

Grazing Leys - From Intensive to Traditional



Maximising Milk from Grazing

Times are tough for dairy farmers. Whichever way you look at it, for profits to be maintained or increased, the solution is to reduce inputs and increase the use of cheaper feeds, namely grass. Grazed grass is by far the cheapest and most important source of forage. On dairy farms around two thirds of forage can be produced from grass. Perennial ryegrass leys are highly nutritious and remain the cornerstone for intensive grazing systems.

Money from Ryegrass

Ryegrass mixtures provide very high annual yields when managed intensively in a high-input system. Ryegrasses allow higher stocking rates than alternative grasses such as meadow fescue or cocksfoot. They are also significantly more responsive than other forage grasses to nitrogen fertiliser.

Changes in Fertiliser Use

It comes as no surprise that the increased use of nitrogen fertiliser has doubled the yield and stocking capacity of grassland. Since the early 1950's when 20 kg N per hectare was applied to leys, there has been a steady increase in use. With a cheap and plentiful supply, the quantity of nitrogen applied dramatically increased. There was, many will recall, a very high usage from the mid 1980's to mid 1990's with application rates reaching 450 kg N per hectare. However, since then there has been a sharp reduction in use as a result of the increased cost of N and the extension of NVZs. These factors now effectively restrict the use of N to around 200 kg per hectare.

Ryegrass + N or Clover?

In line with changes in fertiliser use, there has been a fall in permanent grassland in favour of temporary leys which have a far greater response to nitrogen fertiliser. Now, in light of falling N fertiliser use, what will happen next is less predictable. A low cost, high clover ley system is predicted by some as an effective alternative. It has been well documented that clover-based systems compare favourably to grass which requires 200 kg N ha. This is reflected in seed sales, with substantial increases of red and white clover seed traded. However, many intensive dairy farmers continue without clover, preferring instead to improve the efficiency of fertiliser N usage by targeting intensively bred strains of responsive ryegrass grown as short and medium duration leys.

How Long Do Ryegrass Leys Last?

Perennial ryegrass based leys last reliably for between three and five years. Sometimes they go on longer on good soils, but all eventually deteriorate as unsown species such as meadowgrasses and bents increase to make up more of the sward. There are differences within ryegrass species and between individual varieties. Generally, late heading perennial ryegrasses such as Twystar are very persistent with good ground cover. Earlier heading ryegrasses such as Aberecho, a hybrid type, offer early season growth but do not persist as well. In any event, ryegrass leys should be considered as temporary ones and should not be routinely extended beyond the recommended duration.

Avoiding the Lean Years

A newly sown ley on soil in good heart, with plenty of soil moisture and nitrogen will outyield all others. As discussed earlier, a deterioration of the sward sets in over time which involves the invasion of unsown grass species less able to convert N to fodder. It is certain that leys with late heading ryegrasses such as those in 'Intensive Dairy Graze - Late' are much slower to change, resulting in a longer lasting ley which needs reseeding less frequently. A reduction in nitrogen application is not helpful to ryegrass ley persistence as, by default, this will reduce the competitive ability of the ryegrass and further favour the unsown species.

Milk from Grass Manager Leys

The mixtures on this site include the latest varieties and grow exceptionally well on moisture-retentive 'ryegrass soils', providing grass from spring through summer and well into the autumn. The 'Intensive Graze - Early' contains a range of varieties providing early bite and continues to grow through to the end of the autumn. The 'Late' mixture is for mid and late season grazing. The varieties used in this are much leafier and are easier to manage, especially in the spring as they produce fewer seed heads. Finally, if the ley is to be used for cutting and grazing, 'Milk-Meat' is excellent. It has been updated again this year, but the mixture is still the same basic formulation as it was when first used over sixty years ago.

Longer Term Stock Leys

All year round grass may be an unrealistic proposition, but by combining grasses and clovers with differing growth habits it is possible to get close.

Winning Combinations

The main reason for sowing mixtures of grasses and clovers is to increase yield. A single grass alone will nearly always be lower yielding and more vulnerable to failure or poor performance due to pests, disease attack or the effects of unusual seasonal weather. Therefore, a mixture of seeds is preferable to sowing a single species. This is especially important for leys which are expected to last for more than one year. Higher yields from mixtures of grasses and clovers are due to better seasonal

distribution of growth; grasses give high yields during May and June, clovers produce theirs in July. Critically, it is the contribution of grass and clover that provides the optimum balance between bulk yield and feed value. Grasses tend to have higher annual yields, but are lower in protein than clovers. Animals grow faster and 'do' better on a mix of clover and grass.

Pick of the Crop

There are many grasses and legumes which can be found throughout the UK, but there are only a handful of species which are used for forage. The reason for this is simple: a suitable forage plant must produce a reasonable yield and be nutritious to livestock. The most notable plants include ryegrass, cocksfoot and timothy, along with red and white clover. These species can be reliably sown together and are quite easy to manage as a temporary ley.

Our stock leys are for self-sufficient beef and sheep farmers to produce profitable stock with the emphasis placed on seasonal production, live weight gain, breeding and finishing healthy animals. These leys contain ryegrass, timothy, with cocksfoot and clover for good all year round production. Clover is an excellent protein source which increases production, reduces inputs and maintains profit margins.

Henry Edmunds and his Outstanding Cholderton Mixture

The Cholderton Estate is a traditionally run, mixed farm near Salisbury, Hampshire. Henry Edmunds has been running the 2,500 acre estate since 1975. He is a keen naturalist and an advocate of the rotational ley farming system which has been central to Henrys' farming policy to provide for his dairy, beef and sheep enterprises. Henrys' great grandfather, a scientist, was originally attracted to the low-quality land at Cholderton as he was keen to apply a scientific approach to prove that even poor land could be farmed successfully. The thin, chalk soils at Cholderton hold little organic material, therefore there is a requirement for regular applications of FYM and careful management to keep them in good heart. The Cholderton seed mixture is a good example of a successful combination of species to provide flexible and all purpose use. It contains hybrid and perennial ryegrasses, along with early-growing cocksfoot and late season timothy. These grasses, mixed with red and white clovers, are left down for around five years before returning to arable for two or three years. In addition to providing forage, the leys also improve soil structure, add fertility and suppress weeds. On the thinnest chalk soils Sainfoin is grown to finish lambs in the summer and also to provide hay. Vetches and lucerne are also important crops, providing both forage and soil fertility at Cholderton.

Cover Crops

Long leys can benefit from the addition of a fast-growing cover or nurse crop. Westerwolds, a one year ryegrass, can provide cover during establishment and increase yields in the first year of production. Please call us if you would like to add this to your order.

Long Lasting Upland & Deep Rooting Dry Land Leys

It would be out of place to see Suffolk sheep, with their voracious appetites, on upland pasture. So why accept ravenous ryegrass there either? There are other grasses that may be more suitable, such as meadow fescue, timothy and cocksfoot. Whilst not perfect, these species can offer great benefits over ryegrass to those in challenging conditions. If you are high in the hills or have thin, dry land then we have leys specifically designed for these conditions.

Long-Lasting Upland Leys

Before the intensification of agriculture, grass leys frequently contained species other than ryegrass. In upland areas mixtures of meadow fescue, timothy and clover were often sown. These were chosen because they grew well on cold, wet soils. Over time they became less popular as they did not respond as well to artificial nitrogen fertiliser compared with ryegrass leys. Ryegrass has been frequently sown on uplands in recent times, however it often reduces rapidly after only a few years. It is therefore necessary to give careful consideration to seed mixtures sown as long term leys in cooler, wetter districts. Timothy and meadow fescue are considered to be the most palatable of the permanent grasses. Although they may lack some of the digestibility associated with ryegrass, they are consumed readily by the grazing animal. In addition, when grown with red and white clovers, the forage produced will be higher in protein, more digestible and largely self-sufficient with little demand for artificial nitrogen. There is no reason to assume that these leys are low yielding either. Of course, all grass will be restricted by altitudes in excess of 800' and are held back by poorer soil fertility, but ryegrasses will not do well in upland conditions in comparison to a meadow fescue and timothy mixture.

How to Establish a Long Lasting Ley

These long-lasting leys take more time to germinate from seed and become established. It is therefore essential to sow when growing conditions are good and not too early in the spring before the soil is warm. The ideal way to establish this mixture is to sow in the spring. This can be done direct, with a cover of westerwolds ryegrass or vetches, which provide additional bulk in the year of sowing, or undersown to a spring cereal. Autumn sowings can be contemplated provided the seed is in by mid-August. A cover of Italian or westerwolds ryegrass can be sown with it but, be warned, westerwolds grows away quickly in the spring and may not be appropriate on heavy ground. If you intend to sow one of these, please feel free to seek advice when you order.

How to Grow Grass on Droughty, Light Land

Many of you will recollect the Clifton Park seed mixture which was sown extensively on lighter soils in former times. Robert H. Elliot and William Lamin were pioneers and advocates of ley mixtures which consisted of deep-rooting species. Elliot's original mixture was complex, with the mainstay being cocksfoot. Then, as now, some farmers were reluctant to use too much cocksfoot,

as it was inclined to grow coarse and in clumps. However, this was only a problem when seed was sown too thinly, allowing the cocksfoot too much freedom. Elliot observed first hand at Clifton Park that his deep-rooting four year ley mixture was considerably better than ryegrass on his dry land.

He wrote that ryegrass was good for the wet parts of England and Wales but not very good for dry districts, where it soon burnt up in the summer. Forty years later, Lamin said of ryegrass: "If there came a dry spell the roots were curling about on top of the ground and they didn't go down into the soil to make the humus nor did they get moisture to keep the grass going... It's like throwing money away to put ryegrass on dry land." Lamin farmed sandy land in Nottinghamshire, and joked that his cocksfoot grass roots would be tickling the miners' ears below ground! He used mixtures based on Elliot's original ideas for over thirty years. Over time he simplified the seeds mixture and left out the finer grasses which he felt made little or no contribution. The mixture detailed on this site is based on Lamin's recipe.

Today, Mr J. R. Hargreaves, also in Nottinghamshire, grows cocksfoot leys with little or no ryegrass. 'On my light land, ryegrass just runs to seed and has no bottom.' He has light, gravel land and is in a low rainfall area. The farm comprises a Friesian dairy herd, a sheep flock and arable. The cocksfoot leys are used for the production of silage for milking-cows and also late autumn/winter grazing for sheep. They are sown for four years. The cocksfoot leys guarantee production of grass through the spring and summer. It is usual to take a first cut of silage in the first or second week of May, followed by a second and often a third cut. The cocksfoot ley keeps producing leaf providing it is cut frequently. 'There are no problems with bloat, which is surprising given the amount of clover we grow with it.' says Hargreaves.

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