

Good foundations

You can't make nutritious summer hay unless you start thinking about your fields' health now. In this new mini series, expert hay producer **Christine Page** explains how to assess your pasture for potential and when to rest it

Stacking that very last bale of sweet-smelling hay in the dry safety of your barn after a long, hot day lugging them around is a joyous and satisfying moment. However, long before the weather warms up, considered planning is needed to reach that goal, along with a generous dose of blessing from the weather gods. It is also important to understand the prerequisites for making good quality hay, whether feeding your beloved equine, a few ovine friends, or providing that all-important fodder necessary to enable your house cow to produce delicious, nutrient-rich milk for you through the winter.

The aim should always be to make hay that, when opened in the depths of winter, gives off a sweet summer-meadow aroma from a bale that has a light,

springy bounce from the fresh smelling grasses of light green, cream and pink hues, and that fall apart easily in your hand. Hay that has a musty or mouldy smell and that is firmly compacted into a heavy lump of beige and grey stems will have little nutritional value and the dust will be no good for you or your livestock.

PLANNING IN ADVANCE

There are just two requirements for making that beautiful meadow hay: the quality of the underlying pasture, and the quality of the make.

Preparing for that good quality make means planning many months in advance. Livestock should be removed from the

land in good time for any manure to be fully degraded and for the worms to pull it all below the surface well before hay making time in order to ensure a clean, uncontaminated crop.

Large animals, like horses or cattle, should ideally be off the land by the end of the prior year for this reason, but also to help prevent the land from being poached over the winter. Sheep and goats should be removed by the end of March.

When choosing a field in which to make hay, the slope and evenness of the ground should be taken into consideration. While hay can be made on quite steep land, the ground needs to be even enough to allow the length of the tractor plus the mower, tedder or baler behind to ride comfortably over the field without getting snagged on rises or falls.



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Well made hay should be of pale green, cream and pink hues

MOB GRAZING

Traditionally fields would be chain harrowed in March to scarify the pasture, spread any remaining clumps of manure and knock out any mole hills to maintain a flat, level surface ready to make hay. However, this process is usually only necessary if the land has been set-stocked, creating uneven pastures with over-grazed sections, and heavily mucked areas where the stock prefer to camp each night.

Harrowing can be made redundant, saving time

and fuel, with good grazing management using mob grazing techniques whereby fields are temporarily split into small areas that are grazed for only a day or two before the stock are moved to the next area. This prevents over-grazing, ensures that manure is evenly spread across pastures, and the ‘mob’ both knocks out any mole hills and tramples dead grasses into the soil to feed the worms. (See *Country Smallholding*, May 2019, Great Green Energy

Generators for more on grazing management.)

GRASSES, FORBS AND LEGUMES

Assessing a pasture for the potential to make good quality hay is the same as assessing whether it would provide nutritious and palatable fresh forage for your stock. Like the best pastures, the best hay is made from a well-managed diverse sward: an ideal pasture will have at least 15 different species made up of grasses, forbs and legumes.

The Field Studies Council (www.field-studies-council.org) produces excellent pocket identification guides to grassland species. It is well worth taking the time to assess pastures prior to hay making, not only out of interest, but to ensure that you don't inadvertently bale up any poisonous plants.

Ragwort is one you definitely don't want in your hay, but the cinnabar moth caterpillar relies upon it, so if you find a plant mark it, leave for the moth in the spring and remove it before hay making. ▶

GRASS SPECIES FOUND IN A DIVERSE PASTURE

- Common and creeping bent
- Red and meadow fescue
- Rough, annual and smooth meadow grasses
- Sweet vernal grass that will give hay that magical sweet meadow aroma
- Meadow foxtail, which is very similar to timothy and provides fantastic early-season growth and bulk to the hay
- False oat-grass
- Crested dog's-tail
- Smooth hawk's-beard
- Cock's-foot
- The bromes
- Couch grass
- The now ubiquitous rye grasses



Hay can be mown any time from May to September

NUTRITIONAL VALUE

The importance of diversity doesn't just involve knowing that you are providing wonderful native wildlife habitat for a diverse range of insects, birds and small mammals, but the diversity will have a significant impact on the nutritional value of the subsequent hay.

Each species of pasture plant will have different root depths and symbiotic relationships with many different soil microbes, and each will contain varying amounts of the many micro-nutrients needed by your stock: minerals, vitamins and phytonutrients. This will not only keep your stock healthy through the winter months, but the nutritional value of their meat or milk will also benefit you.

In addition, depending on the spring and summer weather, when the hay was last grazed and when it is made, each grassland species will be at a different stage of growth and this will impact the macronutrient values: fibre, protein and metabolisable energy.

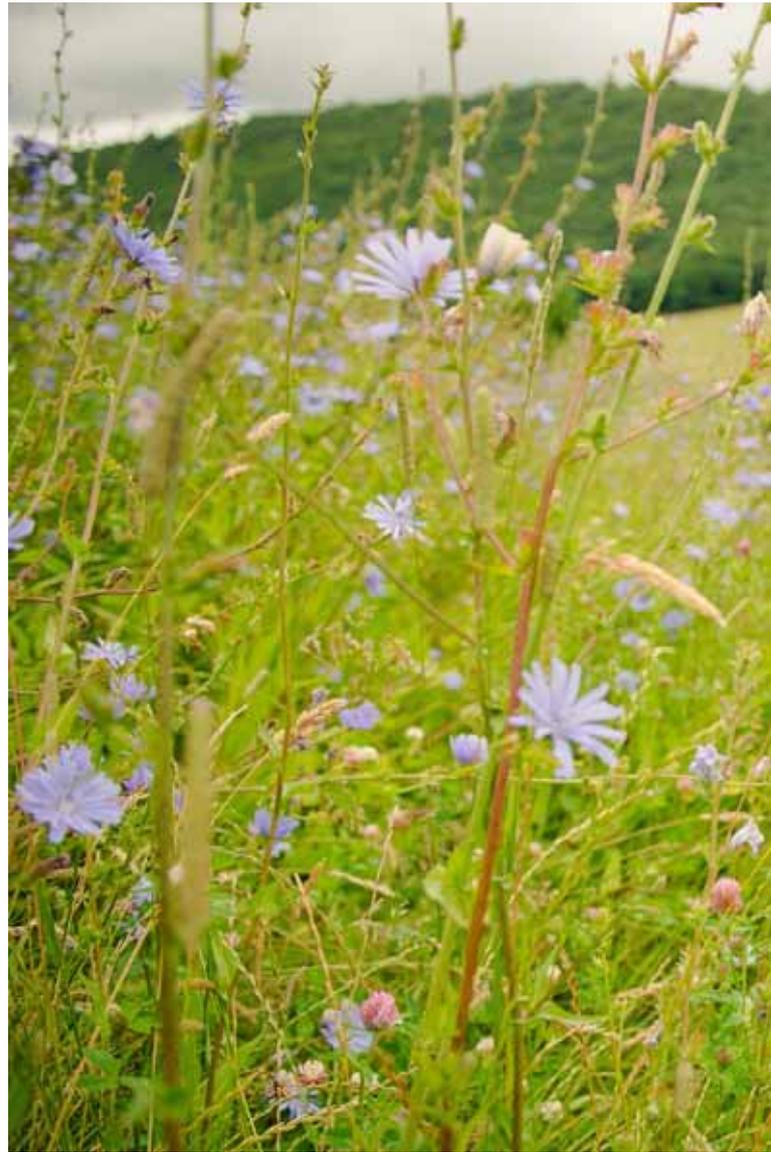
Hay made, for example, in early to mid-June, from plants with lots of succulent leafy growth, will have a significantly higher energy

and lower fibre content, but also a lower micro-nutrient content than hay made in July. This is because July is the time when the highest number of species will have gone to seed and will be starting to senesce. The plants will be mostly fibre-rich stem and seed heads that are extremely micro-nutrient dense, with all the vitamins and minerals needed for a new plant to grow contained within the protein-rich seed germ.

WHY CATTLE NEED JULY HAY

Well-made June hay is, therefore, sweeter, shorter and extremely palatable: it is ideal for horses or ponies that are not prone to laminitis, or for fattening lambs or hogget over the winter. However, the microbes in the rumens of walking bio-digesters like cattle, both dairy and beef, need the long fibres from July-made hay to provide them with the cellulose and micro-nutrients they need to produce the fatty acids and other fermentation by-products on which cows thrive.

Hay can be made as early as May for even shorter, sweeter hay, but it will



Lady's smock: the flower will be gone by hay-making time, but the plant provides valuable micro-nutrients



A traditional diverse native pasture ready to be mown



The non-native chicory bursts into blue flowering spikes up to 5ft tall

FORBS AND LEGUMES IN THE FIELD

Greater plantain with its rounder leaf

Ribwort plantain with its narrower leaf

Cuckooflower, otherwise known as lady's smock



Red and white clovers

Bird's-foot trefoil



Salad burnet

Common and sheep's sorrel

Dandelion

Yarrow

Creeping buttercup

Common nettle, which is extremely mineral rich and, when dried, is loved by cattle and sheep.



Chicory — a non-native plant with a beautiful blue flower and a natural anthelmintic. It is worth getting a small bag of this wonderful plant and throwing a few seeds into each knocked out mole tump in the spring.

come with even lower micro-nutrient levels and will probably need to be fed with some mineral supplementation.

Hay can also be made in August, and even as late as September, but the further into autumn the more nutrients are lost as the seed heads fall, and the quality will deteriorate as the old senesced grasses are mown together with the regrowth.

Stock will always select what they want from a bale and may not eat everything. Animals we may think of as fussy eaters are either telling us the hay is not to their liking or, more likely, they are lacking particular nutrients and so are picking

‘When making hay, the further into autumn the more nutrients are lost as the seed heads fall’

through the hay selecting for the plants that may contain what they need.

The various nutrient values of hay can be ascertained by sending samples to a laboratory.

However, unless you are feeding racehorses or needing to keep an animal on a very specific diet for some reason, the lab tests are unnecessary. The best hay is not that with the most impressive list on a lab report, but is the hay your stock will eagerly tuck into and relish eating. ■

NEXT TIME: How to make good quality hay, plus safety issues, bale types, storage and finding a local contractor.

All about Christine Page

Christine Page owns and runs a small-scale, regenerative organic pastoral farm in south Shropshire. For more information visit www.smilingtreefarm.com