#TeamWilder Toolkit: Meadow Creation & Maintenance

A valuable part of our agricultural and social history, meadows also provide a fantastic source of food and habitat for a whole range of insects, birds and small mammals, but they are in huge decline; the UK has lost over 97% of its flower-rich meadows and grassland in the past century. Establishing meadows and wildflower patches in our gardens and community spaces can be a fantastic way to support nature's recovery whilst also creating spaces for people to explore, learn and relax!

True perennial meadows can work in a host of different urban, peri-urban and rural settings - but choosing the right location and employing the right management regime are key to creating a thriving meadow.

If, after reading this Toolkit, you decide that a meadow is not the right choice for your space, look out for our new **#TeamWilder Toolkit: Wildflowers for all Contexts** which explores other ways to introduce more wildflowers into gardens and greenspaces – COMING SOON!

Contents:

Image credit: Andy Steele

1. What is a meadow?

Meadows are incredibly diverse in their characteristics and key species – from limestone grasslands with dazzling orchids, vetches and pasqueflowers to more fertile floodplain meadows, lush with vigorous grasses and species that we might usually think of as aquatics or marginals, such as marsh marigold and bistorts - **the term 'meadow' encompasses a whole spectrum of landscape types where a proliferation of native grasses and wildflowers is found.**

This toolkit covers the main considerations when establishing typical neutral meadow (i.e. on soil that is neither especially acid or alkaline – around pH level 7) which is most likely to be appropriate for gardens and community green spaces in lowland urban and peri-urban areas. If you are keen to establish or manage a meadow in other areas, we would recommend you contact us via team.wilder@ywt.org.uk for more bespoke advice and guidance.

A thriving neutral meadow will be made up of a combination of mostly perennial wildflowers (i.e. species that survive for many years, regrow each spring and flower every year/most years) **and more delicate grasses,** like this one in Barmby Moor. Annual flowers will have minimal presence in a traditional, sustainable meadow, except for **yellow rattle and eyebrights**, which often play a **crucial role**, and which are covered in more detail in section 6 of this Toolkit.

Image credit: Andy Steele

As part of traditional agriculture, a meadow is a field allowed to grow through the spring and summer before being cut for hay in late summer. After the cutting and baling of the hay, the meadow is grazed during autumn and early winter until the grass stops growing, at which point livestock are taken off the meadow and fed the cut hay over winter. Early spring may see grazing return for a short period, before the meadow starts to 'wake up' again & grasses and flowers are allowed to grow without any intervention from machinery or animals, until the hay is ready to cut again in late summer.

This annual cycle of growing, cutting and grazing creates the natural rhythm of a meadow. With the right conditions and management, a meadow can develop over time to become a stunning tapestry of grasses and flowers that emerge and bloom at different times and heights – sweet vernal grass, crested dog's tail, soft brome, common bent, cowslips, buttercups, scabious, oxeye daisy, betony, clovers, trefoils, vetches, knapweeds, lady's bedstraw, cranesbills and more may all feature – and, if the soil and geology conditions are favourable, possibly even those elusive but much-cherished orchids.

However, it's not necessary to own sheep or cows to create a meadow! **By simply cutting and collecting at the right time it is possible to create meadows in our gardens, parks, churchyards, community centres, road verges and amenity spaces** – in fact, almost any reasonably free-draining, grassy area that gets plenty of sunlight and hasn't been fertilised has the potential to become a meadow - if we're willing to allow the grasses and flowers to be left uncut through the summer so that they can bloom and set seed, thereby multiplying year-on-year.

2. What is a meadow not?

As a result of horticultural marketing practices, the word 'meadow' for many people now conjures visions of a strip or block of land packed with highly colourful flowers, often mainly comprising annual and non-native species – e.g cosmos, poppies, cornflowers and chrysanthemums. These are sometimes referred to as **'pictorial meadows'** but, although they feature the word in their name, this type of planting is quite different - in terms of aesthetics, management requirements and benefits to wildlife - to the type of traditional, sustainable meadow that is the focus of this Toolkit.

Pictorial meadows can undoubtedly look stunning as a feature for human benefit and can provide a welcome banquet of pollen and nectar for our flying insects, but because these do not contain grasses, they fail to provide a host of wildlife benefits that native, perennial meadows can.

E.g. forage opportunity and habitat for small mammals, food source and egg-laying opportunities for the brown butterfly family and food and overwintering habitat for grasshoppers and many other insect nymphs etc.

Habitat and winter sheltering considerations aside, research by Plantlife* suggests that more than 1,400 species of insect feed on the leaves, stems and roots of native wild meadow plants – compared to just 40 insect species that benefit in this way from a typical annual pollinator mix.

*p.9, The Good Meadow Guide
https://www.plantlife.org.uk/wp-content/uploads/2024/02/The-Good-meadow-guide-Plantlife.pdf

It's worth keeping in mind that many of the **species included in such annual planting schemes rely on regular soil disturbance to provoke seed germination**, whilst the lack of a base grass sward makes them susceptible to infiltration by ruderals such as dock and thistle – as a result of this they can bring with them with a significant annual investment of both cost and effort in harrowing and reseeding, not to mention the further cost and environmental implications that arise if annual herbicide applications are used to control unwanted ruderals.

Image credit: Hull Daily Mail

Despite this, pictorial meadows/pollinator patches are beneficial to humans and wildlife alike and can be a great option in certain contexts – e.g. as part of a '**mosaic' of habitats in a garden or community green space, or as an alternative to gang-mown grass or non-flowering shrubbery in amenity spaces**, which provide little visual interest and minimal benefit to wildlife. With that in mind we are providing more information on how to create and maintain 'pollinator patches' in our upcoming **#TeamWilder Toolkit: Wildflowers for all Contexts.**

The main reason that we refer to them here is that the notion of 'meadows' created by these pictorial urban planting schemes and the 'meadow mix' seed packets we see in garden centres can create a false expectation of how meadows should look – **unlike the immediate vibrant flush of a 'pictorial meadow', a native, sustainable wildflower meadow will take a number of years to properly develop and, even when well established, will not produce the same riot of colours that such horticultural planting schemes achieve.**

The key is to remember that the two are quite different in form and function and to consider which is more appropriate for your space – or, if you are lucky enough to have the space and time, find room to incorporate both!

Another possibility when planning to create or re-invigorate a meadow could be to **combine the two** by incorporating a seed mix of cornfield annuals along with your main perennial mix when first seeding your area may create a colourful show of annuals for the first couple of years, whilst the perennial wildflower and grass species take time to establish.

3. Long grass:

Just leaving a bit of our lawns to grow long or reducing the number of times our community spaces are mown each year can massively improve these areas for wildlife by:

- **Providing food** for insects such as grasshoppers and meadow brown butterflies
- **Providing habitat** for other insects and their larvae (e.g. butterfly and moth caterpillars, ladybirds, beetles etc)
- **Creating shelter** for other small insects, which in turn provides a food source for predators like dragonflies and birds. This can be especially beneficial when some long grass is retained all year, enabling pupae to overwinter, some of which then go on to provide a vital food source to birds preparing for nesting season when they emerge in the spring
- **Retaining moisture** which encourages worms and slugs, in turn attracting foraging hedgehogs and birds
- **Increasing the diversity** of flowering plants – less mowing allows already-present species like clovers, dandelions and daisies to flower, providing pollen and nectar for flying insects - **a survey from, Garden Organic, found that an average unmown lawn can produce a massive 23kg of nectar sugar daily!**

In short, everything grass does, it does better when it is allowed to grow longer:

- Reduced mowing allows grasses to dedicate more energy to root growth – **stronger, deeper roots enable higher resilience and less browning and dying off during dry spells**
- Areas of longer grass have been shown to **absorb more carbon from the atmosphere** than short-mown lawns and verges
- Longer grass creates **more evapotranspiration** than short grass, with the released moisture acting to **cool the local environment** – this can be especially beneficial in urban areas during our increasingly hot and dry summer months
- As well as releasing more moisture into the atmosphere, **longer grass also traps more moisture at ground level, making it effective at 'slowing the flow' of rainwater and mitigating flood risk**
- Less frequent mowing means **reduced fuel use and so reduced spending and a lower carbon footprint for us as gardeners** – as well as less physical work to do on our spaces!

To make an impact for nature with our grassy areas, the simplest option can be just to choose a patch, leave it to grow long and wait to see what arrives.

Mowing a short perimeter around a 'wild patch' makes it obvious that the space is being managed rather than abandoned and prevents grasses from drooping onto pathways and surrounding areas when it rains.

If it's a public-facing area then a sign, such as Yorkshire Wildlife Trust's Wildlife Gardening Award plaque, can help make it even more obvious to passers-by that the area is being managed for wildlife.

Mowing paths through the middle and, if the space is large enough, areas within to sit and rest, allows people to walk through without getting wet legs and can create a really aesthetically pleasing look.

To cut or not to cut?

Most people will probably want to cut the area at some point **during late summer/early autumn**. It's best to use a traditional scythe, Allen scythe, strimmer or flail, depending on the size of the area and the resources available, as by this point the grass will be too tall for a standard mower. If possible, it is beneficial to **do this in stages to allow wildlife to retreat into the remaining uncut areas**, and to **leave a patch uncut throughout the winter as a refuge** for overwintering insects and their larvae – and maybe even amphibians too?!

By leaving an uncut area every winter, but varying which patch is left – perhaps by choosing three different sections and rotating which one is left uncut on a 3-year cycle? – it is possible to provide this winter refuge year-on-year without worrying about the area in question becoming overrun with coarser grasses or starting to develop into scrub.

Whichever areas you do mow, please remember to be careful – insects and maybe even small mammals and reptiles may be hiding in the grass so it's good to do a walkover first before setting the mower blades in motion!

4. Considering a meadow – location is key:

Whether you want to create a meadow in your garden, school, on a verge, in a park, at a community venue or in a field, knowing a bit about your site will help to determine its suitability. Many factors affect what will grow well on an area of land – these include how much sunlight it receives, the soil type and underlying geology, how wet the area is, what the prevailing weather conditions are, the slope & aspect and how the land has been used and managed previously.

This can all sound a bit complicated at first, but following these **2 simple key principles** will give you a much better chance of achieving success:

1. **Know your soil:** Most native meadow flowers thrive on **low nutrient soil**. If your soil is too fertile wildflowers will be outcompeted by more vigorous grasses and nitrogen-loving ruderals like dock and nettles, and you may be better off choosing a different spot.

   - ✓ **Knowing how the space has been used before** can give you a good indication of likely fertility – if it has been fertilised for growing crops or herbaceous plants or if it has been mown but with cuttings left to rot down the nutrient content will likely be high.
   - ✓ **Existing growth is another clue** – if the area already has lots of dock, thistle, nettle and/or rank grasses then the soil is likely to be high in nitrogen.
   - ✓ **If your site has been a lawn or piece of ground where no fertilisers or pesticides have been used** and, better still, where cuttings have been collected and removed during mowing, you may be in luck – this could be an ideal chance to leave the mower in the shed and see if you've got a hidden meadow just waiting to be given a chance to bloom!

- ✓ **Some plants, such as red clover, meadow buttercup, oxeye daisy and crested dog's tail grass are positive indicators of low nutrient soil**, so if you have identified a spot that has these species already present then you have struck gold!
- ✓ If you're planning to manage a large area as meadow or invest significantly in seeds etc we **recommend soil testing across different areas of the site before beginning**. Phosphate and nitrogen are the elements to be wary of, as high levels of these indicate very fertile soil (and so the opposite of what you are looking for!)

2. Seek a sunny spot!

There are wildflowers that thrive in shady areas (see our upcoming **#TeamWilder Toolkit: Wildflowers for all Contexts** for more info!) and seed mixes developed for shadier areas can be purchased from some suppliers, but **in general most native meadow plants thrive in full sun, so if possible choose a site that gets the summer sun throughout the day and avoid areas that are shaded by walls or mature trees etc.**

Other considerations:

- **Many hands make light work** – meadows need little intervention for large parts of the year but, depending on their size, can require a serious bout of graft when it comes to mowing season (more on this later too!) – will you be managing your meadow as part of a community group? Could you involve others, share the burden and the learning, and turn 'making hay while the sun shines' into a celebratory annual event?
- **What tools will you be using to maintain your meadow** (more on this later!) and **how accessible is the site** in terms of bringing such equipment onto site? Consider journey times, access points, narrow gateways and tool storage options to ensure that meadow maintenance isn't going to present a real headache when the mowing season arrives!
- **Is the area you are considering for your meadow currently a bit 'wild' and unmanaged?** Areas like this may seem ripe for 'improving', but it can be hard work to clear them of coarser vegetation and scrub and – more importantly – this kind of land is valuable and increasingly scarce itself - so think hard before destroying tangle and scrub that is probably already providing great habitat!

5. Creating a meadow:

Before starting any work on a space it's important to first consider what's already there. Late spring into summer is a good time to do a **site survey**, as it's easier to identify grass and wildflower species when they are in flower. Using a **good field guide or a free app (we recommend iNaturalist)** can help you to understand what's already in your patch – and obviously it helps if you haven't done any mowing for a few weeks beforehand to allow any existing flowers the chance to bloom.

The natural approach: If you find you already have **5 or more wildflower species present across your site** (and bear in mind that 'wildflowers' includes naturally occurring but often undervalued species like common daisy, dandelion, yarrow, clover, plantain, selfheal etc), **our recommendation would be to give your meadow the chance to regenerate naturally** from the existing seedbank by

simply letting it grow through spring and summer and implementing a seasonal cut and collect regime (more on this below). This naturalistic approach can both help to conserve the distinctive character of your local flora and save you from wasting unnecessary funds on new seed!

Giving nature a helping hand: If you find that there are **less than 5 wildflower species present** in your would-be meadow, then you may wish to **help things along by the addition of seed and/or plug plants**. Bear in mind the advice about soil nutrient levels though and consider choosing a different area if your patch is not only bereft of wildflowers but also dominated by coarse grasses and/or nitrogen-loving perennials like dock and nettle.

If you are confident that your chosen area's soil is not too high in nutrients, you'll need to remove some of the top growth and expose some soil before sowing seed.

Late summer into early autumn is the best time to do this, when the soil is warm and regular rainfall is likely to encourage seeds to germinate.

It's good to aim for at least 50% visible brown soil to grass, but it's not necessary or helpful to dig or use herbicides to remove the grass – leaving grass roots in place helps stabilise the soil, protecting it from erosion and minimising carbon emissions.

Image credit: Rachel Hardy

- Simply **use a mower and rakes to remove the top growth and any thatch** (layers of dead grass built up over time)
- **Then scarify the surface** - s**carifying enhances your chances of success as it opens up patches of bare soil, slowing regrowth of existing grasses and creating more opportunities for your new seed to make contact with the earth and germinate.**

Depending on the size of your area and the number of people involved, scarifying can be done by roughly dragging steel-tined rakes or cultivators across the ground to create bare patches and channels, or you may prefer to use a petrol scarifier which can be hired from most tool hire companies. If all goes to plan, scarification should only be necessary when first establishing a meadow so, unlike mowing, the cost and/or effort involved will hopefully be a one-off rather than a recuring factor!

Molescroft Wildlife Network using a petrol scarifier.

Image credit: Andy Steele

Sowing the seed:

Following ground preparation, you are ready to add seed. If you are lucky enough to have a thriving meadow in your local area who are willing to donate some of their **green hay** (i.e. the fresh cuttings from their meadow) this is a great option, and one which means you can feel confident in the provenance of the seed and the likelihood that the species included will do well in your local soil and climate. It's worth contacting any likely provider in midsummer to find out when they plan to cut their hay, as this will inform the timings for your ground preparation. A typical recommendation when adding green hay is to go for a 1:3 ratio (i.e. for every 1sqm of donor site that you have collected the hay from, aim to spread this across 3sqm of your recipient site). Once you have added the hay to your site it can be left for a week or two to drop all remaining seed (enlisting some willing volunteers to kick and throw it about a bit at some point while it's on your site can be a fun way to help this process along!) and then should be removed to ensure that it doesn't start to rot down and release nutrient into the soil.

Image credit: Rachel Hardy

Another option is to buy a prepared seed mix. Again, it is worth sourcing seed harvested from as near to your own site as possible, to increase the chances that it will germinate and grow well. There are links to some reputable seed suppliers at the end of this toolkit, all of whom will be happy to provide information about where they source the seed for their different mixes and advice as to the best choice for your soil type and location. **Suppliers will also recommend sowing densities for different mixes** (usually somewhere around 1-5g per sq metre) – if you are starting a meadow in an area of grass that has few species already naturally occurring, or you have decided to strip the turf (see below) then it is best to err towards the upper end of the suggested sowing rate. For areas where a meadow is already partly established or there are a promising number of naturally occurring species showing then focus on patches within the area, rather than sowing the whole space, and opt for a lower sowing rate.

Top tip: If you aren't sure of the size of your area you can pace the perimeter (one large stride is roughly equivalent to 1metre) and multiply the length by the width, or for a more accurate result, especially if your area is not a regular shape, you may prefer to use the measuring tool on Google Earth.

When sowing your seed it can be useful to mix it in a clean bucket with sawdust or dry sharp sand. As the seed is very fine it is hard to see once scattered, so using a medium such as these helps to keep track of areas that have been sown and spots that could do with greater coverage. Once the seed has been spread on your site the next step is to **press it into the soil, either by lightly raking or walking over the area**; this will help germination, as will giving the area a **good watering after sowing** (or sowing right before rains are forecast). As the existing grass begins to grow back, it is a good idea to cut it once before winter using a mower on its highest setting.

Starting from scratch: Another possibility is that you are **sowing onto bare soil**. This could be because you have **found a patch of poor-quality soil that hasn't been cultivated recently, or because you have decided to strip the turf from a grassy area**. The latter is an option to consider where you are determined to create a meadow but limited as to choice of locations and so considering an area with more fertile soil than is ideal - **stripping away a few inches of topsoil will expose the less fertile subsoil beneath, which will give your seeds a better chance of germinating** than trying to mow and scarify a relatively high-nutrient area. In small areas turf can be stripped manually using a spade, but for anything above a few square metres you will likely want to hire a petrol turf cutter from a tool hire company.

Bear in mind that **stripping turf is hard work**, you'll need to find somewhere to compost or re-use the rolled turf (or pay someone to take it away for you), and you will **need to sow bare ground at a much higher density than scarified grass, making it more expensive** to do. As with the method outlined above, if starting from bare soil or stripping turf, Autumn remains the ideal time to undertake the ground preparation and sowing, and the other principles in terms of the potential to introduce green hay and/or a seed mix, using an inert medium to help show sowing coverage when seeding, walking or rolling in the seed and watering well after sowing all still apply.

Other considerations for all methods of establishing meadows:

- It makes sense to **remove any unwanted species such as dock, nettle and thistle** as part of your site preparation and to continue to manage them as your meadow starts to establish. The best methods and timings for removing these problem plants without encouraging them to spread further varies according to species – there is good advice on how to deal with each species here - **KWT Land Mgt Advice Sheet 6 - Control of ragwort&other problem plants.pdf**

- You may wish to consider using **plug plants to increase the diversity of species in your patch**. Plugs can speed the process up and give more control when introducing species into a specific area of your meadow, which can be useful if, for example, you are working on sloping ground where the lower part is much damper than the upper area. The downside of using plug plants is that they are more expensive than seed and can be prone to failure due to drought if not well watered after being planted. For this reason, we recommend planting in autumn, when plants will be going dormant above ground and putting their energy into developing strong roots, and when good amounts of rainfall are likely in the coming months which will aid this root development.

- As with seeding a meadow, **it is good practice to source plants that have been grown from seed harvested as locally to your chosen site as possible and of course select species that are suitable for your site** - i.e. planting damp-loving ragged robin on a dry, sunny bank will lead to disappointment but viper's bugloss would likely thrive in such a setting. As with seed mix selections, your chosen supplier will be able to recommend species for your site if you can provide them with more information on the soil type and aspect.

- When planting plugs, we recommend **turning a sod and replacing into the ground grass-side down, then using a dibber to make a few holes into the upturned bare soil and planting into these**, firming the plants in carefully to ensure good contact between the roots and the soil. Planting plugs in little groups of 3 to 5 will create a better visual impact and increase the chance of them being cross-pollinated, thereby improving the likelihood of them producing seed and spreading naturally the following year.
- If a **dry spell** follows planting, then it is essential to **keep the plugs well-watered, ideally using collected rainwater rather than tap water**. As well as reducing the competition from the surrounding grass, turning a sod upside down also makes it easier to locate your plugs when you return to water them – although inserting some marker pegs can also be helpful for when the grass starts to regrow.
- **The 'upturned sod' method** also makes it easier to spot and avoid your plugs if an autumn cut of the area is required to keep on top of grasses after your initial cut and ground prep (see above). If another cut is to be done in the following spring this should be with the mower on its highest setting to avoid damaging the new plugs and any early-germinating seed. The main summer cut in the following year should not harm the plugs (or seeded plants) as they will be perennials and ought to be well established, and in some cases have flowered and set seed for the first time, by then.
- **Growing your own plug plants from seed you have collected, dried in late summer and sown in modules in autumn then nurtured for a year and well-watered (but not fed!)** – ready for planting the following autumn can be a satisfying way to augment the natural spread of flowers in your meadow – and a potential way to generate income if your meadow project is part of a community initiative.

6. Yellow rattle:

Known as the 'meadow maker', yellow rattle is the cornerstone plant of any thriving neutral wildflower meadow. As well as a very distinctive flower and a favourite source of pollen to bumblebees, its value lies in its semi-parasitic nature - the roots of yellow rattle seek out and attach themselves to those of other plants, especially grasses, stealing moisture and nutrients from them. As such it is a perfect antidote to the vigorous grasses which, if left to their own devices, can outcompete the flowers we want to encourage.

Image credit: Andy Steele

Unlike most of the other species we might want to introduce into a meadow, **rattle is an annual** (which means it completes its life cycle in 1 year) rather than a perennial. It needs an extended period of vernalisation (exposure to cold temperatures) over winter for its life cycle to kick into action – **sowing between early august and late November is ideal**, with any sowings made after Christmas likely to produce poor results. Frustratingly, its seed does not save at all, meaning that seed needs to be sown in the same year that it is collected if it is to germinate.

Germination: Following a successful late summer/autumn sowing, seeds that have germinated will grow quickly in spring, with **flowering usually beginning in May and continuing through the summer until its large seed pods develop in mid-July through into August**. When the seedheads have ripened and dried the seed inside rattles around, giving the plant its name. It is said that in the past, farmers used this sound as their cue to cut the hay. **When it comes to deciding on the best time to cut your meadow, observing your rattle and ensuring that it has set and dropped seed before mowing is crucial – because the plant is an annual, it will vanish completely from your meadow if cut before it has set seed.**

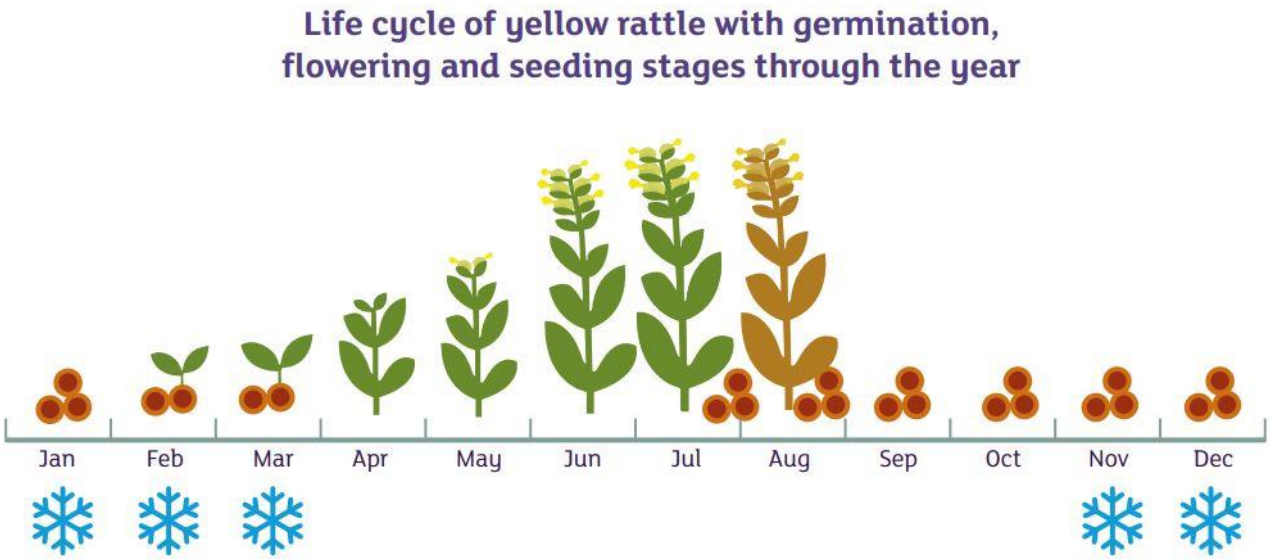


**diagram credit Plantlife, from The Good Meadow Guide -* The-Good-meadow-guide-Plantlife.pdf

Once successfully established, yellow rattle should spread year on year. If there are some patches of your meadow where it has taken hold better than others then it's a straightforward job to give it a helping hand to spread – simply collect a few envelopes of seed in the late summer, keep it somewhere dry for a few weeks and then, after your main summer meadow cut, scarify a few areas where it is less established and scatter and walk in the saved seed to give it a helping. Equally, if it is becoming too dominant in some areas then, as it's an annual, it can be knocked back easily by cutting some patches before it sets seed.

7. Mowing & management:

Preparing your site and sowing seed and/or introducing plug plants is just the start; it's the on-going management in future years, the efforts to create the best conditions for the community of plants in your meadow to evolve and thrive together, that really makes a meadow.

Your key input going forward will be adopting the **right mowing regime**. Traditionally, agricultural meadows would have been cut early to mid-July in order to provide the best hay quality for livestock. This may be a consideration for you too if you're hoping to create winter feed from your meadow, but for those managing meadows for biodiversity, **a cut anytime from late July through August or even into September is preferable** as this allows a longer floral display (and so extends the period for which your meadow is providing pollen and nectar for insects), ensures seeds will have set on all flowering species and, for those managing larger meadows, allows time for any ground-nesting birds to finish raising their brood and leave the site.

This main summer cut does not need to be at exactly the same date every year – it makes sense to pay close attention to the **weather forecasts** from mid-July onwards and try to time your cut to coincide with a **dry spell** – it's much easier to cut a meadow when the grass and flower stems are dry, and the falling seed heads will release any remaining contents more easily if they are nice and crispy, rather than soggy! Also, remember these other considerations:

- If you have **yellow rattle** in your meadow, pay attention to when this is setting and dropping seed and be sure not to mow until you are confident most of this has fallen to the ground ready to germinate again the following year
- A standard mower will not be effective for this summer cut so, depending on the size of your meadow and your preferred tools, remember to make sure ahead of your summer cut that you have access to and are confident in using either a **traditional scythe, an Allen scythe, a strimmer or a flail**
- If possible, it's **beneficial to cut in stages** to allow wildlife to retreat into the remaining uncut areas, and to **leave a patch uncut throughout the winter as a refuge**, varying the location of this uncut area is each year
- When mowing, remember to **do a walkover first to disturb any creatures** that are feeding or sheltering and ensure they can escape to safety

Using a traditional scythe on a community meadow in Cottingham.
Image credit: Claire Gribben

This main late-summer cut is an essential part of effective meadow management, but you may wish to add additional cuts, up to four times a year (extra cuts can be especially useful to help reduce grasses when establishing new meadows) but getting the timing right is key.

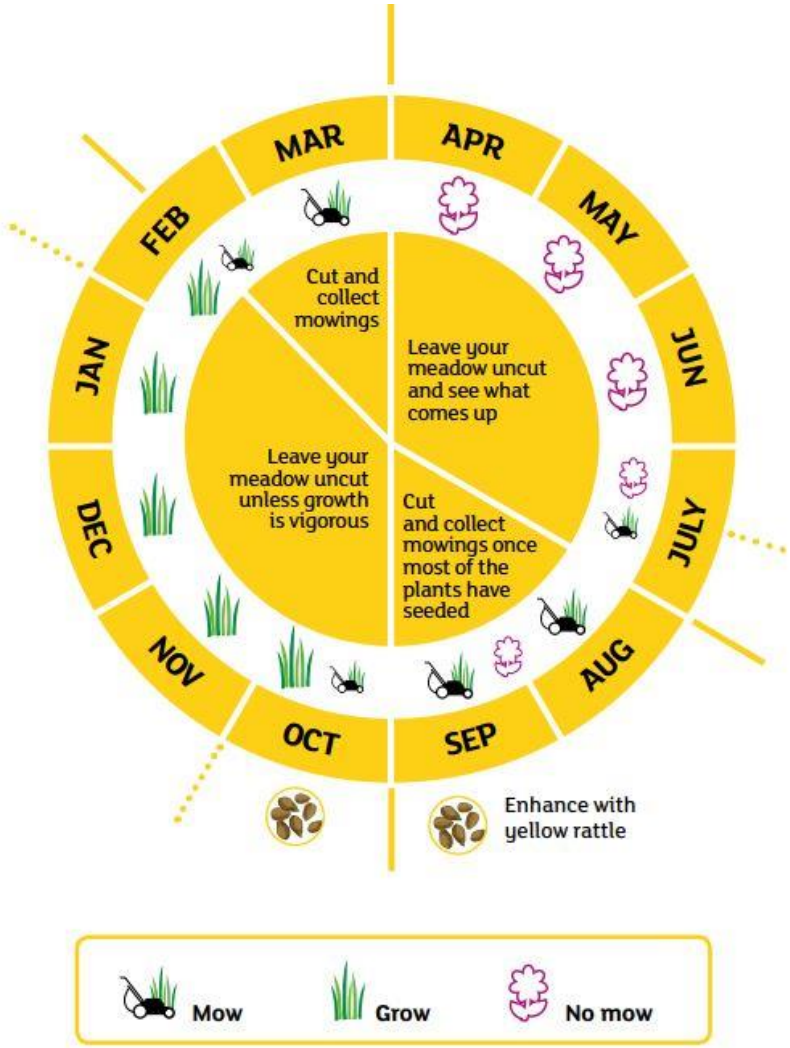
As outlined in section 1, meadows are traditionally 'aftermath grazed' following the main summer hay cut and then may have livestock returned to them for a short period in early spring. Replicating this grazing as part of your management by doing an additional one or two cuts in autumn and another in spring will ensure that grasses are kept in check and wildflowers given the best possible chance to grow on without being shaded or outcompeted.

The diagram on the following page, taken from **Plantlife's Good Meadow Guide** illustrates the ideal recommended cutting times and the period where your meadow should definitely be left unmown (late March through until your main summer hay cut).

However, your decisions on whether to cut once, twice, three or four times a year will likely be informed by the size of your meadow and your capacity as an individual or a group to undertake work at different times of the year, because **an essential principle of good meadow management is that arisings (all stems, leaves, seedheads and other plant matter) should be removed after every cut**.

If left to rot down, they will release nutrients back into the soil and so encourage coarse grasses and nitrogen-hungry plants like dock and nettle to colonise the space at the expense of the wildflowers and meadow grasses you are trying to nurture.

Unlike the main summer cut when the meadow plants are standing tall, the reduced sward height at autumn and spring mowing times should mean that it's possible to do these cuts with a standard **lawnmower set to its highest cut setting** – so for smaller meadows in gardens, using a mower with a hopper on the back to catch cuttings means the work involved is no more than you might expect from mowing your lawn. If your meadow is much larger, however, and you are using a strimmer or a mower without a hopper, or you are managing a meadow in a public space and relying on your local council to do the cutting for you, the work involved to then rake off arisings can be substantial, and you may not feel you have capacity to do this more than once or twice a year.



- ✓ if you can **only manage 1 cut** a year then **August or September** is the time to do it
- ✓ if you can **manage 2 cuts** a year then a **main hay cut in August** followed by an **'aftermath' cut in** the **autumn** is your best option
- ✓ if you can **manage 3-4 cuts** a year then a **main hay cut in August** followed by **several 'aftermath' cuts in the autumn and a spring cut in early-mid March** is the ideal scenario

Whether you decide to cut once, twice, three or four times a year – removing arisings is key. If in doubt about your ability to rake off arisings it is better to not cut at all than to cut and leave them in situ.

**Diagram credit Plantlife, from The Good Meadow Guide.*

Arisings: In terms of dealing with the arisings, it's good practice to leave them for a few days and then throw them around a little with a fork or rake to prompt any unreleased seed to disperse. At this point they should be removed from the meadow – they will compost relatively quickly if added to well-managed heaps.

If any pathways or seating/activity areas are to be incorporated into the space then these would need mowing regularly through each spring and summer to remain accessible, with arisings/clippings again to be removed to prevent return of nutrients into the soil. It makes sense to avoid plug planting/seed sowing where possible along pathways and in any seating/activity areas, as these will not have a chance to establish.

Undesirable plants such as thistle, dock, nettles etc may find their way naturally into the meadow; removing these early (following the advice for each species provided via the weblink in section 5) will prevent them from setting seed and spreading across the site over time.

Creating a thriving wildflower meadow takes time and patience – it will be several years before the full results can be appreciated, with fluctuations each year as quicker-to-establish species emerge, become dominant and then become part of a larger tapestry as slower-growing perennials start to make themselves known. This is all part of the natural process and to be embraced as a journey of discovery!

Whilst it may take up to a decade for your meadow to fully establish in terms of the balance of the plant community and its aesthetic impact, the good news is that benefits to wildlife arrive much more quickly - recent studies have indicated substantial invertebrate benefits to be measurable within two years of meadow creation*. Hopefully you will soon see bees, hoverflies, moths, butterflies, grasshoppers and more visiting to feed on the flowers and grasses, and with this increased invertebrate activity the likelihood of bird bat activity should also increase, as the food chain develops.

Good luck in your endeavours! We hope this Toolkit proves useful over the coming months and years and we would love to hear from you about your successes and challenges at team.wilder@ywt.co.uk

* Marshall, C. A. M. et al, *Urban wildflower meadow planting for biodiversity, climate and society: an evaluation at King's College, Cambridge*, Ecological Solutions and Evidence, May 2023. DOI: 10.1002/2688-8319.12243

Recommended Suppliers & Further Resources:

- Plantlife leads a consortium called Magnificent Meadows which is a great source of information and support; we are particularly indebted to their Good Meadow Guide for our learning over the years:
  http://www.magnificentmeadows.org.uk
  https://meadows.plantlife.org.uk

  https://www.plantlife.org.uk/wp-content/uploads/2024/02/The-Good-meadow-guide-Plantlife.pdf
- Natural England's guide to lowland meadow management can be found at:
  http://publications.naturalengland.org.uk/publication/35034
- For anyone creating or maintaining a meadow in a floodplain area, The Floodplain Meadows Partnership has a detailed technical manual here: http://www.floodplainmeadows.org.uk/floodplain-meadow-technical-handbook
- Emorsgate supply a large range of seed mixes and offer a good management guide:
  https://wildseed.co.uk/page/management-of-meadows-and-grassland
- Cumbria Wildflowers is the cheapest supplier of yellow rattle seed that we have found, as well as offering seed mixes and plug plants: https://www.cumbriawildflowers.co.uk/
- Mires Beck nursery at North Cave is an excellent nursery supplying plug plants of local provenance:
  https://www.miresbeck.co.uk/
- The Scythe Association promotes the use of traditional scythes and offers training in use and maintenance: http://scytheassociation.org
- Boston Seeds is another recommended supplier of seed mixes, plugs and bulbs:
  https://www.bostonseeds.com/

This toolkit has been produced with thanks and credit to the above organisations and resources.