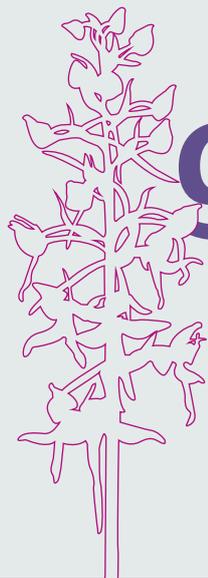


# The good meadow guide

Your go-to guide for transforming  
places into flower-rich meadows



# The good meadow guide

Your go-to guide for transforming places into flower-rich meadows

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# A meadow revival

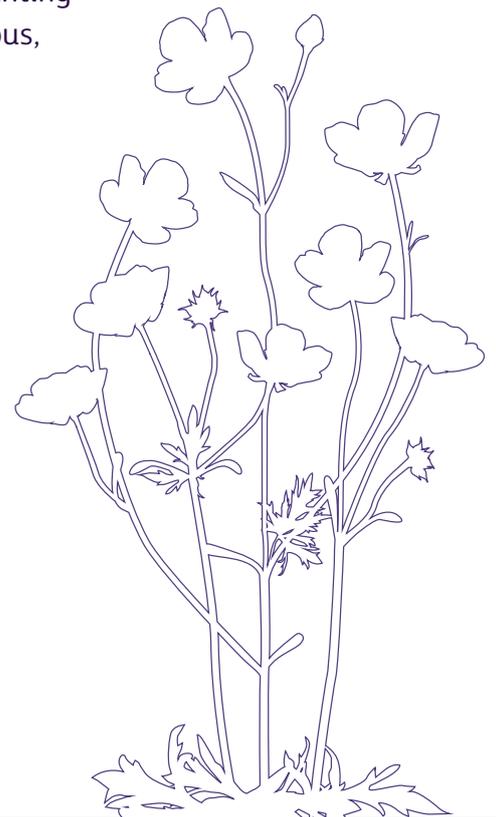
The headline is stark. Since the 1930s, over 97% of wildflower meadows have been lost.

That's 7.5 million acres of once flower-rich fields and meadows that are now intensively managed: regularly ploughed, sown, herbicided and fertilised, cut repeatedly for silage, heavily-grazed with livestock, or cultivated with wheat, barley and other crops. Where once thirty species of plants would bloom under your outstretched arms, in most of our fields there are now around six.

But, in the last few years, we have come to appreciate what we've lost. We're beginning to understand the incredible value of flower-rich meadows and pastures – for livestock, for wildlife and for us – and recognise their breathtaking beauty. The tide is turning and the appetite for creating and restoring meadows – from the smallest garden to the largest fields – is greater than ever. Indeed, since 2013 Plantlife has led the creation and restoration of over 12,000 acres of wildflower meadow.

Whether you want to learn more about creating and planting meadows, help on how to keep meadows looking fabulous, or want some advice on growing yellow rattle and plug plants, the *Good Meadow Guide* is a great place to start. By adopting a few basic principles, you can create flower-rich meadows on any scale – from a few square metres in your garden to fields of many hectares.

Doing so will significantly improve biodiversity, help store carbon, and bring benefits for wildlife, for us and for future generations.



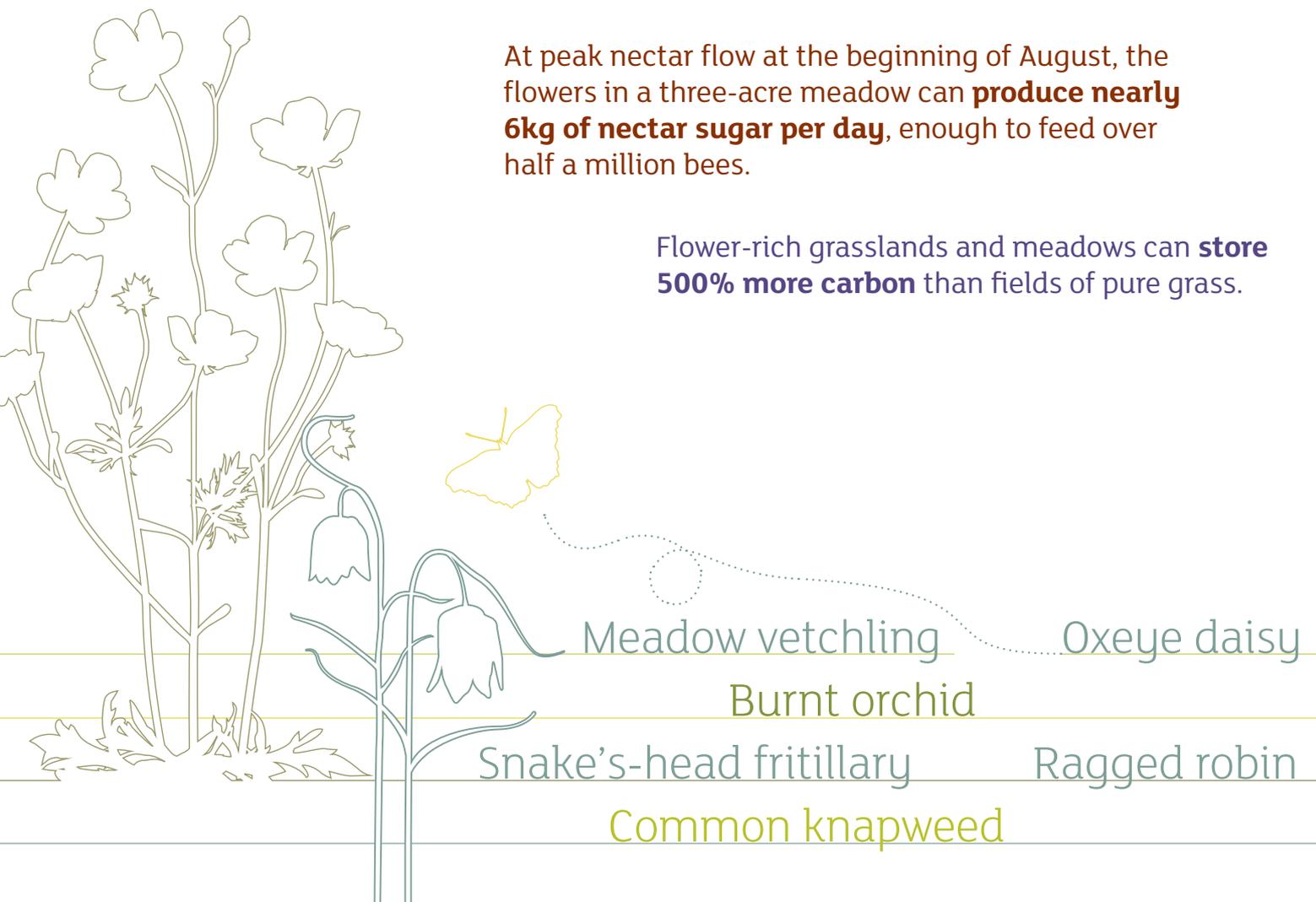
# The value of meadows

Over **700 species of wild plants** grow in grassy meadows, pastures and fields.

A typical meadow can be home to 570 flowers per square metre on a single day in early summer, **that's nine million flowers in an average three acre meadow.**

At peak nectar flow at the beginning of August, the flowers in a three-acre meadow can **produce nearly 6kg of nectar sugar per day**, enough to feed over half a million bees.

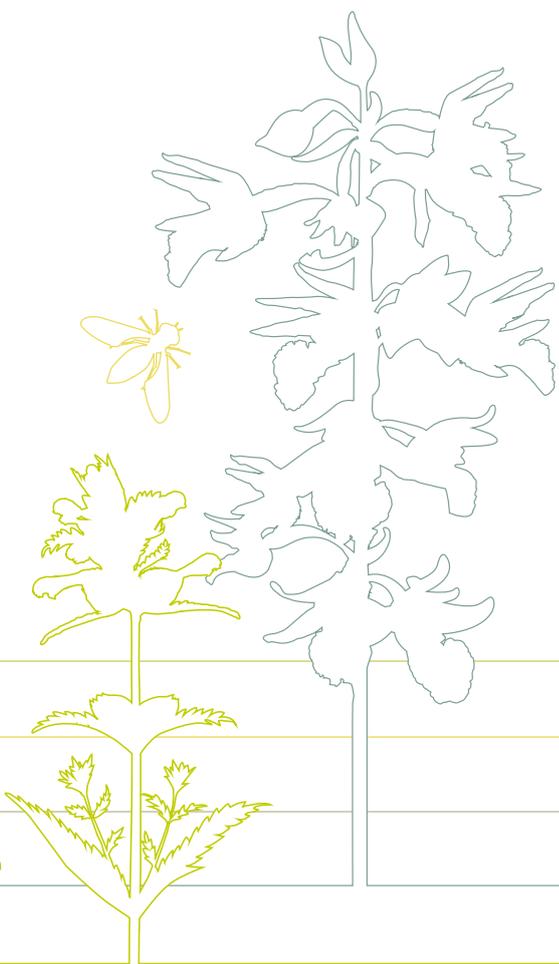
Flower-rich grasslands and meadows can **store 500% more carbon** than fields of pure grass.



Roots of meadow plants like common knapweed, great burnet and bird's-foot-trefoil can **reach down two metres into the ground**, helping them survive drought, stabilise the soil, store carbon and bring up valuable minerals for livestock to eat.

Looking at a flower like oxeye daisy **for just six seconds has been shown to lower your blood pressure.**

The plants in **a typical meadow can support nearly 1,400 species of invertebrates**, that's an army of bugs, beetles, flies, spiders, grasshoppers, crickets, butterflies and moths.



Bee orchid

Lady's-bedstraw

Meadow saxifrage

Wild carrot

Selfheal

Yellow rattle

# The diversity of meadows...

The iconic flower-rich habitat we typically think of when we imagine a meadow in all its glory is a **lowland neutral meadow**. Rooted in soil that's neither too acid or alkaline, neutral meadows support a soft mixture of grasses and flowers reaching from knee to waist-high in summer; an intricate tapestry of flowers such as cowslips, oxeye daisy, buttercups, scabious, betony, clovers, vetches, knapweeds and lady's bedstraw. Flowery and exuberant, these meadows can support magnificent displays of orchids, especially green-winged and common spotted orchids. Yellow rattle and eyebrights play a crucial role, helping keep the grass down. Thanks to these species and the infertile soil, the sward is thin and short, with delicate grasses like sweet vernal grass, quaking grass and crested dog's-tail allowing plenty of room for other flowers to grow.

On wetter soil where rivers break their banks in winter, **floodplain meadows** develop where the soil is deeper and more fertile, supporting quite tall, lush vegetation. Here, early sheets of cuckooflower and – in a few spectacular cases - snake's-head fritillaries are followed by ragged-Robin, meadowsweet and great burnet, providing splashes of colour amongst vigorous grasses such as meadow foxtail, red fescue and creeping bent. In wetter spots, amphibious bistort and marsh marigold thrive, while ancient floodplain meadows with less fertile soils can support delicate pepper saxifrage.

In areas of northern Britain, **upland hay meadows** develop with a distinctive flora. Although not as species-rich as their lowland counterparts, they can be truly spectacular with characteristic wood crane's-bill, melancholy thistle, bistort and great burnet providing colour amongst the buttercups, red clover, yellow rattle and eyebrights. The white frothy flowers of pignut often soften the picture, and rare species of lady's-mantle nestle amongst the grasses.

On poorer soils in western areas, wet **rush pasture** (also known as **culm pasture** in England and **rhôs pasture** in Wales) is characterised by purple moor-grass and rushes enlivened with ragged-Robin, Devil's-bit scabious, whorled caraway, lesser spearwort and sneezewort. Marsh orchids and heath spotted orchids can be abundant, and this is particularly good habitat for other wildlife including reptiles, amphibians and wading birds.

Some of our most spectacular of all wild flower habitats can be found on well drained, alkaline soil that develops on top of chalk and limestone rocks. **Chalk downland and limestone grassland** can support an astonishing 50 species in a single metre square, with wild thyme, lady's bedstraw, salad burnet, common rockrose, marjoram, harebell and small scabious densely packed together. But it's the rare and unusual flowers that make these meadows so exciting: the chance to find all manner of orchids, gentians, milkworts, vetches and pasqueflowers.

One of our most widespread but perhaps unappreciated grassland habitats is **acid grassland**. Found on acid soils of hills, mountains and fells, as well as overlying acidic lowland rocks such as sandstone and shale, this habitat is dominated by grasses such as bents, fescues, sweet vernal-grass and mat-grass. Despite this, the sward is often enlivened by wild flowers, especially tormentil, heath bedstraw, mouse-eared hawkweed, heath milkwort and sheep's sorrel. Occasionally, other flowers like heath spotted-orchid, betony and autumn hawkbit can be abundant, as well as swathes of harebell.

The diversity of our meadows and grasslands is staggering. The vast palette of wild flowers allows some remarkable pictures to be painted, with plants coming together in myriad combinations that lend local character and identity to our meadows, such as:

**Herefordshire meadows** thick with common spotted orchids and rare dyer's-greenweed, pepper saxifrage and meadow saffron.

**Wet Carmarthenshire rush pastures** with whorled caraway, ragged-Robin and Devil's-bit scabious.

**Clay-rich Norfolk meadows** with sulphur clover, pyramidal orchid and common bird's-foot-trefoil.

**Kent downland** with a plethora of rare orchids: monkey, man, military, fragrant and lizard.

**Upland meadows** in Cumbria with wood crane's-bill, rare Lady's-mantles and melancholy thistle.

**Coastal hill pastures** in the Scottish Islands with frog orchid, wood bitter-vetch and field gentian.

**Sandy Lincolnshire meadows** with pasqueflower, autumn gentian, basil thyme and kidney vetch.



# What is a meadow?

With a mixture of soft grasses and wild flowers reaching above your knees, a traditional meadow is a field or grassy area allowed to grow unhindered until it's cut for hay in late summer.

After the hay has been cut and collected in late July or August, the meadow is grazed for a few months during autumn and winter, usually by cattle or sheep. As midwinter approaches and the grass stops growing, the animals are fed the hay from the meadow while food is short. In early spring as the meadow wakes up, the animals are removed from the field (the meadow is 'shut up') and the grasses and flowers allowed to grow unhindered until the hay is ready to cut again.

This simple annual cycle of growing, cutting for hay and grazing with livestock is the beating heart of the meadow, the regular pulse by which it thrives.

But you don't have to own cows or sheep to create a meadow. By cutting and mowing at the right time, we can create meadows in our gardens, parks, community spaces and along road verges. Indeed, any grassy habitat can become a meadow - we just have to let the flowers bloom and set seed, so allowing them to increase year-on-year.

©Joe Costley/Plantlife



Green-winged orchids

## What is the difference between a meadow and a pasture?

Just as we use the word woodland to describe many different types of wood, we now use the word meadow to describe many different types of flower-rich grassy places that aren't maintained by cutting for hay. This includes pastures that are maintained by grazing.

The grass is kept in balance by careful grazing with a small number of animals which are moved around throughout the year. This 'extensive' grazing (as opposed to intensive grazing) allows **pastures and grasslands** to support abundant flowers without a hay cut:

- Dry, lime-rich soils, chalk downland, sandy dunes and limestone grassland are all grazing pastures that can be exceptionally rich in flowers – they're some of our most species-rich habitats of all.
- Dry, acidic soils, acid grasslands are some of our most common pastures. Although relatively species-poor, they can host abundant tormentil, heath bedstraw and heath milkwort.
- Wet soil, rush pastures are home to their own special flowers, especially whorled caraway and heath spotted orchids.

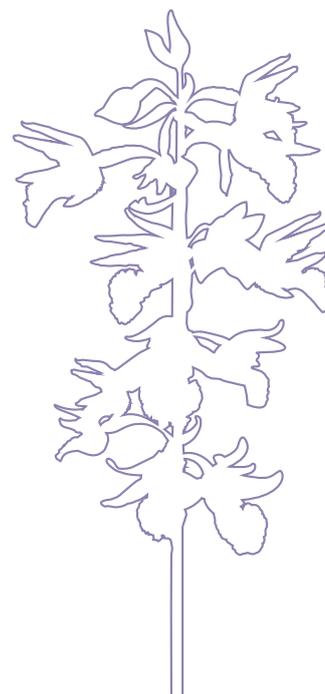
## What is a pictorial or annual meadow?

In a horticultural sense, the word meadow has also come to mean plantings of annual flowers in gardens, amenity areas and on roundabouts and road verges. Highly colourful and often including cornfield flowers and non-native species like Californian poppy and cosmos, they are a popular way to enliven urban and suburban areas and provide a hit of pollen and nectar for pollinators.

Although they have meadow in their name, this style of gardening and amenity planting doesn't produce meadows in the true sense of the word, which are perennial in nature. Instead, they require a different sort of annual management – an intensive mix of ground clearing, soil cultivation and sowing of (sometimes expensive) seed each year.

Because pictorial meadows don't include any grasses to soften the palette, they pack an intense floral punch, so risking distorting expectations of what a native wildflower meadow looks like. This can be a problem when new perennial meadows don't deliver a riot of colour in their first few years, leading to disappointment.

It's also good to remember that there's an awful lot more to our important insect life than pollinators: research by Plantlife suggests that while more than 1,400 species of insect feed on the leaves, stems and roots of native wild meadow flowers, a typical annual pollinator mix will only support around 40 insect species in this way.



# Plantlife's meadow management guidelines

## Thinking about having a meadow?

Although meadows come in a huge range of different shapes, sizes and types, a few basic principles underlie their creation and care. Whether you want to turn a tiny part of your garden into a wildflower meadow, create a new meadow as part of a community project, or have many acres of farmland you want to restore as hay meadows, understanding and applying these principles will really help.

### First steps

The initial stages of meadow creation and restoration often involve a few unique steps – things we have to do to get the flowers back and prepare the ground for them. These normally include deciding where the wild flower seed will come from and how to get hold of it, stripping any existing grass or exposing and scarifying some bare soil, and trampling in the seed. The ideal time to undertake these site preparation activities is late summer or early autumn, when the warm, moist soil will encourage seeds to germinate quickly.

### Into the future

Once this has been done, simply adopt an annual cycle of meadow care in the following years – things like hay cutting or mowing or grazing, depending on circumstances – to keep the meadow in good condition. This onward care is really important. It allows the flowers you've introduced to spread and – over time – it creates conditions for new ones to appear by themselves, improving the meadow every year.

### Useful terms

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#### Meadow creation

Creating a new meadow from scratch where there was no grassland before.

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#### Meadow restoration

Improving the floral richness of an existing grassland by adding in additional plant species.

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#### Meadow care

The onward cycle of management needed to look after and maintain and improve a meadow.

# Plantlife's meadow management guidelines

## Basic meadow principles

Three basic principles are fundamental to creating a wildflower meadow, on any scale and in any setting.

### 1 Poor soil is your best friend

Creating a meadow is all about achieving a balance between vigorous plants and delicate wild flowers. If the soil is too rich and fertile, this balance can be difficult or impossible to achieve and your meadow will be dominated by thick grasses, thistles, docks and nettles. However, if you start with poor, infertile soil the chances of success are very much higher. The grasses will be thinner and less competitive, allowing flowers the room they need to grow.

There are several ways to work out if your soil is too fertile. If it has a history of high production – in other words it has grown crops like vegetables or wheat and barley which require it to have been repeatedly fertilised, or has been an intensive grass pasture for silage or dairy - it is likely to be too rich. If it's already supporting a dense growth of lush grass, docks, thistles or nettles, it's also likely to be too rich. Finally, you can do a soil test to confirm – phosphate and nitrogen are the things to look out for. Nitrogen is soluble and reduces over time but phosphate is much more persistent and high levels might mean you need to consider another site for a wildflower meadow.

### 2 Sun, sun, sun!

Fundamentally, meadows are open habitats bathed in sunshine - it's all that light reaching the ground that allows so many different plants to grow so closely together. If you ever see a tree growing in meadow, the grass underneath will be longer and the flowers fewer. This doesn't mean you can't have trees in meadows – there are flowers that grow in shade – but if you want maximum flowers then make sure your site receives plenty of full sun.

### 3 Management, management, management

When you create a meadow, you're setting into motion a wonderful adventure. Preparing the site and sowing the seed is just the start – the real magic comes with the onward care you give the meadow over the following years. Putting this simple management in place – cutting, mowing and grazing at the right time - creates the conditions for the community of plants in your meadow to grow and evolve together, improving every year.

In the early years, your meadow will change rapidly as species come and go. Yellow rattle often spreads quickly, reducing the grasses. Sometimes there's a boom in ribwort plantain as it can fend off the parasitic roots of yellow rattle, and fast-growing flowers such as red clover, buttercups and selfheal begin to bloom. After three or four years, slower-growing perennials like oxeye daisy, common knapweed, cowslips, Lady's bedstraw, Devil's-bit scabious and betony put in an appearance. A little later, vetches and the quicker growing orchids arrive. Finally, after 7-10 years, the meadow begins to reach maturity and settles down, with the exciting prospect of rarer orchids and other unusual plants making an appearance.

# Plantlife's meadow management guidelines

## Timetable of meadow flowers

Years after seeding	Plants to begin flowering
1-2	Yellow rattle, eyebright, buttercups, white clover, lesser trefoil, selfheal, common mouse-ear, yarrow, ribwort plantain.
3-4	Oxeye daisy, cat's-ear, hawkbits, common knapweed, red clover, common bird's-foot-trefoil, common sorrel, field scabious, wild carrot, Devil's-bit scabious, Lady's-bedstraw, betony, cowslip, great burnet, ragged-Robin.
5-7	Tufted vetch, meadow vetchling, common spotted orchids, marsh orchids, bee orchid, pyramidal orchid, pepper saxifrage, meadow saxifrage.
7-10	Burnt orchid, green-winged orchid, greater butterfly orchid, dyer's-greenweed, snake's-head fritillary.

## How big should a meadow be?

Meadows come in all shapes and sizes, from small garden lawns to miles of road verge and expansive acres of farmed meadowland. At one end of the scale, even a square metre of unmown garden lawn can be allowed to grow into a 'mini-meadow', full of buttercups, clover and selfheal. At the other, the largest hay meadow in Britain – Portholme in Cambridgeshire – is over a million times larger, covering 262 acres (106 hectares). Both will be managed in similar ways, both are meadows.

Plantlife research shows that a single metre of meadow can be home to an average of 570 flowers on a single day at the height of summer. That astonishing figure comes mainly from a tightly interwoven mix of yellow rattle, red clover, lesser trefoil, ribwort plantain, eyebright, buttercups and bird's-foot-trefoil. The metre square meadow in a garden could easily contain that many flowers, while the largest meadow of all – by this calculation – would be home to a mind boggling 604 million flowers.

Of course, the larger the meadow you can create the better. Although species diversity can be very high at a small-scale (maybe 30 species per square metre), a large meadow is likely to have more species in it than a small meadow. This is because less frequent species are spread thinly across the ground; so orchids, for example, might grow scattered across the meadow, but probably wouldn't appear in every square metre. As the area of a meadow increases, so does the chance that it will be home to more species.

# Plantlife's meadow management guidelines

## Meadow creation

Creating a meadow is all about bringing in seed or plants to get you off to a good start. **This is best done in late summer or autumn**, as many perennial meadow flowers germinate at this time of year when the soil is warm and moist. They'll establish through the winter and grow away strongly in the spring. It's a good idea to plan your site preparation and source of seed a few months before this. Once you've selected your site there are a few things to consider, depending on your circumstances.

### Know your site

Selecting where you're going to create your meadow is critical, especially when it comes to sunshine and soil. Meadow plants like lots of sun, so avoid shaded sites under trees or beneath north-facing walls. And poor, infertile soil is essential, so avoid land that has a history of being heavily fertilised to produce crops. If it has, and your site is small, you might need to strip away a few inches of topsoil first to expose less fertile subsoil (the topsoil can be used to create raised beds for vegetables). On larger sites, such as intensive cereal or grassland fields, several years of cropping with no fertiliser may be needed to reduce soil fertility.

It's a good idea to see what's growing already in your site, as the plants can tell you a lot about your soil conditions and history of the site. If there are lots of thistles, docks and nettles, the soil might have been cultivated recently and be too fertile. If rushes, reeds, meadowsweet and ragged-Robin are growing nearby, the soil will be damp and you can think about establishing a wet meadow. If there are cowslips, salad burnet and field scabious nearby, the soil is likely to be lime-rich so you might be able to establish downland or limestone grassland. Remember, it's always best to work with the soil conditions you have, rather than try to change them and create something that's not actually suited to your site.

It's also good to select a spot with good access. You'll need to bring in mowers and strimmers and have somewhere to take the hay when you cut it in late summer. In farming situations, grazing livestock will need suitable fencing, water and maybe holding pens.

### Prepare the ground

**If you are beginning with bare soil** (maybe a newly cultivated site or one where fertile topsoil has been removed), you can source your seeds and sow them directly onto the soil.

**If you are beginning with existing grass**, you'll need to remove some of the top growth and expose and scarify some soil before sowing. Aim for at least 50% visible brown soil. This doesn't mean digging or using herbicides to get rid of the grass – all you need to do is remove the top growth and any thatch (layers of dead grass that has built up over time) and then scarify the surface. Leaving the grass roots in place helps stabilise the soil (protecting it from erosion) and minimises carbon emissions (which result from disturbing grassland).

On a small scale, this can be done with a lawnmower set at its lowest setting to almost scalp the grass, followed by raking to scarify the soil. On a large scale, a flail mower (such as a Ryetec or Amazone) can be used to remove the top growth and thatch, followed by a harrow to break the soil surface. Alternatively, a power harrow can be used, although this tends to disturb the soil a bit too much.

### Where do I get my seed from?

This is a critical question and it depends on circumstances such as the size of your meadow, your budget and the type of meadow you want to create. The simplest and cheapest option is to just adopt annual meadow management and see what appears over time, allowing plants to appear from the soil seed bank (**natural regeneration**) or to spread in time from neighbouring flower-rich meadows and grasslands.

This does take time though, so another option is to bring in the seed from elsewhere. In order to preserve the local character and identity of our meadows, we recommend using **natural seeding** techniques, particularly for the creation or restoration of large-scale meadows. Fresh seed is harvested from a very flower-rich donor meadow nearby and brought to your prepared site, usually as a cut of green hay or brush-harvested seed. This is then spread across the site and then rolled or trampled in. Natural seeding methods require some extra planning and co-ordination, but

# Plantlife's meadow management guidelines

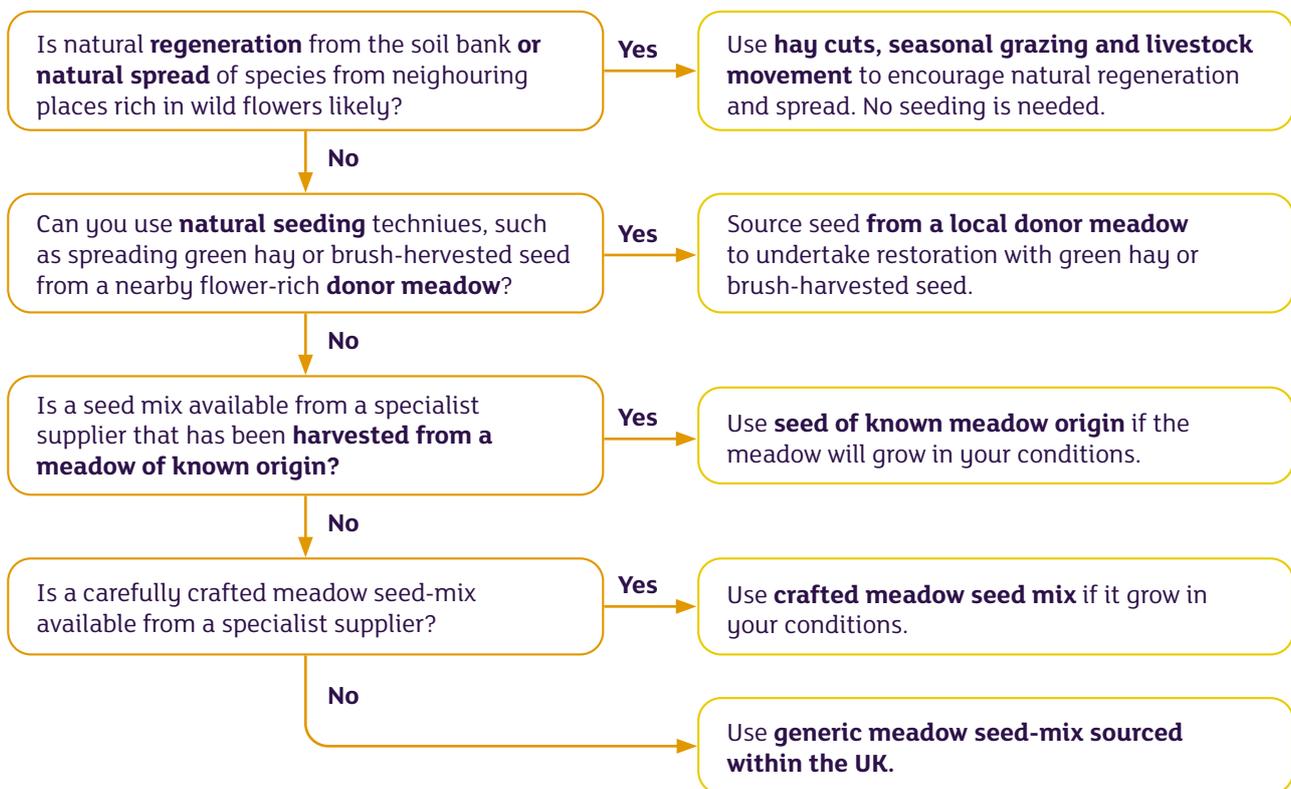
results in a more species-rich meadow much more quickly, and also helps to conserve the genetic diversity of meadow plants.

Another option is to turn to a commercial supplier and buy a **ready-made local seed**. There are some very good specialist suppliers that can advise you on the best mixes for your situation and how much

seed to use, with a range of very carefully created mixtures based on ancient meadows. For small scale meadows such as gardens, these are usually the best sources of seed to use.

Consider the following decision tree to work out which seeding option is best for you.

## Decision tree to work out options for bringing seed into your meadow



## After sowing

Once the seed has been spread on your site, it should be rolled or trampled into the soil to help germination. On small-scale sites, this can be done by lightly raking or walking over the area. As the grass begins to grow, you might need to cut it once before winter using a mower on its highest setting.

On large-scale sites, livestock can be introduced for a few days to trample the seed into the ground, or it can be rolled. Once the grass begins to grow back, cattle and sheep can be used to graze it back lightly before winter.

# Plantlife's meadow management guidelines

## Meadow care

Once your meadow has started growing in the spring, the annual cycle of management can be adopted to care for it. The two meadow wheels below show the different stages of the meadow through the year in a large-scale agricultural setting (with a hay-cut and grazing) and in small-scale horticultural setting (with mowing).

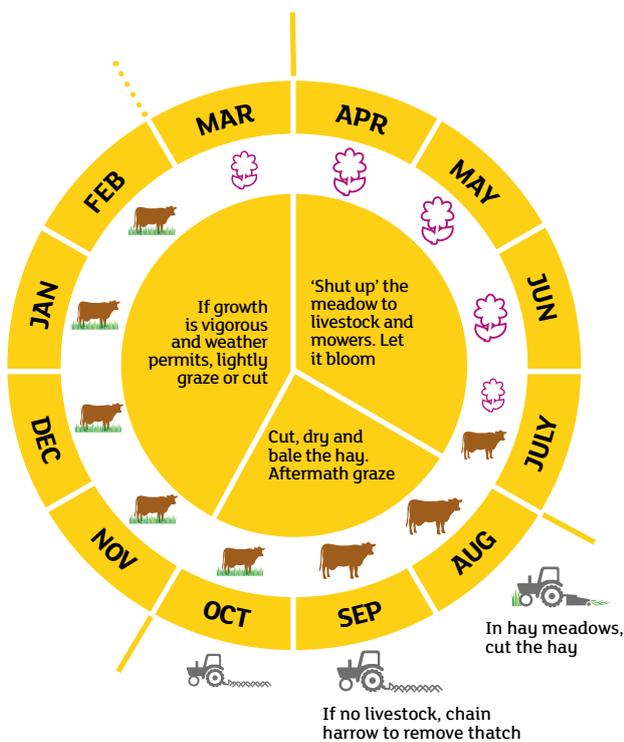
At its simplest, caring for a meadow involves leaving the grass and flowers to grow until late summer or early autumn before cutting. Leave the mowings to dry and turn occasionally to knock the seed into the meadow. After a few days, remove the mowings/hay and, after a few weeks, the grass will begin to grow again. It's essential to keep this 'aftermath' growth short in autumn and early winter, as this is one of the main periods of wild flower germination. If seedlings are swamped by grass at this time, they'll quickly die.

On small-scale meadows, this can be done by mowing the grass again using a mower on its highest setting and removing the clippings. On large-scale meadows, grazing livestock are brought in for a time to keep the grass at around ankle height.

By early spring, the grass and wild flowers will begin to grow again. Yellow rattle will begin to germinate in February or March, and at this point livestock will be removed from the meadow (the meadow will be 'shut up') and the plants allowed to grow unhindered until late summer.

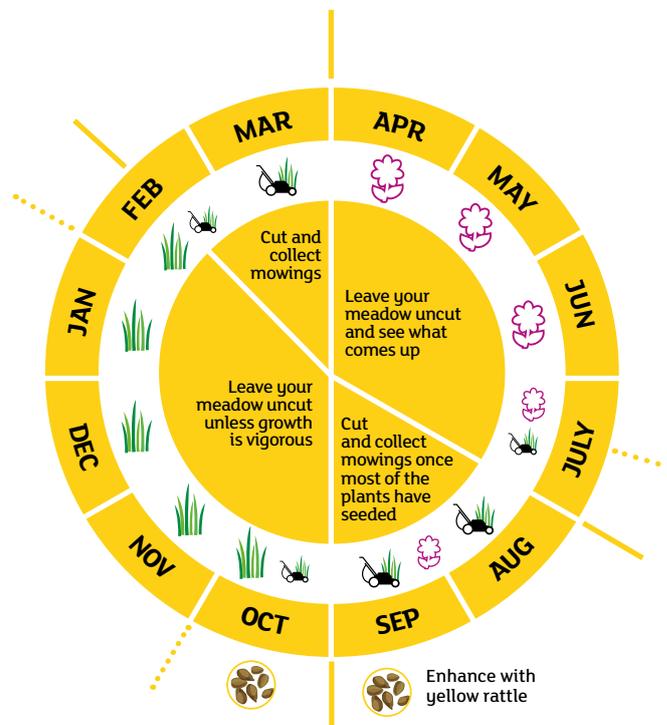
If you're using livestock to produce a flower-rich grazing pasture, similar principles are adopted in terms of grazing times, but livestock is introduced a little earlier – often the end of July, to graze the vegetation down gently over a period of months.

**Large-scale wild flower meadow and pasture care (agricultural setting)**



Graze/cut    
 Shut up    
 Keep it low

**Small-scale wild flower meadow care (garden setting)**



Mow    
 Grow    
 No mow

# Plantlife's meadow management guidelines

## Using plug plants to add more wild flowers

Part of the magic of wildflower meadows is seeing the tapestry painted by nature's own hand develop over the years. Left to their own devices, wild flowers often arrive under their own steam, popping up whenever they find conditions they like.

But sometimes we can give them a little help. Plug plants are an excellent way of getting new species established, giving them a chance to set their own seed and spread if they're happy. All sorts of species can be introduced as plug plants, but it's often a good way to bring in species that can be a little tricky or slow to establish from seed. Species to try include:

- Cowslip (*Primula veris*)
- Betony (*Betonica officinalis*)
- Field scabious (*Knautia arvensis*)
- Meadow crane's-bill (*Geranium pratense*) and wood crane's-bill (*G. sylvaticum*)
- Tufted vetch (*Vicia cracca*) and meadow vetchling (*Lathyrus pratensis*)
- Devil's-bit scabious (*Succisa pratensis*)
- Melancholy thistle (*Cirsium heterophyllum*)
- Ragged-Robin (*Lychnis flos-cuculi*)

### What is a plug plant?

Plug plants are young plants, usually around one or two years old, growing in small pots or cellular trays. They are often grown at home from seed collected locally, but can also be purchased from specialist wild flower suppliers. The small 'plug' of peat-free compost is planted directly into the meadow and, because it has an established root system, the plant is more likely to survive than a delicate seedling.

Plug-planting can be seen as sort of 'inoculation', a way of introducing a new species that will hopefully become established and spread by themselves. It doesn't always work – everyone's meadow is different and conditions don't always suit – but part of the fun is trying out different species and seeing which ones take to the home you're providing.

### Top tips for planting plugs

- Only plant species that are suitable for your site. Plant damp-loving Ragged-robin on a dry, sunny bank and you'll be disappointed, but plant Viper's-bugloss and it'll love it.
- Grow plug plants from seed that you've collected and sown the year before (sow in autumn, plant out the following autumn), or from reputable suppliers that source their seed from within the UK, or more locally if possible.
- Late summer and autumn are the ideal times to plant plugs, as the warm soil encourages root growth before winter. You can plant them any time up to March (as long as the ground isn't frozen), but avoid planting in spring as roots won't get established before drier weather arrives in April and May. Plug plants are very prone to drought and this is one of the main causes of failure.
- Always plant plugs in little groups. If your cowslip or betony plants are close together, there's much more chance they'll be cross-pollinated and set seed, increasing chances of natural spread in the future.
- To plant a plug, dig out a small sod of turf with a trowel or narrow spade, about 3 or 4 inches (7-10 cm) across and about the same in depth. Slice the grassy top off and put this back in the hole, grassy side down. Then crumble the remaining earth back into the hole and plant the plug into it, firming down the earth around the plug.

# Plantlife's meadow management guidelines

## All about yellow rattle, the meadow maker

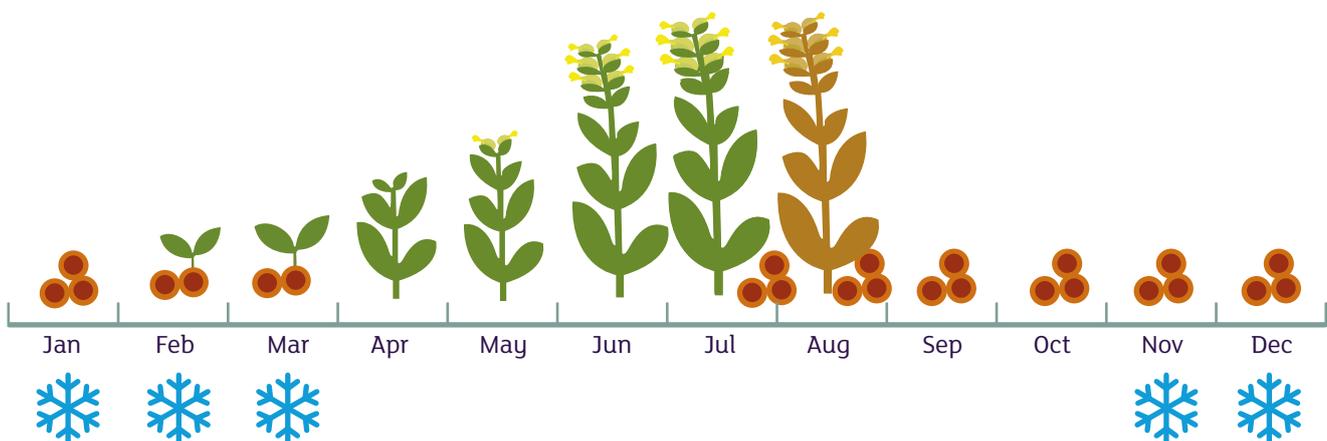
Known as 'the meadow maker' or 'nature's lawnmower', yellow rattle is the single most important plant you need to establish when creating a wildflower meadow. Without it, vigorous grasses grow unchecked and can smother the flowers you want to encourage.

Yellow rattle (*Rhinanthus minor*) is an annual, completing its life cycle in one year. In early spring the seeds germinate and grow quickly. As their roots develop underground they seek out the roots of plants growing nearby, especially grasses. Once contact is made the yellow rattle draws water and nutrients from them, suppressing the growth of grasses by as much as 60%. In the resulting space, other flowers have room to grow.

The flowers of yellow rattle are pollinated by large bees, especially bumblebees, and are followed by large, inflated seed pods. When these ripen and dry, the seed inside rattles around; in former times, farmers used this sound as their cue to cut the hay.



### Life cycle of yellow rattle with germination, flowering and seeding stages through the year



# Plantlife's meadow management guidelines

## Five golden rules to establishing yellow rattle

Yellow rattle can be a little tricky to get established, but the five golden rules below should help you get it going.

- 1** Yellow rattle seed is short-lived (12 to 18 months) and **must be sown as fresh as possible**. If you buy seed make sure it comes from a specialist supplier who can guarantee it was harvested within the last 12 months. Even better, if you know someone that has yellow rattle in their meadow, ask if you can collect some seed. June to August is the ideal time, either to collect some seed heads by hand (for small meadows) or take a cut of green hay or brush harvested seed (for large meadows). Remember you only need a few plants to grow in the first year – they'll produce much more seed in following years.
- 2** Cut your grass short between July and September and remove the hay or clippings. Then **remove the thatch (the layer of dead grass and moss that builds up on the soil surface) to expose some bare soil**, using a rake or harrow. This 'scarification' is really important; the seed must be able to reach the soil surface. Aim for at least 50% bare soil, preferably more. If you're sowing an entirely new meadow in an area of specially prepared bare soil, sow the yellow rattle along with all the other seeds in the autumn.
- 3** Sow by hand straight away, scattering the seeds on the soil surface. **This must be done by November** as the seeds need about four months of temperatures dipping below 5°C in order to germinate in spring. Seed sown after Christmas germinates poorly.
- 4** To keep yellow rattle going in the future, **only cut the meadow once the seed has been shed**. This can be any time from late July or, preferably, into August or early September. Before removing the cut hay, spread it on the ground for a few days and turn it a few times to knock seed back out into the meadow.
- 5** During autumn and winter, aim to keep the grass sward below ankle height. In agricultural settings, graze the meadow hard with cattle or sheep until New Year (if it's not too wet). In a garden setting, cut the grass (and remove clippings) once or twice again before Christmas. **Yellow rattle germinates from February until April, so a short sward at this time gives seedlings space to grow amongst the grass.**



If your soil is very fertile you might struggle to keep yellow rattle going – it can slowly disappear. Always create meadows on poor, infertile soils.

Part of the joy of creating a wildflower meadow is seeing the gradual changes over time. As yellow rattle establishes, the grass will become thinner and plants like oxeye daisy, knapweeds and vetches will start to appear. Eventually, if you're lucky, even a few orchids might find a home.

**It's an exciting journey, and it starts with yellow rattle.**

## More help and advice

If this *Good Meadow Guide* has left you wanting more information and advice, please visit the [Plantlife's Meadows' Hub](#), which has all the information you could ever want about creating and caring for meadows.

To see how an inspirational wildflower meadow was created on the banks of the river Conwy in North Wales, see this [webinar by Plantlife's Dr Trevor Dines](#).

Plantlife is campaigning for better management of our road verges, which are often looked after in a similar way to meadows. Our [Road Verge Hub](#) includes *The Good Verge Guide* and *Managing Grassland Road Verges*, with more detailed best practice guidance for managing grassy verges, as well as updates and progress with the campaign.

For more advice on growing wild flowers in your garden, including profiles of over 100 species and tips on how to create wildflower meadows, see [Plantlife's Wildflower Garden](#).





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## We are Plantlife

For 30 years, Plantlife has had a single ideal – to save and celebrate wild flowers, plants and fungi. They are the life support for all our wildlife and their colour and character light up our landscapes. But without our help, this priceless natural heritage is in danger of being lost.

From the open spaces of our nature reserves to the corridors of government, we work nationally and internationally to raise their profile, celebrate their beauty and protect their future.

**Join us in enjoying the very best that nature has to offer**

## Where wild flowers lead wildlife follows

