush family, but other species such as Spike rushes are confusingly called rushes, also.

True rushes have six simple, neutral coloured petal-like parts on their flowers. Woodrush leaves are like the blades of grasses. They can be recognised by their soft white hairs. An early flowering woodrush is known as Good Friday grass.

Spike rushes, which belong to the Sedge family, have leaves that are like tight sheaths around their stems. Their simple flowers are at the tips of their stalks.







Lady's smock

(Cardamine pratensis)

J F M A M J J A S O N D

Lady's smock, often called Cuckoo flower, has four-petalled pale lilac flowers in loose spikes. It likes slightly damp fields. The leaf rosettes may have a purple tint and can be found throughout the winter. The basal leaves are broad but the leaves higher up the flowering stem become narrower and more delicate.

Lady's smock may be confused with Hairy bitter cress or Wavy bitter cress, which are smaller plants and have much smaller white flowers.







Lady's smock basal leaf



Flower size

Wild thyme

(Thymus polytrichus)

J F M A M J J A S O N D

Wild thyme is scented, like other members of the Mint family. The square stems are wiry but very thin, and it grows low to the ground in dry grassland. Its tiny leaves are hairy. The two lipped, deep-pink flowers are held in clusters. Its scent is noticeable on warm days.







Louseworts

Lousewort (*Pedicularis sylvatica*), **Marsh lousewort** (*Pedicularis palustris*)

J F M A M J J A S O N D

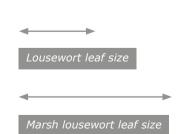
Louseworts are partially parasitic plants with bright pink flowers, 2–2.5 cm long, and delicately lobed leaves.

Lousewort is a small low growing plant found in damp and acidic habitats. It is a perennial. It has flowers held on very short flower stalks. They have two bright pink lips. The upper is like a hook and it is slightly longer than the bottom lip which has three lobes.

Marsh lousewort is an annual species. It is taller than Lousewort. It grows in slightly wetter grassland. It has very similar flowers but its upper lip is the same length as the lower lip.





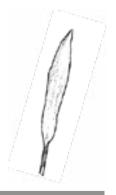


Ragged robin

(Silene flos-cuculi)

J F M A M J J A S O N D

Ragged robin is an attractive medium tall plant of damp grassland. The stems have several flowers each held on a short flower stalk. The reddish-pink flowers have five petals which are split into thin forks, held in a sepal tube. Occasionally, the flowers are white. Lower leaves are simple and held in opposite pairs on the stalk, and they become narrower up the stem.



Ragged robin leaf





Meadow Thistle

(Cirsium dissectum),

Marsh thistle

(Cirsium palustre)

J F M A M J J A S O N D

All thistles have sharp spines on their leaves and small flowers held in a compact head. They have hairy seeds which are dispersed by the wind.

Meadow thistle is distinctive. It grows in damp grassland. It has single purple flower heads on spineless stems. The whole plant looks pale because it is covered in soft white hairs. It has purple spines on each undivided leaf but these are quite soft to touch.

Marsh thistle grows in soils which hold moisture. It is a biennial. It is usually chest height but it can grow very tall. It has dark purple, sometimes white flower heads in clusters. Its leaves are dark and have purple marks at their edges. Its stems are winged with sharp points. Compare with Thistles (Negative Indicators, p53).











Marsh thistle leaves

Common knapweed

(Centaurea nigra)

J F M A M J J A S O N D

Knapweeds are medium tall plants with thistle-like flowers but no spines. Their individual flowers are held in compact heads.

Common knapweed is also known as Knapweed or Black knapweed. It can be abundant in neutral or acidic grassland. Its tube-like flowers are dark pinkish purple. The bases of the compact heads are covered in scaly bracts with bristly edges. Its leaves are simple and slightly hairy.

Common knapweed can be confused with Greater knapweed (p42).







Common knapweed leaf

Greater knapweed

(Centaurea scabiosa)

J F M A M J J A S O N D

Greater knapweed grows in alkaline grassland. It is larger and more showy than Common knapweed. It is a medium tall plant with thistle-like flowers but no spines. The individual bright pink 'flowers' are made of many tiny flowers called florets. The large ragged ones sit around the edge to attract insects. Only the small, densely packed little flowers in the centre are fertile. The leaves are greyish green and deeply pinnate. The stems are rough, hairy, and angular. The leaves on the stem are very narrow and this feature is used to separate Greater knapweed from Common knapweed.







Greater knapweed leaf

Scabious

Devil's bit scabious (Succisa pratensis), **Field scabious** (Knautia arvensis)

J F M A M J J A S O N D

Scabious are medium tall plants with attractive light purple flowers held in compact heads.

Devil's bit scabious is common and widespread in semi-natural grassland. It can become quite tall in long grass. Its purple flowers are held tightly in heads, 1.5–2.5 cm across. Most leaves are basal and simple.

Field scabious is found is dry grassland. It has flatter and larger (3–4 cm) flower heads than Devil's bit scabious. They are a paler purple in colour, and the outer flowers in the flowerhead are larger than the ones in the centre. It has lobed leaves.

Field scabious may be confused with Knapweeds (Positive Indicators, p41–42).









Devil's bit scabious leaf (left), Field scabious leaf (right)

Selfheal

(Prunella vulgaris)

J F M A M J J A S O N D

Selfheal grows low to the ground and spreads through grassland. It is in the Mint family. It has simple unscented leaves and purple-blue flowers.

Selfheal is lightly hairy. It has small twolipped flowers held in short spikes with two leaves at the base. Not all the flowers open at once and the flower spikes can be found for a long time after flowering. It sometimes flowers late in the year. Its leaves are simple with slight teeth. The stem is square.







Selfheal leaves are simple and held in opposite pairs

Bugle

(Ajuga reptans)

J F M A M J J A S O N D

Bugle grows low to the ground and spreads by runners through grassland. It is in the Mint family and has simple unscented leaves and purple-blue flowers.

Bugle has leafy flowering spikes with whorls of purplish-blue flowers which have lobed lower lips. It has square flower stems which are only hairy on two sides. The leaves are often quite purple or bronze. They have rounded teeth and taper to the leaf stalk.

Pyramidal bugle is a related but a very rare species. It differs in having hairs on all four sides of its stem.





Bugle leaf



Orchids

Bee orchids (Ophrys spp.), Orchids (Orchis spp.), Marsh orchids (Dactylorhiza spp.)

J F M A M J J A S O N D

In grassland, orchids are short to mediumhigh plants with unusual flowers. They have strap-like leaves with parallel veins. They have a short summer flowering season but the leaf rosettes may be found throughout the winter.

Bee orchids, and the closely related Fly orchids, have complex individual flowers which look like insects. They grow in dry alkaline grassland. Bee orchids have a few flowers spread up a short flowering spike. They have small pink petals surrounding their dark lower petal. Their rosettes are small and each leaf has a pointed tip.

Orchids, such as Early purple orchid, have slightly less showy purple flowers more closely held on the flowering spike. Their lower petals do not look like insects and they can be lobed or frilled. Each flower has a small pocket at the back called a spur. These point upward in Orchis species and downward in the closely related Spotted and Marsh orchid group. Their leaves can have dark patches.











Mints Mint species (Mentha spp.)

J F M A M J J A S O N D

Mints are softly hairy plants with mintscented leaves held in opposite pairs on square stalks. The are several Mint species which grow in grassland. Some have stalked leaves, some have leaves with no stalks. They have tiny, pale purple flowers arranged in clusters either at the top of the flowering spike or in whorls around the stem. Each flower is a very short tube with four lobes. One of the lobes may be larger and notched. They have simple leaves with gently toothed edges. Water mint leaves can look purplish.







Mint leaves may be rounded or pointed at the tip

Violets

Dog violets (Viola riviniana, Viola reichenbachiana),
Marsh violet (Viola palustris)

J F M A M J J A S O N D

Violets are small plants with bluish-purple flowers and lower leaves with rounded bases.

Violets are small plants with heart-shaped or round leaves with rounded teeth. They have pale bluish-purple flowers with five petals. The lowest petal has a long pocket or spur. Most violets in Ireland are unscented.

Dog violets have a white or purple spur they prefer slight shade. They are spring flowering.

Marsh violets are found in damp grass and at the edges of ditches and streams. They have bluer purple flowers with no spur and more rounded leaves.









Harebell

(Campanula rotundifolia.)

J F M A M J J A S O N D

Harebells are small plants with bluishpurple flowers and lower leaves with rounded bases. Harebells are found in dry grasslands and flower late in summer. They have pale purplish-blue petals forming a bell. Several bells are loosely held on each stem. Their basal leaves are rounded and toothed like Violet leaves, and they can be very small. Leaves up the flowering stem are thin and pointed.

Harebell basal leaves can be as small as the inner circle, but they are never larger than the outer circle. They fit somewhere in the grey area.



Harebell basal leaf size can be very small







Forget-me-not species (Myosotis spp.)

J F M A M J J A S O N D

There are seven species of Forget-me-not in Ireland. They are all small hairy plants found in damp or dry habitats. They have many tiny blue flowers on slender stalks, which sometimes curl. Flower buds can be yellow or pink. Each flower has a short tube with five spreading lobes. Their leaves are simple and have no stalk and they are arranged one-by-one on either side of the stem.

Forget-me-nots may be confused with Speedwells, so check that the leaves are not toothed.





Forget-me-not leaf



Flower sizes are from 2-6mm across

Negative Indicators

- Negative Indicator plants are used to rapidly assess if grassland is in 'poor' condition; the plants themselves are not good or bad.
- Negative Indicators, such as Perennial rye grass and Nettles, indicate that grassland is managed intensively or it has been improved.
- This section also includes agricultural weeds which are listed in the Noxious Weeds Act (1936), such as Creeping and Spear thistle, and Broad-leaved and Curled dock.

Ragwort

(Senecio jacobaea)



Ragwort is a well-known weed of dry habitats. It is poisonous to animals but good for insects. It has many small yellow daisy-like flowers, with distinctive lobed leaves with some purple colouring at the base of the stalk and leaves. The rosettes are flat to the ground when the plant is not in flower.

Marsh ragwort looks similar, but it grows in wet areas. It has larger flowers and looks more delicate than Ragwort.







Thistles

Creeping thistle (Cirsium arvense);

Spear thistle (Cirsium vulgare)

J F M A M J J A S O N D

Creeping thistle has roots that spread through grassland, so if you see one plant there are likely to be more nearby. Its small, pale purplish-pink flowers smell sweet, like honey. The leaves are pale green and spiky but the spikes are soft.

Spear thistle has large dark green rosettes. Its flowers are large and dark pinkish purple. The bottom of the flower head is very rounded. Each leaf has upturned points like spears.

Both species can be confused with Marsh thistle and Meadow thistle (Positive Indicators, p40).







Spear thistle leaf









Docks

Broad Leaved dock (Rumex obtusifolius),
Curled dock (Rumex crispus)

J F M A M J J A S O N D

There are several species of Dock in Ireland. They have small green flowers in whorls on tall flowering spikes. They are closely related to Sorrels (Positive Indicators, p12). Their reddish seeds are more noticeable than the flowers and their features can help to separate different species.

Broad leaved dock can be abundant in fertile grassland. The leaves are large and rounded at their base. They are probably the most likely to be picked by children to soothe a Nettle sting. Its seeds have a toothed green part.

Curled dock is similar, but its leaves have a wavy edge.







Nettles

(Urtica dioica)

J F M A M J J A S O N D

Nettles spread rapidly by their roots to form large patches, especially when the soil has plenty of nutrients.

Their flowers are green and tiny, on separate male and female plants. Females can be identified easily when they have seed. The dark green leaves are arranged in opposite pairs. Their edges are deeply toothed. The whole plant is covered in tiny stinging hairs.







Perennial rye grass

(Lolium perenne)

J F M A M J J A S O N D

Perennial rye grass, also known as PRG, is the most commonly sown grass in Ireland and may remain in fields long after they were last reseeded. Fields containing a large amount of Perennial rye grass will look very green and almost shiny from a distance.

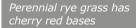
It has tall flowering spikes with flattened groups of small green flowers which are spread widely apart on both sides of the flower stem.

It can be recognised easily by its glossy green leaf blades. They are strong and make a twanging sound if you pull them apart between your fingers. The leaf bases are a bright cherry red colour. It does not have runners but grows in tufts of individual plants.











Leaf width

Bracken

(Pteridium aquilinum)

J F M A M J J A S O N D

Bracken is a fern that has huge leaf-like fronds growing singly from an underground stem. It can cover large areas although it does not clump. In early summer, soft scale-covered fronds can appear in grassland. The fronds unfurl in several directions at once. They can reach 2 m high by late summer. Brown dead leaves are still evident in autumn and winter.

Bracken produces spores, not flowers, which form along the underside edges of the leaf tips and look pale.





Sown legumes and herbs (multi species ley)

- Multi-species leys contain many trace elements, minerals, and medicinal substances that benefit grazing animals and lead to higher yields.
- The many different root types in a multi-species ley can improve the uptake of plant nutrients and water, and they improve the soil structure and nutrient cycling within the soil.
- Most of the species in this section are members of the Pea family, known as legumes. They can be easily identified by their pea-like flowers.

Sown legumes Bird's foot trefoil

(Lotus corniculatus)

J F M A M J J A S O N D

Birds foot trefoil is a valuable plant for grassland because it can tolerate poor quality soil and it may have medicinal benefits for grazing animals. It is a legume (Pea family). It has a distinctive flower arrangement. The flowers have five petals. The largest petal at the top is called the standard. It can have a notch at the top. There are two smaller wing petals at each side.

The two bottom petals are very small and joined together to form a boat-like keel. The fertile parts of the flower are inside the keel. It has a toothed sepal tube. The leaves have three leaflets and two similar-looking stipules. (See Positive Indicators, p14).







Bird's foot trefoil leaf

Red clover

(Trifolium pratense)

J F M A M J J A S O N D

Red clover is a beneficial plant in grassland because it 'fixes' nitrogen and makes it available to other species. It does not like being trampled, so it is characteristic of old meadows and disappears from intensively grazed fields.

It grows in tufts and it is more upright than other clover species. The round heads of small pea-like flowers are pink (never red). It has trefoil leaves which may have a white mark on them. Look at the edge of a leaf to distinguish it from white clover: white clover has teeth and red clover is hairy.







Red clover leaf has hairy edges

White clover

(Trifolium repens)

J F M A M J J A S O N D

White clover prefers moist, fertile grassland but it does not like shade and may quickly disappear in long grass. It can be recognised easily by its small, thin pea-like flowers in clustered heads, which brown as they age. The leaves are trefoil with white marks on them.

White clover has been important as a fodder crop since the 17th Century because, like Red clover, it can 'fix' nitrogen and make it available to other plants. It is a valuable plant in grassland. Unlike other clovers, it has stems that run along the ground and these produce edible leaves and flowers, making it ideal for grazing. If it is combined with Perennial rye grass it increases the protein content of forage to 20%.







White clover leaf has toothed edges

Alsike clover

(Trifolium hybridum)

J F M A M J J A S O N D

Alsike clover is unique amongst crop clovers because it grows well in wet and acid soils. It grows semi-upright. It can be distinguished from red and white clovers by the flowers which are pink and white. The leaflets are slightly toothed but they do not have the white markings of red and white clover.







Alsike clover leaf

Sweet clover

(Melilotus officinalis)

J F M A M J J A S O N D

Sweet clover, also called Ribbed melilot, likes dry waste ground and the edge of grasslands where it can grow to 1 m tall. It has quite large spikes of bright yellow pea-like flowers held upright on hairless stalks. Its leaves are trefoil, made of three sharply-toothed leaflets. The middle leaflet has a short stalk, unlike Red and White clover. In late summer, it forms brown wrinkled seedpods. Sweet clover smells of hay.

If Sweet clover is sown in May, it can produce large amounts of green material by July which makes it good for grazing. It is also a very good green manure and it makes nitrogen available to other plants.







Sweet clover leaf has a middle leaflet with a short stalk

Lucerne

(Medicago sativa)

J F M A M J J A S O N D

Lucerne, also called Alfalfa, is an old fodder crop dating back to the 17th Century. It has a high feeding value for grazing animals. Now, it can be found in dry field borders, roadsides and waste ground. It is a large plant growing upright. It looks similar to Sweet clover with spikes of pea-like flowers at the end of the stems, but the flowers are purple, not yellow. The trefoil leaves are long and toothed at the tips. The central leaflet is stalked, like Sweet clover, but it does not smell of hay. The deep roots are known to improve soil.

Lucerne produces a high protein forage and it is widely grown in Europe on its own or mixed with meadow grasses. It is drought resistant.







Lucerne leaf has a middle leaflet with a short stalk

Sainfoin

(Onobrychis sativa)



Sainfoin is a tall, pretty plant with spikes of pea-like flowers coloured pink, dark red, and violet. The flowers are held on tall stems. The leaves are long and pinnate with 8–14 pairs of untoothed leaflets. Unlike vetches, they have a leaflet, not a tendril, at the end of their leaves.

Sainfoin is a valuable forage plant that fixes nitrogen to make it available to other plants. It likes chalk and limestone soils. It is drought resistant. Its roots can extract many nutrients by growing deep into the soil. Sainfoin is also valuable for grazing animals because it is a natural and safe worming agent. It makes good silage and hay in June.







Sainfoin leaf is pinnate with a leaflet at the end

Sown herbs Chicory (Cichorium intybus)

J F M A M J J A S O N D

Chicory is a member of the dandelion family. It grows to 1 m tall. It has pretty bright blue dandelion-like flowers. They are arranged in loose spikes on stiff stems that are grooved. Chicory is easy to identify if you break a stem and it leaks a white latex. The leaves on the stem look different from the leaves at the base of the stem. A stem leaf is long and thin and it grasps the stem at its base. The leaves at the base of the plant are lobed and may have a reddish midrib.







Burnet

(Sanguisorba minor)

J F M A M J J A S O N D

Burnet is a short perennial plant that likes dry and limestone habitats. Its small flowers are unusual having no petals just a small green cup holding the fertile parts. These tiny flowers are held in a short round heads which look redder at the top and greener lower down. Its leaves are made up of small, toothed leaflets, each about 1 cm long.

It may be confused with the larger Greater burnet whose leaf segments are 3–4 cm. When the flowers have finished flowering, they can look like Ribwort plantain seed heads. Check the leaves to be sure of the identification.

All parts of Burnet are edible, making it a useful plant for forage. It is long lived and drought resistant.







Burnet leaf is pinnate with small, toothed leaflets

Ribwort plantain

(Plantago lanceolata)

J F M A M J J A S O N D

Ribwort plantain is very abundant in grassland where it produces long thin leaves with obvious parallel veins. The leaves grow out from a single rosette. It can form short, more rounded leaves in a flattened rosette on the surface of the soil in disturbed areas where there is less competition from other plants. It has tiny individual flowers in short dense spikes. The flowers are brown with pale yellow stamens radiating out in all directions.

Ribwort plantain is closely related to Greater plantain which has much larger and more rounded leaves. They can be distinguished by the flower stalk which is ridged in Ribwort plantain and smooth in Greater plantain. Greater plantain is very resistant to trampling and it is frequently found on paths, tracks and gateways.







Yarrow

(Achillea millefolium)

J F M A M J J A S O N D

Yarrow can be easily identified by its soft feathery leaves and its dense white or pinkish umbels of flowers held at the top of stiff and strong stems (Positive Indicators, p29).

Yarrow is related to Daisies. Both have flower heads made of many small tubeshaped flowers with larger flowers around the outside which look like petals.

It is often included in wildflower seed mixes for grassland because it is long lasting. It provides a good source of food for pollinating insects.

The leaves have a distinctive smell.







Yarrow leaves are feathery

Sheep's parsley

(Petroselinum crispum)

J F M A M J J A S O N D

Sheep's parsley is often included in seed mixes because it contains many nutrients. It has a deep root that helps to improve soil and the flowers attract butterflies.

Sheep's parsley is a biennial. In the first year, it forms a rosette of pinnate leaves which have three leaflets. In the second year, it grows a flowering stem with many tiny greenish-yellow flowers and fewer leaves.





Garden leaves smell of parsley

Invasive Alien Species (IAS)

• The following four species are controlled under the EC (Birds and Natural Habitats) regulations S.I.477 (2011) which makes it an offence to knowingly disperse them or allow them to escape.

Himalayan balsam

(Impatiens glandulifera)

J F M A M J J A S O N D

Himalayan balsam, also known as Indian balsam, is an annual which spreads by producing a huge number of seeds. It likes growing in damp places, particularly river banks. It grows up to 3 m tall, with large pale pink-purple flowers that look like trumpets. The seeds explode out of the flowers when ripe. The hollow stems are reddish in colour. The leaves are dark green, long and quite narrow with toothed edges and pointed tips.



Japanese knotweed

(Fallopia japonica)

J F M A M J J A S O N D

Japanese knotweed is a tall perennial which is tolerant of a wide range of conditions and can be found almost anywhere. It produces bamboo-like canes and its leaves are bright green with a distinctive flat base, like a shield. It produces plumes of little white flowers in early autumn. It produces underground stems called rhizomes, which crack open like a carrot. They are bright orange inside. Dispersal occurs because the rhizomes easily break into pieces when disturbed and each broken piece can form a new plant.



Giant hogweed

(Heracleum mantegazzianum)

J F M A M J J A S O N D

Giant hogweed's main flowering time is during the summer but flower heads can be found year-round.

Giant hogweed is much bigger than our native Hogweed and its sap can cause a serious burn. The two species can be distinguished by these four characteristics:

Giant hogweed	Hogweed
Huge leaves, 1 m across. The leaflets look jagged as if they have been cut with a pair of scissors.	Smaller leaves with more rounded edges to the leaflets.
Grows in huge clumps, often along roads and rivers.	Grows singly.
Stems have purple splotches and stiff bristles.	Stems are green with fine hairs.
Flower head is very large and umbrella shaped, with 50 rays.	Flower head is flat topped and much smaller with less than 15 rays.



Giant rhubarb

(Gunnera tinctoria)

J F M A M J J A S O N D

Giant rhubarb is a perennial which spreads by underground rhizomes, like Japanese knotweed.

It grows 2 m tall with huge rough leaves. The leaf stalks grow up to 1.5 m long, with stiff bristles and spines along them. The flower is a large cone-like structure which produces a huge number of seeds.



Irish names

Airgead luachra	Meadowsweet
Athair thalún	Yarrow
Bainne bó bleachtáin	Cowslip
Biolar gréagáin	Lady's smock
Boladh cnis	Lady's bedstraw
Buachalán buí	Ragwort
Cab an ghasáin	Field scabious
Caorthann corraigh	Valerian
Cíb dhéise	Spike rush
Cíb liathghorm	Glaucous sedge
Cluas chait	Cat's-ear
Cnó léana	Marsh cinquefoil
Copóg chatach	Curled dock
Copóg shráide	Broad leaved dock
Corra meille	Bitter vetch
Crobh éin	Common Bird's foot trefoil
Crobh éin corraigh	Greater Bird's foot trefoil
Crúibín cait	Ribbed melilot

Pignut
Lady's mantle
Selfheal
Salad burnet
Ragged Robin
Early purple orchid
Bee orchid
Wild carrot
Kidney vetch
Harebell
Lucerne
Marsh lousewort
Common knapweed
Greater knapweed
Mint
Tormentil
Nettle
Ox-eye daisy

Fanaigse	Violet
Feabhrán	Hogweed
Feochadán colgach	Spear Thistle
Feochadán corraigh	Marsh Thistle
Feochadán mín	Carline Thistle
Feochadán móna	Meadow thistle
Feochadán reatha	Creeping thistle
Finidí na muc	Goat's beard
Fraoch mór	Heather
Fraoch naoscaí	Heath
Gallfheabhrán	Angelica
Giúnach léana	Woodrush
Glanrosc	Eyebright
Glasair choille	Bugle
Gliográn	Yellow rattle
Luachair chaoráin	Heath rush
Lus an ghiolla	Lousewort
Lus buí Bealtaine	Marsh marigold

Lus cúráin mín	Smooth hawk's beard
Lus míonla buí	Forget-me-not
Lus na pingine	Marsh pennywort
Odhrach bhallach	Devil's bit scabious
Peasair na luch	Tufted vetch
Peasairín buí	Meadow vetchling
Peirsil gharraí	Sheep's parsley
Raithneach mhór	Bracken
Sabhaircín	Primrose
Samhadh bó	Common sorrel
Samhadh caorach	Sheep's sorrel
Seagalach buan	Perennial rye grass
Seamair bhán	White clover
Seamair dhearg	Red clover
Searbh na muc	Mouse ear hawkweed
Siocaire	Chicory
Slánlus	Ribwort plantain
Tím chreige	Wild thyme

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Notes







An Enise Telepholechea, this ages Mars Department of Agriculture, Evod and the Marine



The European Agricultural Fund for Rural Development: Europe investing in rural areas