



Handbook

Recommended Grass and Clover Lists



2017/18





Recommended Grass and Clover Lists

– who are they for?

Knowing the performance characteristics of grass and clover is immensely useful for grassland producers. It allows appropriate selection of varieties that will perform well for a particular system.

The Recommended Grass and Clover Lists for England and Wales are drawn up after rigorous testing for attributes such as yield, persistency, quality and disease resistance. The data come from trials carried out by the NIAB-TAG, Barenbrug, IBERS, DLF Seeds, DSV, AFBI and SRUC, and are evaluated by a panel of experts.

The scheme has changed – it is no longer partially funded by merchants, which means the data are available to all. The testing is funded by plant breeders through the British Society of Plant Breeders and the ruminant levy boards AHDB Beef & Lamb, AHDB Dairy and Hybu Cig Cymru.

There are three steps to making the best use of this booklet:

- 1.** Is it on the list? – when looking at mixtures check that the varieties are listed in this booklet
- 2.** Is it right for the job? – make sure the type of grasses or clovers listed in a mixture are fit for the purpose
- 3.** Which varieties fit the job? – refinements can be made to mixtures in consultation with your merchant

This booklet is produced for use in England and Wales. Producers in other UK regions should consult the Scottish Recommended grass and clover varieties list and the DARD recommended grass and clover list for Northern Ireland.





Why are grass and clover important?

The cost of production per litre of milk or kg of liveweight gain is a major consideration for all livestock producers. One of the best ways to reduce costs is to produce more feed on the farm rather than buying it in.

There is huge potential on most grassland farms in England and Wales to increase the amount and quality of the grass and clover that is grown and eaten.

As few as 1 in 20 varieties of ryegrasses tested will actually make it to full recommendation on the list

Few farmers these days would want to use bull or ram genetics from the 1950s in their livestock breeding, yet they continue to use outdated varieties in their grassland.

By relying on old varieties, farmers are missing out on millions of pounds worth of investment made by plant breeders to produce new grasses that are far superior in important aspects such as yield, digestibility and spring growth.



Is it time to re-seed?



The percentage of ryegrass (or other sown species) in a sward is a better indicator of a need for re-seeding than the age of the ley.

Pulling up a handful of grass plants allows farmers to assess how much perennial ryegrass there is by looking for any with a red base to their stem.

Weed grasses, such as annual meadow grass take every opportunity to invade sown pastures and do not have red stem bases. Weed grass species yield poorly, are of poor feed quality and do not respond well to nitrogen.

The ideal grass/clover balance across the grass growing season is 30% white clover to 70% grass – but clover content can vary widely between and within fields.

Re-seeding or over-seeding allows farmers to increase the performance of their swards by sowing improved grass and clover varieties that match individual field objectives – ie long term grazing or shorter term cutting.

Consider re-seeding if there is less than 50% sown species in the ley



Which type of grass?

Mixtures

In the UK farmers tend to re-seed with a mixture of different grasses and clover, rather than sowing a single variety.

Mixtures can produce yield benefits when compared to the same varieties sown individually. They also allow farmers to capitalise on the strengths of different species. For instance the digestibility of perennial ryegrass can be combined with the yield of a hybrid ryegrass and the superior nutrient value of white clover in one field.

Heading Dates

Grasses are classified according to heading date – which is the date on which 50% of the ears in fertile tillers have emerged.

Early varieties of ryegrass reach their heading date in the first two weeks of May; intermediate varieties head during the second half of May and late varieties reach this stage during the first two weeks of June.

In general, early heading varieties grow earlier in the spring, are more erect, tiller less freely and are easier to cut for conservation than later heading varieties, which tend to be more prostrate and persistent and give good mid-season growth.

Perennial, Italian and Hybrid ryegrasses

Ryegrass is the most important sown grass grown in the UK due to its productivity and suitability to the climate and farming systems.

Perennial ryegrasses (PRG) produce persistently good yields of high quality forage. Italian ryegrass (IRG) yields higher than PRG but has poor persistence.

Hybrid ryegrass (HRG) is a cross between perennial and Italian varieties, combining the strengths of the two parent species eg the sward density of PRG and the out-of-season growth of IRG.

For 2 year leys – use tetraploid and diploid Italian ryegrasses
For 3-4 year leys – use hybrid ryegrass and early perennial ryegrasses
For long term leys – use intermediate and late perennial ryegrasses.

Choosing the right type of grass

Ryegrass

Each type of grass has different growth and quality characteristics. When re-seeding it is important to select the most appropriate grasses and clovers for the situation and to meet the objectives set for each field.

Perennial ryegrass

- Most effort by plant breeders has been concentrated on PRG
- Establishes rapidly, even from autumn sowing
- High yields in first harvest year
- High sugar content makes it good for silage-making
- Produces dense and persistent swards so useful for long term leys and establishing permanent pasture

Good for all types of management eg silage or hay production, extensive or intensive grazing

Italian ryegrass

- Produces heavy crops of silage or hay
- Useful for short term leys of one to three years
- Long growing season gives opportunity for 'early-bite' grazing followed by leafy hay or silage cut

Good for cutting, but can also be used for intensive spring grazing

Hybrid ryegrass

- Better ground cover and longer lived than IRG
- Good winter hardiness and disease resistance
- Mid-season digestibility better than IRG, but poorer than PRG
- First year yields lower than IRG, but yield improves in second and third year
- More drought resistant than IRG

Good for silage production and cattle rotational grazing

Diploids and Tetraploids

Tetraploids have twice the number of chromosomes of diploid varieties, which makes all their cells bigger. This means they have larger seeds and leaves and tend to establish quickly. They are more able to compete when used for over-seeding.

Tetraploids have a more upright growth habit and are suited to drier growing conditions. In some cases they have better digestibility and palatability than diploids.

Diploids tend to be more persistent and tiller more freely and are generally better suited to wetter growing conditions. Well-managed diploid leys will usually produce denser swards.



Choosing the right type of Timothy and clover

Timothy

- Grows at lower temperatures than ryegrass so can be good for early season grazing, especially in cold, late springs
- Good mid-season growth can fill the gap when ryegrass growth falters
- Good winter hardiness and ground cover
- Can be slow to establish and yields are likely to be lower than PRG
- Best utilised in cooler, wetter areas

Good for extensive grazing and hay production

White clover

- High nutritional value, particularly protein and mineral content
- High palatability
- Good animal performance
- Can provide 150kg/ha (120 units/acre) of nitrogen for grass growth
- Match leaf size to stock (small for continuous, hard sheep grazing; medium for frequent cutting and rotational grazing; and large for cutting and cattle grazing)

Good for grazing and cutting

Red clover

- High protein content up to 19% in silage depending on percentage in sward
- High yields, even with no or low N fertiliser
- Early red clovers produce two main cuts and a small autumn cut
- Generally only lasts for three years

Good for cutting and finishing stock in autumn

Key information on each of the different grass and clover species is contained in the tables on pages 9 to 19.

The data provided has been extracted from the full Recommended Grass and Clover Lists. The full Lists are available to all and can be found on the British Grassland Society website www.britishgrassland.com/rgcl



Tips for re-seeding

Once the decision to re-seed has been made, it is important to follow some key steps:

Preparation

- Spring or autumn re-seeding are equally advantageous and the choice will depend on the farming system plus when the field is available and conditions are good

Remember that any mixture containing red clover needs to be in by August and white clover needs to be in by September.

- Take a soil sample at a depth of 15cm – deeper than soil sampling in established swards as cultivation will disturb the soil
- Check for any soil structure issues – a plough may sort some of them out, but if the issue is deeper a sub-soiler may be needed
- Aim to deal with major weed problems in the old sward
- Correct any nutrient deficiencies

For lime

Apply before ploughing so it can be mixed in during cultivations and remember that it can take nine to twelve months for pH to increase so planning ahead is important.

These guidelines are based on material with neutralising value of 50. This is a simplified version as it has combined recommendations for different soil types. Look at Table 1.2 on page 13 in Chapter 1 - Principles of nutrient management and fertiliser use. See ahdb.org.uk/rb209 for more information. Seek advice from a FACTS-qualified adviser.

Adapted from www.aglime.org.uk/technical05.htm

Guidelines for lime application

pH	Tonnes per ha	Tonnes per acre
6.2	0	0
6.0	0	0
5.5	3-4	1.2-1.6
5.0	5-7	2.0-2.8

*** recommendations**
To calculate from tonnes/ha to tonnes/acre multiply by 0.4046
Apply no more than 7.5t DM/ha at one time.

The Nutrient Management Guide (RB209) provides recommendations for grass establishment:

- For spring sown re-seeds the recommendations is 60kg per ha, with up to 30kg/ha being applied in the seedbed
- For autumn re-seeds the recommendations for moderate soil nitrogen supply situations is 0-30kg per ha depending on sowing date
- For grass and clover re-seeds have no requirement for nitrogen at establishment
- For phosphate and potash

P or K index	Phosphate (P ₂ O ₅) kg/ha	Potash (K ₂ O) kg/ha
0	120	120
1	80	80
2	50	60 (2-) 40 (2+)
3	30	0
>3	0	0

Remember to deduct any nutrients applied in the seedbed from the first season's grazing or silage/hay requirements.

Full re-seed

- For a full re-seed, spray the old sward using a product containing glyphosate

Ensure there is enough leaf area remaining to take up the product and manufacturer's instructions are followed.

Consider how pests like leather jackets can be controlled – without chlorpyrifos.

- For a full re-seed, plough, press and work down to a firm and reasonable fine seedbed
- Drill or broadcast the seed on to the rolled seedbed, to place it no deeper than 1cm
- Ring roll or light harrow to ensure maximum contact between seed and soil, but avoid burying the seed below 1cm, especially small seeded species such as clovers and timothy

Over-sowing

- Over-sowing or stitching-in can be a way to rejuvenate old or damaged grass without the cost of a full re-seed
- As existing grass or weeds can out-compete the new seedlings, good soil structure and nutrients is still important
- The best time is summer as the existing grass is less vigorous and soil temperatures will be high, although soil moisture may be a limiting factor
- The seedlings need light so 40% of bare ground should be seen before over-sowing is considered – harrowing in two directions may help
- The seed can be broadcasted or direct drilled and the existing sward can be sprayed off beforehand or “checked” by hard grazing or cutting
- Seed to soil contact is still important, so roll after sowing or allow sheep to graze the field for 7-10 days to tread the seed in
- Seed rate will change depending on sward conditions – a minimum of 8kg per acre and up to 15kg for badly damaged swards
- Do not apply nitrogen as it will only boost the growth of the existing sward (if it has not been sprayed off)

Post-establishment

- Once the grass is established (after five to six weeks), graze lightly with sheep or young stock when the grass reaches 8-10cm to firm in roots and encourage tillering. Do not graze it down lower than 4cm
- Weed control in a new ley is usually necessary to ensure good establishment and to avoid variable ground cover
- If significant weed problems are expected, consider establishing the ley without clover and introduce it once the weed problems have been solved

All grass and clover species can be successfully established by following the above guidelines, however, tetraploid ryegrasses are likely to establish quicker and easier than diploids as they have larger seeds and are more competitive against the existing grasses.

How to use the Recommended Grass and Clover Lists

The tables on the following pages contain data extracted from the Recommended Grass and Clover Lists for 2017/18. They are provided to help producers to check and formulate seed mixtures in conjunction with their merchant.

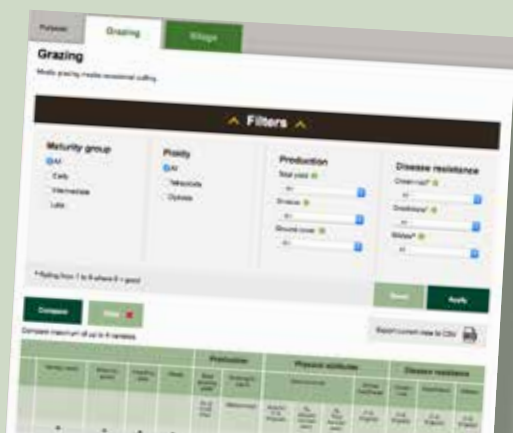
The data produced are based on cutting trials in North Yorkshire, Shropshire, Oxfordshire, Gloucestershire, Devon and Ceredigion, plus additional information from Northern Ireland and Scotland. Each variety is sown for two or more seasons.

The cost of grass seed is a small proportion of the expense of re-seeding – yet taking time to select the right varieties will reap productivity and lifespan benefits.



Your grass seed merchant will have a more in-depth booklet with more information about each variety on the Recommended Grass and Clover Lists. It can be found at www.britishgrassland.com/rgcl

An online tool is available at dairy.ahdb.org.uk. It can be used to compare perennial ryegrasses for various traits to help choose the correct varieties for the job.



Recommended List of Early Perennial Ryegrass Varieties 2017/2018

**OK for short term cutting and grazing leys.
Can lose quality quickly as head early.**

Variety	Heading date	Simulated grazing management		Conservation management		Ground cover	Crown rust	Drechslera	Suitable for my farm 
		Total annual yield	D-value Midsummer	Total annual yield	D-value 2nd conservation cut				
		Average = 100 at 10.34 t DM/ha		Average = 100 at 15.53 t DM/ha					
Diploids									
Genesis	10 May	101	75.7	107	73.0	6.7	7	6	<input type="checkbox"/>
Moyola	12 May	104	75.5	105	72.3	6.4	7	5	<input type="checkbox"/>
Kilrea	13 May	97	75.4	99	72.0	7.2	4	6	<input type="checkbox"/>
Kilian	14 May	103	75.7	102	72.7	7.1	8		<input type="checkbox"/>
Kimber	15 May	99	75.0	100	71.8	6.7	4	6	<input type="checkbox"/>
Glasker	17 May	103	76.2	103	72.6	6.6	8		<input type="checkbox"/>
Tetraploids									
AberTorch	6 May	100	76.3	102	72.8	6.5	7	7	<input type="checkbox"/>
Anaconda	7 May	96	76.3	100	72.0	6.0	4	9	<input type="checkbox"/>
Carraig	14 May	102	76.2	(102)	(72.5)	(6.3)	2	8	<input type="checkbox"/>
Starman	16 May	98	75.3	(103)	(72.1)	(6.2)	9		<input type="checkbox"/>

Yield

For yield figures, 100 equals the average yield for the varieties on the Recommended Lists. For example, if a variety has a yield of 105, it is above average. If it has a yield of 95, it is below average. It is measured in tonnes of dry matter per hectare.

D-value


D-value is a measure of quality and refers to the percentage of the dry matter that can be digested by an animal. A higher number is better.

Crown rust and Drechslera

Score relates to resistance.

() Some data derived from intermediate trials. [] Limited data.

Recommended List of Intermediate Perennial Ryegrass Varieties 2017/2018

Variety	Heading date	Simulated grazing management		Conservation management		Ground cover	Crown rust	Drechslera	Suitable for my farm 
		Total annual yield <i>Average = 100 at 10.34 t DM/ha</i>	D-value Midsummer	Total annual yield <i>Average = 100 at 15.53 t DM/ha</i>	D-value 2nd conservation cut				
						1 = poor 9 = good			
Diploids									
Solomon	17 May	99	75.7	102	72.4	6.6	8	7	<input type="checkbox"/>
Boyne	19 May	102	75.0	105	70.2	6.9	8	6	<input type="checkbox"/>
AstonConqueror	22 May	103	76.6	102	75.1	7.1	5		<input type="checkbox"/>
Moira	23 May	102	75.6	103	74.5	6.3	7	7	<input type="checkbox"/>
Nifty	23 May	105	77.1	99	72.3	6.6	7	5	<input type="checkbox"/>
AberDart	24 May	100	77.7	95	73.3	7.2	7	3	<input type="checkbox"/>
Glenariff	25 May	103	75.1	100	73.1	6.8	8	5	<input type="checkbox"/>
AberStar	25 May	103	77.3	96	72.7	6.9	9	3	<input type="checkbox"/>
AberZeus	25 May	107	77.5	102	74.8	7.5	8		<input type="checkbox"/>
Premium	27 May	97	75.3	97	73.1	6.8	6	7	<input type="checkbox"/>
AberFarrell	27 May	99	77.1	97	76.1	6.4	8	6	<input type="checkbox"/>
AberWolf	27 May	104	77.8	103	73.3	7.5	7	4	<input type="checkbox"/>
AberMagic	27 May	106	76.7	100	72.1	6.3	8	4	<input type="checkbox"/>
Gosford	28 May	102	76.6	100	74.0	6.6	8		<input type="checkbox"/>
AberGreen	29 May	106	77.3	102	73.7	7.1	8	5	<input type="checkbox"/>
Elyria	29 May	102	76.2	98	73.1	7.2	8	6	<input type="checkbox"/>

Good for cutting, but can also be used for intensive spring grazing.

Variety	Heading date	Simulated grazing management		Conservation management		Ground cover	Crown rust	Drechslera	Suitable for my farm
		Total annual yield <i>Average = 100 at 10.34 t DM/ha</i>	D-value Midsummer	Total annual yield <i>Average = 100 at 15.53 t DM/ha</i>	D-value 2nd conservation cut				
						1 = poor 9 = good			

Tetraploids									
Fintona	19 May	105	76.8	107	74.6	5.6	5	8	☐
Malone	19 May	98	76.9	101	75.0	5.6	4	7	☐
Glenstal	21 May	101	75.6	101	73.2	5.6	4	7	☐
Seagoe	21 May	101	76.3	107	73.0	5.7	8	8	☐
Nolwen	21 May	101	77.0	102	75.0	6.3	9		☐
Ramore	22 May	101	75.8	107	73.8	5.9	5	9	☐
AberClyde	24 May	100	77.4	100	73.5	6.5	8	7	☐
Eurostar	25 May	99	76.6	100	73.8	6.2	6	8	☐
AstonBonus	28 May	100	75.8	100	74.5	5.6	8	7	☐
AberSpey	29 May	106	77.5	101	75.2	5.8	8		☐
Dunluce	29 May	103	77.1	103	73.8	5.7	4	7	☐
Caledon	29 May	104	76.4	(106)	(70.7)	(5.2)	[8]	[9]	☐
Triwarwic	30 May	101	76.2	105	73.2	5.8	8		☐
Diwan	30 May	99	76.5	103	73.1	5.4	9		☐
Pensel	30 May	102	75.5	104	71.3	5.7	8	8	☐
Montova	30 May	100	75.3	103	71.8	6.2	6	7	☐
Federer	30 May	102	76.8	101	73.9	6.2	8		☐
AstonEnergy	31 May	99	77.7	97	76.0	4.9	9	8	☐

[] Limited data. () Data derived from late trials.

Recommended List of Late Perennial Ryegrass Varieties 2017/2018

Variety	Heading date	Simulated grazing management		Conservation management		Ground cover	Crown rust	Drechslera	Suitable for my farm ↙
		Total annual yield <i>Average = 100 at 10.34 t DM/ha</i>	D-value Midsummer	Total annual yield <i>Average = 100 at 15.53 t DM/ha</i>	D-value 2nd conservation cut				
						<i>1 = poor 9 = good</i>			
Diploids									
AberAvon	1 Jun	99	77.4	95	74.7	7.3	8	4	<input type="checkbox"/>
Toddington	2 Jun	96	76.0	98	72.6	6.7	8	6	<input type="checkbox"/>
Glenarm	3 Jun	98	76.8	102	74.6	6.2	8	3	<input type="checkbox"/>
Romark	3 Jun	98	76.8	93	74.4	6.4	5	4	<input type="checkbox"/>
Drumbo	4 Jun	98	77.2	95	75.2	6.1	7	5	<input type="checkbox"/>
Clanrye	4 Jun	97	75.4	100	71.1	6.4	6	6	<input type="checkbox"/>
Cavendish	5 Jun	96	75.5	99	74.3	6.8		[3]	<input type="checkbox"/>
Timing	5 Jun	99	76.1	100	73.0	6.1	8	4	<input type="checkbox"/>
AberLee	6 Jun	100	78.6	96	76.3	7.1	7		<input type="checkbox"/>
AberChoice	9 Jun	103	77.2	98	72.8	6.1	6	3	<input type="checkbox"/>
Matiz	11 Jun	96	77.4	92	74.3	6.4	7	6	<input type="checkbox"/>
Cancan	11 Jun	99	76.5	94	73.5	6.5	5	5	<input type="checkbox"/>

**Diploids – Good for long term grazing and cutting leys.
Good for ground cover.**


**Tetraploids – Good for medium term cutting leys and in
grazing mixtures.**


Variety	Heading date	Simulated grazing management		Conservation management		Ground cover	Crown rust	Drechslera	Suitable for my farm ✓
		Total annual yield	D-value	Total annual yield	D-value				
		Average = 100 at 10.34 t DM/ha	Midsummer	Average = 100 at 15.53 t DM/ha	2nd conservation cut				
						1 = poor 9 = good			
Tetraploids									
Ballintoy	31 May	101	77.6	107	72.7	5.5	4		☐
Bijou	31 May	102	75.6	(103)	(72.5)	(6.0)	8	[7]	☐
Alfonso	1 Jun	99	77.1	102	73.8	6.0	7	6	☐
Calao	2 Jun	101	77.7	104	73.7	6.1	8		☐
Meiduno	2 Jun	103	76.5	103	74.2	4.9	7	8	☐
Hurricane	2 Jun	97	77.2	104	73.4	5.8	8	7	☐
Dundrum	3 Jun	98	77.3	104	73.5	5.6	4	7	☐
Aspect	3 Jun	99	77.3	102	74.1	5.9	6	7	☐
AberGain	4 Jun	107	78.1	108	72.8	5.7	8	7	☐
Novello	4 Jun	101	76.9	98	73.6	5.8	7	7	☐
Irondal	4 Jun	99	77.3	101	74.3	6.3	8	7	☐
AberBite	4 Jun	101	77.7	101	74.3	5.6	7	7	☐
Youpi	5 Jun	100	77.0	100	73.6	5.9	9	9	☐
Twymax	6 Jun	98	77.5	101	74.5	6.3	6	7	☐
AstonPrincess	6 Jun	100	77.1	101	74.5	6.0	6	7	☐
Xenon	6 Jun	101	77.0	99	73.8	6.4	5	7	☐
AberPlentiful	6 Jun	100	77.1	99	73.7	5.5	8	7	☐
Solas	7 Jun	102	76.7	101	73.8	6.0	2	8	☐
Ideal	9 Jun	95	77.5	97	74.6	6.3	7	7	☐

() Data derived from intermediate trials. [] Limited data.

Recommended List of Italian Ryegrass Varieties 2017/2018

Good for silage production and cattle rotational grazing.

Variety	Heading date	Total annual yield <i>Average = 100 at 18.11 t DM/ha</i>	D-value 2nd conservation cut	Early spring growth 1st harvest year <i>Average = 100 at 1.87 t DM/ha</i>	1st Conservation cut <i>Average = 100 at 6.85 t DM/ha</i>	Ground cover	Ryegrass Mosaic Virus resistance	Mildew resistance	Suitable for my farm 
Diploids									
Shakira	15 May	100	66.3	101	103	3.2	6	6	<input type="checkbox"/>
Muriello	18 May	101	66.6	106	92	4.0	3	7	<input type="checkbox"/>
Meribel	19 May	98	67.1	102	96	3.4	4	6	<input type="checkbox"/>
Fox	19 May	99	66.3	99	95	3.8	4	7	<input type="checkbox"/>
Alamo	19 May	101	67.3	101	97	4.4	5	7	<input type="checkbox"/>
Steel	19 May	99	66.7	103	100	4.0	7	6	<input type="checkbox"/>
Abys	20 May	99	66.2	103	94	3.9	4	7	<input type="checkbox"/>
Davinci	22 May	101	67.0	96	94	4.0	5	7	<input type="checkbox"/>
Belluna	22 May	100	66.8	99	91	4.0	6	7	<input type="checkbox"/>
Javorio	22 May	100	66.8	98	101	3.4	6	7	<input type="checkbox"/>

Variety	Heading date	Total annual yield <i>Average = 100 at 18.11 t DM/ha</i>	D-value 2nd conservation cut	Early spring growth 1st harvest year <i>Average = 100 at 1.87 t DM/ha</i>	1st Conservation cut <i>Average = 100 at 6.85 t DM/ha</i>	Ground cover	Ryegrass Mosaic Virus resistance	Mildew resistance	Suitable for my farm 

Tetraploids									
Itarzi	15 May	100	66.9	99	105	4.0	5	6	<input type="checkbox"/>
Udine	16 May	100	67.4	99	107	4.1	6	7	<input type="checkbox"/>
Hunter	17 May	102	66.3	100	106	3.4	5	7	<input type="checkbox"/>
Kigezi 1	18 May	100	66.3	99	108	3.7	4	6	<input type="checkbox"/>
Barmultra II	18 May	100	66.7	103	106	3.9	4	6	<input type="checkbox"/>
Cazzano	19 May	101	68.0	100	101	3.8	[5]	8	<input type="checkbox"/>
Gemini	19 May	101	67.2	100	101	3.1	4	7	<input type="checkbox"/>
Messina	19 May	104	67.9	111	105	3.7	[7]	[7]	<input type="checkbox"/>
Danergo	21 May	99	67.0	92	102	3.5	5	6	<input type="checkbox"/>

[] Limited data.

Recommended List of Hybrid Ryegrass Varieties 2017/2018

Good for silage production and cattle rotational grazing.

Variety	Heading date	Total annual yield <i>ave. = 100 at 16.54 t DM/ha</i>	D-value 2nd conservation cut	Early spring growth 1st harvest year <i>Average = 100 at 1.69 t DM/ha</i>	Ground cover	Ryegrass Mosaic Virus resistance	Mildew resistance	Suitable for my farm ✓
Diploids								
Pirol	20 May	102	67.0	118	3.8	4	4	<input type="checkbox"/>
Barsilo	23 May	98	69.1	115	3.4	4	7	<input type="checkbox"/>
Barclamp	24 May	98	67.7	114	3.9	[7]	6	<input type="checkbox"/>
Tetraploids								
Palmata	07 May	101	72.5	107	4.4	7	7	<input type="checkbox"/>
AberEcho	15 May	103	72.5	105	4.2	6	7	<input type="checkbox"/>
Solid	16 May	98	71.9	82	4.8	7	7	<input type="checkbox"/>
AstonCrusader	18 May	102	71.1	108	4.2	7	7	<input type="checkbox"/>
Enduro	18 May	101	71.5	99	4.3	7	7	<input type="checkbox"/>
Tetragraze	19 May	100	71.3	79	4.7	7	7	<input type="checkbox"/>
Novial	19 May	101	71.9	99	4.2	7	7	<input type="checkbox"/>
AberEve	21 May	97	72.2	98	3.8	7	7	<input type="checkbox"/>
Kirial	21 May	102	71.9	100	4.1	8	7	<input type="checkbox"/>
Bahial	22 May	101	71.2	100	4.3	8	6	<input type="checkbox"/>
Amalgam	22 May	99	71.9	83	4.8	8	5	<input type="checkbox"/>
AberNiche #	23 May	102	67.9	115	3.6	7	8	<input type="checkbox"/>

[] Limited data. # Festulolium type variety.

Recommended List of Timothy Varieties 2017/2018

*Good for extensive grazing and hay production.
Good for wetter soils.*

Variety	Heading date	Simulated grazing management		Conservation management		Ground cover 1 = poor 9 = good	Winter hardiness 9 = good	Suitable for my farm 
		Total annual yield <i>Average = 100 at 11.45 t DM/ha</i>	D-value Midsummer	Total annual yield <i>Average = 100 at 14.13 t DM/ha</i>	D-value 2nd conservation cut			
		Presto	08 Jun	102	72.7			
Comer	09 Jun	103	71.3	104	63.6	4.8	7.1	<input type="checkbox"/>
Dolina	09 Jun	101	71.7	101	63.5	3.2	7.1	<input type="checkbox"/>
Promesse	10 Jun	96	73.0	96	64.6	6.7	6.8	<input type="checkbox"/>
Comtal	10 Jun	102	71.6	98	64.2	5.0	6.9	<input type="checkbox"/>
Winnetou	11 Jun	97	73.1	99	64.7	5.2	6.6	<input type="checkbox"/>
Moverdi	11 Jun	101	72.8	99	65.4	2.6	[6.3]	<input type="checkbox"/>
Motim	17 Jun	97	72.4	98	63.8	7.9	6.8	<input type="checkbox"/>
Barrett	18 Jun	99	72.4	98	63.6	6.8	[6.9]	<input type="checkbox"/>

[] Limited data.

Recommended List of White Clover Varieties 2017/2018

Good for grazing and cutting.

Variety	Leaf area (mm ²)	Total yield of clover	Total yield of grass + clover	Autumn ground cover 1 = poor, 9 = good		Suitable for my farm ✓
		3rd harvest year ave. = 100 at 4.03 t DM/ha	3rd harvest year ave. = 100 at 11.64 t DM/ha	After light defoliation	After hard defoliation	
AberAce	378	80	96	5.0	8.2	<input type="checkbox"/>
Galway	513	78	94	3.9	7.3	<input type="checkbox"/>
Aber S.184	580	83	96	5.2	8.2	<input type="checkbox"/>
AberPearl	723	77	98	4.7	7.3	<input type="checkbox"/>
G Demand	735	91	97	6.4	7.2	<input type="checkbox"/>
AberHerald	767	116	102	7.4	5.9	<input type="checkbox"/>
Iona	792	101	98	5.2	7.4	<input type="checkbox"/>
Crusader	793	94	100	6.8	6.5	<input type="checkbox"/>
Avoca	800	92	100	5.6	7.5	<input type="checkbox"/>
Buddy	812	110	101	5.8	8.4	<input type="checkbox"/>
G Bounty	833	93	101	6.4	8.1	<input type="checkbox"/>
AberDai	847	107	101	6.5	6.6	<input type="checkbox"/>
Violin	1011	119	107	7.7	7.4	<input type="checkbox"/>
Dublin	1018	115	105	6.8	6.0	<input type="checkbox"/>
Katy	1031	114	101	5.9	6.2	<input type="checkbox"/>
Alice	1035	111	101	6.1	5.7	<input type="checkbox"/>
Barblanca	1070	114	104	7.0	6.6	<input type="checkbox"/>
Aran	1361	121	103	6.4	5.0	<input type="checkbox"/>
Brianna	1489	118	104	6.2	6.1	<input type="checkbox"/>



Descriptive List of Red Clover Varieties 2017/2018

Good for cutting and finishing stock in the autumn.



Red clover

Red clover has a Descriptive List, which means there are not as many sowings as for Recommended Lists.

Lucerne and Cocksfoot also have Descriptive Lists which are available at www.britishgrassland.com/rgcl.

More data are currently being gathered on red clover varieties so a Recommended List may be produced by 2018.

Variety	Conservation management				Suitable for my farm ✓
	Yield of 1st cut in 1st harvest year <i>ave. = 100 at 5.26 t DM/ha</i>	Total annual yield <i>Average = 100 at 13.87 t DM/ha</i>	Crude protein <i>% in 1st cut of 1st harvest year</i>	Ground cover <i>%(2nd harvest year)</i>	
Merviot	105	101	17.3	45	<input type="checkbox"/>
Lemmon	102	101	17.2	48	<input type="checkbox"/>
AberRuby	93	92	17.1	36	<input type="checkbox"/>
AberClaret	99	104	16.8	51	<input type="checkbox"/>
AberChianti	87	97	16.3	52	<input type="checkbox"/>
Avisto	99	101	16.6	44	<input type="checkbox"/>
Harmonie	98	98	18.1	55	<input type="checkbox"/>
Metis	108	102	17.6	54	<input type="checkbox"/>
Discovery	105	100	17.6	42	<input type="checkbox"/>
Hegemon [#]	100	99	17.6	52	<input type="checkbox"/>
Amos [*]	105	102	17.4	51	<input type="checkbox"/>
Maro [*]	104	102	17.1	51	<input type="checkbox"/>
Atlantis [*]	101	101	17.8	55	<input type="checkbox"/>
Magellan [*]	93	99	17.7	50	<input type="checkbox"/>

* Tetraploid. # Name not confirmed.



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Pasture Improvement Flow Chart



What do I want?

Field name: _____

For: Beef Sheep Dairy Mixed grazing

It is likely to be:

Grazed only Silaged once Silaged 2-3 times

Needs to last:

1 year 2 years 3-4 years 5 years
 10 years is for overseeding only

My soil pH is: 5 - 5.5 6 - 6.5 6.5+

P and K indexes are: P: _____ K: _____

Nitrogen use: None Low Medium High

My priority is: Yield Quality Balance of both

I wish to include varieties for:

Early spring growth Mainly mid-season growth
 Late autumn grazing Extended spring and autumn grazing

Crown rust resistance is:

Very important Moderately important Not important

Other diseases I am concerned about include: _____

Species must include:

White clover Red Clover High digestibility grasses
 Timothy Other _____

Other requirements: _____



Recommended Grass and Clover Lists are funded by plant breeders through the British Society of Plant Breeders and the ruminant levy boards (AHDB Beef & Lamb, AHDB Dairy and Hybu Cig Cymru).

The full Lists can be found at www.britishgrassland.com/rgcl



Complying with latest spray legislation at a glance

These measures now apply to grassland weedkillers

- Demonstrate Integrated Pest Management (IPM) is followed on your farm
- The sprayer operator on your farm must hold a Recognised Certificate; Grandfather rights are no longer valid
- All pesticide application equipment (excluding handheld equipment) in use must have a valid National Sprayer Testing Scheme (NSTS) Certificate.

These measures are a legal requirements for the UK and its farmers through the UK's Sustainable Use Regulations. Non-compliance could lead to prosecution and threaten your Single Farm Payment. They will also feature in Red Tractor standards.

H2OK? Think Water – Keep it Clean

Many grassland weedkillers are detected in drinking water sources, take extra care to protect water when filling and washing the sprayer and avoid over-spraying ditches and streams.

For more advice visit www.voluntaryinitiative.org.uk