



Recommended Grass and Clover Lists for England and Wales



2022/23



Introduction

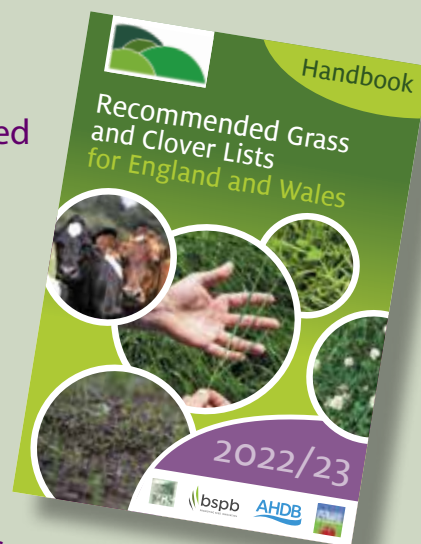
Welcome to the full Recommended Grass and Clover Lists (RGCL). This version of the RGCL is specifically for industry specialists to aid farmers in their variety selections for mixtures.

Well-managed grassland provides the most economic feed throughout the year, either as grazing or conserved forage. However, with input costs increasing, selecting the right seed mixture to suit the system is essential for efficient performance.

This booklet has the complete dataset including performance measures for seasonal growth and agronomic characters including ground cover and winter hardiness. The tables also provide information on the number of trials carried out.

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 and HCC).

Herbage trials are organised and coordinated by the NIAB on behalf of BSPB.



Both the full list and Handbook are available at www.britishgrassland.com/publications



An excel spreadsheet with the full dataset is available to download.

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How To Use This Guide

Varieties are ranked by heading date

Simulated grazing performance

What's the difference between this and conserved forage?

More regular cuts?

Conserved forage performance, e.g. silage

When are cuts taken?

Agronomic characteristics, such as ground cover and hardiness

Disease resistance

The number of trials used to gather yield data

The higher the number the more data behind the results

	Mean of 6 varieties	Late Diploid Mean (G's only)	Kendal	Wetherby	Callan	AberTest	Dundrod	Ballyvoy	Toddington	AberAvon
Recommended List status			PG	PG	PG	PG	PS	PG	G	G
Heading date			31 May	31 May	2 Jun	2 Jun	2 Jun	2 Jun	2 Jun	3 Jun
Grazing: management										
Grazing yield (% of 264t DM/ha)	100	98	97	102	102	103	99	100	96	95
Grazing DMUE	76.9	76.4	76.6	77.7	76.0	79.1	75.4	77.5	75.8	75.8
ME yield (% of 119,000 MJ/ha)	100	97	96	102	101	106	97	101	95	95
Conservation: management										
Total yield: year 1 (% of 16,39t DM/ha)	100	94	96	100	97	97	99	100	95	95
1st and 2nd year ME yield: best harvest year (% of 125,000 MJ/ha)	100	94	97	100	94	96	98	100	94	94
Total yield: year 3 (% of 13,28t DM/ha)	100	97	102	104	103	96	97	101	99	99
Total yield: mean (% of 14,88t DM/ha)	100	95	98	102	99	96	98	100	97	97
Agronomic characters										
Ground cover % (2nd harvest year)	69	70	73	70	69	72	68	71	68	68
Ground cover % (3rd harvest year)	65	65	65	69	64	65	65	68	65	65
Autumn ground cover (% 1=poor 9=good)	6.4	6.5	6.9	6.8	6.4	6.6	6.4	6.6	6.4	6.4
Disease resistance										
Crown rust (1-9, 1=poor 9=good)	5.6	5.8	8.0	7.7	4.4	6.0	6.0	6.0	6.0	6.0
Drechslera (1-9, 1=poor 9=good)	5.1	4.5	6.0	[5.3]	3.9	6.0	6.0	6.0	6.0	6.0
Mildew (1-9, 1=poor 9=good)	6.5	6.5	6.8	-	7.0	6.0	6.0	6.0	6.0	6.0
Year First Listed										
			2019	2021	2019	2019	2019	2019	2019	2019
Number of trials for yields										
1st harvest year			12	6	6	6	6	6	6	6
2nd harvest year			9	6	6	6	6	6	6	6
3rd harvest year			6	6	6	6	6	6	6	6

- G** General Use
- S** Recommended for Specific Use
- PG** Provisional General Use Recommendation
- PS** Provisional Specific Use Recommendation

White Clover

White clover varieties include additional or alternative measures including:

- Specific clover yields within a grass mix sward and overall crop yields
- Measures of clover content in the sward and measures for ground cover

Performance is also measured under two separate systems.

Light defoliation (cutting or rotational cattle grazing)				
2nd harvest year				
Total Clover yield (% of 5,09t DM/ha)	100	77	86	95
Total yield: Grass + Clover (% of 11,87t DM/ha)	100	92	98	99
% Clover	43	38	40	44
3rd harvest year				
Total of clover (% of 4,30t DM/ha)	100	71	74	78
Yield of grass + clover (% of 20,30t DM/ha)	100	96	93	93
% clover	40	32	32	32

Autumn ground cover	
Light Defoliation	Ground cover % (3rd harvest year)
	Overall (1-9, 1=poor 9=good)
Hard Defoliation	Ground cover % (3rd harvest year)
	Overall (1-9, 1=poor 9=good)

Frequently Asked Questions



How and where is this information gathered?

Trial plots for each variety are grown across four locations in England and Wales. The performance of these plots is then compared to each other under different cutting regimes. The location of trial sites can be seen on the adjacent map. The Barenbrug and Dartington sites are only collecting disease data.

Are the results representative of a commercial situation?

All plots are grown outdoors in areas of grassland production. Plots receive nitrogen inputs to represent well-fertilised grassland including returns of animal manures.

What seed rates are they applied at?

Trial plot seed rates vary depending on species.

Species		Seed Rate
Perennial ryegrass	Diploid	25kg/ha
	Tetraploid	37kg/ha
Italian and Hybrid ryegrasses, plus Festulolium	Diploid	33kg/ha
	Tetraploid	50kg/ha
Timothy		16kg/ha
White clover (along with 25kg/ha of companion ryegrass)		3.5kg/ha
Red clover		13kg/ha

What is the difference between conservation and grazing management?

Conservation management applies to perennial ryegrass and timothy in their first and third year after sowing. The aim is to simulate silage cutting with the first cut at early ear emergence and then cuts are taken at six week intervals thereafter. This usually results in up to five cuts per year.

Grazing management applies to perennial ryegrass and timothy in their second year after sowing. The aim is to simulate grazing with the first cut taken at a yield of approximately 1.5t dry matter (DM)/ha and then cuts are taken at three to four week intervals thereafter.

Conservation/rotational grazing management applies to Italian and Hybrid ryegrasses and consists of an early cut followed by two conservation cuts and monthly simulated grazing cuts thereafter. White clover is cut on a monthly basis to assess yields and more frequently in separate plots to assess persistence under simulated grazing.

How much difference is there between trial sites in terms of variety performance?

There is currently no analysis of changes in performance between the same varieties on different trial sites.

How is disease resistance measured?

All perennial and Italian ryegrass variety trials are monitored regularly for the presence of foliar diseases. Usually, plots are inspected just before a cut is due, so that disease will have increased and effective discrimination between varieties can be made. The plot area is assessed visually and the percentage of total leaf area affected by different diseases is estimated. Records are collated at the end of the season and combined with previous years' data to give a robust estimate of the relative differences in resistance to disease. This is then expressed on a 1 to 9 scale, where 9 indicates a mean score of close to zero percent leaf area infected.

At the NIAB-TAG site at Dartington in Devon and the Barenbrug site near Evesham in Worcestershire, natural infection of disease is encouraged through late season management. This information is recorded and used to increase the accuracy of disease resistance values.

What if I want to know the ME value?

Metabolisable energy (ME) is the amount of energy in the sample that is available for the animal (this is calculated from the D-value), whereas D-value is a measure of the digestible organic matter of the variety. So one is a measure of what is available to the animal and the other a measure of what will be digested by the animal.

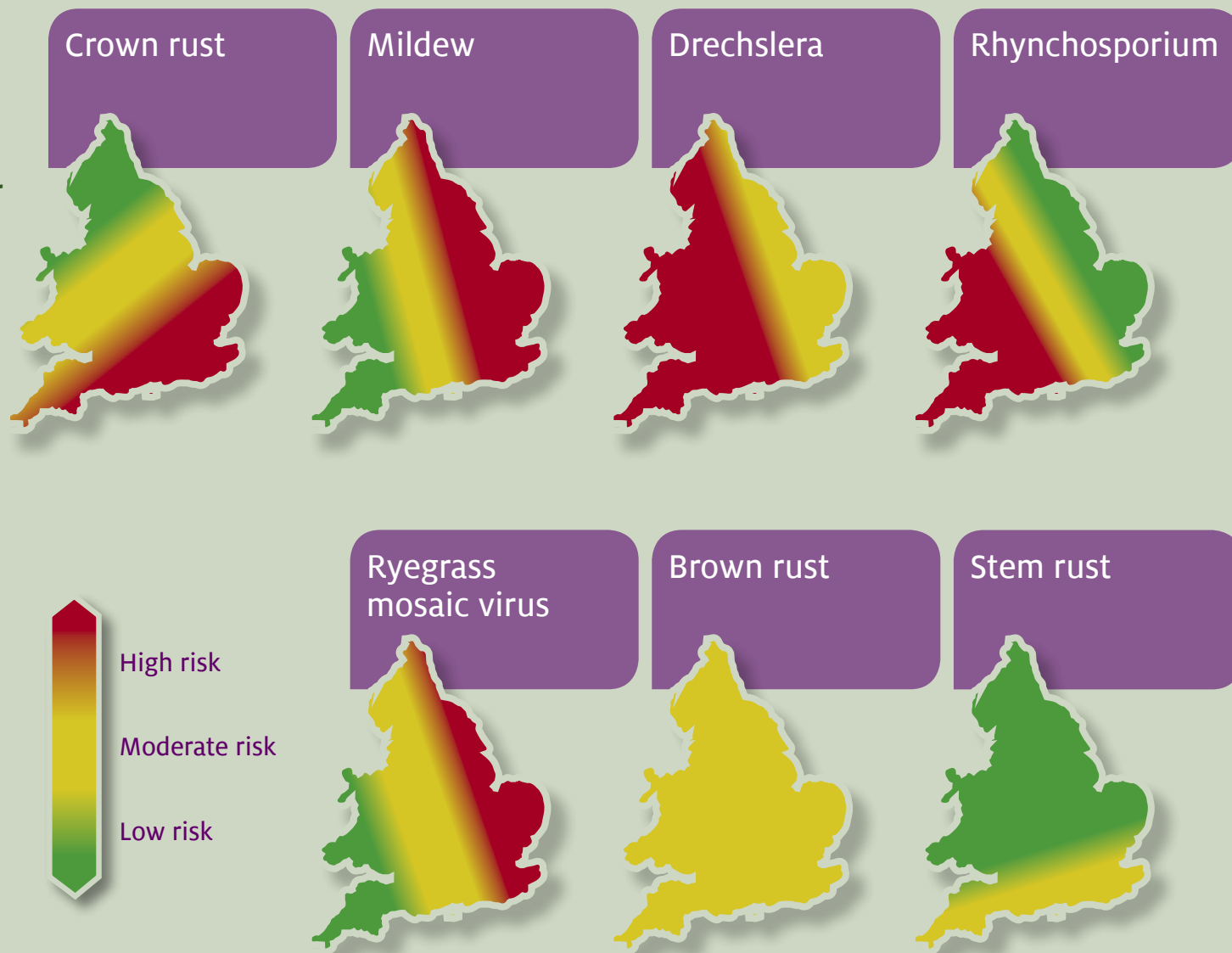
Rule of thumb
1 D-value unit = ME of 0.16

So for example a D-value of 70 would equate to an ME of **11.2 megajoules (MJ)**.

Regional Disease Information

Records taken since the early 1980s show that the diseases illustrated on the right are the main ones to affect grasses in England and Wales. Though some fungicides are effective against grass diseases, their use is very limited, as is the product range available. Using resistant grass or clover varieties in seed mixtures for high risk areas provides a cost effective and reliable way to minimise the effects of disease.

Regional disease risks are shown in the maps. Disease severity is very dependent on overall climate in different areas of the country. Some diseases are more prevalent in the generally wetter and warmer west and south west, while others are more common in the drier east. In some areas, multiple diseases can be high risk. In these areas selecting varieties with a good combination of moderate (ratings 6 or 7) and preferably high (8 or 9) disease resistance is essential.



Major diseases

Crown rust usually occurs in the late summer and autumn, when there are warm days with dew at night. Once largely confined to the south and south west of England, it has recently been recorded at high levels as far north as Yorkshire.

Mildew is an issue with warm and relatively dry conditions and is usually seen between spring and summer along eastern England. It generally does not reach high levels in wet areas.

Drechslera is often most severe at the start and the end of the growing season and is encouraged by cool, wet and humid conditions, although it can occur during wet summers. It can occur throughout England and Wales.

Rhynchosporium is a wet weather disease and is usually confined to the west and south west of England, and Wales. It occurs in the spring and normally dies away during the summer months.

Ryegrass mosaic virus (RMV) is the most important virus disease affecting ryegrass and the symptoms are more common in Italian than perennial ryegrass. It is transmitted by a mite that prefers dry conditions, so RMV largely appears in the drier eastern half of England.

Less prevalent diseases

A number of other pathogens infect perennial and Italian ryegrasses. These are more sporadic than the major diseases described, but can be significant in some years.

Brown rust occurs early in the season, during April and May and throughout England and Wales. It only affects ryegrasses and is a different species to the brown rusts that infects wheat and barley. It can reach moderate levels in some varieties, but most have good resistance.

Stem rust is common in grass seed crops, but can occasionally infect leys in the far south of the country during warm autumn conditions.

Barley yellow dwarf virus (BYDV) may be quite widespread on leys where aphid vector species are present. However, symptoms are quite rare and the significance of the virus is difficult to establish.

Cocksfoot and timothy can be infected by several diseases. **Cocksfoot yellow rust** is common, but this is not the same as **yellow rust** which affects wheat. Timothy can be severely affected by **stem rust**, particularly in hay crops. Other diseases include **selenophoma** and **cladosporium leaf spots** on timothy, and **mastigosporium leaf fleck** on cocksfoot and timothy. These three fungi favour wet conditions and are more common in the west and south west.

Effects of grass diseases

Diseases not only affect yield but also quality and sward composition. On average, a disease can reduce yields by around 3%. However, responses to fungicide treatments have been far greater than this. The effects of grass diseases have been investigated using fungicide programmes on perennial ryegrass. On average, over the life of a three year ley, disease effects were estimated to cause a loss of just over 1t DM/ha, which is about 3% of the average yield of the varieties used. Individual site and variety effects were larger, for instance controlling *Drechslera* leaf spot at one site on a susceptible variety gave a yield response of nearly 1.25t DM/ha at first cut.

One of the most serious effects on quality is the reduction of water soluble carbohydrate, generally by 1-2%, when crown rust was severe in late season cuts. Lower water soluble carbohydrate levels reduce feeding value and may make grass less palatable. In grazing trials, rejection of rusted varieties in favour of cleaner material has been frequently recorded.

Leaf diseases increase the amount of dead material in a ley and will reduce D-value if they are allowed to increase. Mildew and rhynchosporium in Italian ryegrass have been shown to reduce D-value by between 1 to 2 units.

Grass diseases may also affect sward composition and therefore yield and quality, if susceptible varieties become less vigorous due to infection and die out. In extreme cases, there may be an ingress of unproductive weed species although other sown species may compensate.

Red and white clover diseases

The most significant disease of clover is **sclerotinia rot**, caused by *Sclerotinia trifoliorum*. Red clover is more prone to damage than white clover and the same disease can affect winter sown field beans. Symptoms are difficult to see in clover and usually the first sign of a sclerotinia problem is the disappearance of clover plants in the spring. Where infection is established, reseeding with more resistant varieties is the most effective control option.

A wide range of leaf spot diseases affect clover, as well as **powdery** and **downy mildew**. Apart from powdery mildew, most diseases tend to be more prevalent in the wetter western parts of the country. The significance of these foliar diseases is uncertain, though some loss of yield and quality is likely.

Managing diseases

Selection of a proportion of resistant varieties in seed mixtures provides an effective means of suppressing diseases. However where susceptible varieties are used because of other desirable characters, then management techniques will be needed to avoid disease build-up. Generally, cutting or grazing before leaves become significantly infected will help to reduce disease build-up.

Recommended List of Early Perennial Ryegrass Varieties 2022/2023

	Diploids					Tetraploids			
	Mean of G varieties	Early Diploid Mean (G's only)	Genesis	Moyola	Glasker	Early Tetraploid Mean (AberTorch only)	AberTorch	Cooky	Barwave
Recommended List status			G	G	G		G	PS	PS
Heading date			9 May	12 May	18 May		10 May	18 May	18 May
Grazing: management									
Grazing yield (% of 9.64t DM/ha)	100	98	97	100	96	96	96	97	97
Grazing D-value	76.9	76.3	76.4	76.1	77.1	76.8	76.8	77.0	76.4
ME yield (% of 119,000 MJ/ha)	100	99	98	101	99	97	97	96	99
Conservation: management									
Total yield: year 1 (% of 16.39t DM/ha)	100	107	107	106	105	104	104	102	110
1st and 2nd cut ME yield, first harvest year (% of 125,000 MJ/ha)	100	103	104	102	103	104	104	102	110
Total yield: year 3 (% of 13.28t DM/ha)	100	101	102	101	99	99	99	99	103
Total yield: mean (% of 14.88t DM/ha)	100	104	105	104	103	102	102	101	106
Agronomic characters									
Ground cover % (2nd harvest year)	69	69	69	68	65	70	70	66	55
Ground cover % (3rd harvest year)	65	69	69	69	67	66	66	65	55
Autumn ground cover (1-9, 1=poor 9=good)	6.4	6.7	6.7	6.7	6.3	6.6	6.6	6.2	4.6
Grazing: seasonal growth									
Early grazing yield (% of 1.26t DM/ha)	100	120	123	116	107	112	112	105	124
Spring (% of 2.28t DM/ha)	100	110	110	110	102	106	106	103	106
Early summer (% of 3.55t DM/ha)	100	89	89	90	88	90	90	93	91
Late summer (% of 2.43t DM/ha)	100	103	99	106	102	99	99	98	100
Autumn (% of 1.43t DM/ha)	100	97	95	99	100	90	90	94	95

	Diploids					Tetraploids			
	Mean of G varieties	Early Diploid Mean (G's only)	Genesis	Moyola	Glasker	Early Tetraploid Mean (AberTorch only)	AberTorch	Cooky	Barwave
Conservation: seasonal growth – Year 1									
1st cut (% of 7.22t DM/ha)	100	95	96	94	90	91	91	83	96
1st cut D-value	71.2	71.3	71.0	71.6	74.3	73.6	73.6	75.7	75.1
2nd cut (% of 3.60t DM/ha)	100	107	110	105	108	112	112	110	118
2nd cut D-value	72.6	69.6	69.7	69.6	71.9	71.0	71.0	72.3	70.4
3rd cut (% of 2.77t DM/ha)	100	108	108	108	110	108	108	107	113
4th+ cut (% of 2.88t DM/ha)	100	106	105	107	110	100	100	103	107
Agronomic characters									
Winter hardiness (1-9, 1=poor 9=good)	7.3	7.3	7.4	7.3	7.6	7.4	7.4	7.4	[7.9]
Disease resistance									
Crown rust (1-9, 1=poor 9=good)	5.6	5.8	5.9	5.7	5.4	4.5	4.5	5.4	7.3
Drechslera (1-9, 1=poor 9=good)	5.1	5.7	5.9	5.4	[6.0]	6.7	6.7	8.2	-
Mildew (1-9, 1=poor 9=good)	6.5	6.7	5.2	8.2	5.4	4.4	4.4	[6.6]	[6.2]
Year First Listed			2009	2009	2016		2000	2019	-
Breeder			Teagasc, Eire	AFBI, UK	AFBI, UK		IBERS, Aberystwyth	R2n, France	Barenbrug NZ
Agent			DLF Seeds Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd		Germinal	RAGT Seeds Ltd	Barenbrug UK Ltd
Number of trials for yields									
1st harvest year			19	14	14		19	11	6
2nd harvest year			20	14	12		20	9	6
3rd harvest year			17	11	11		19	6	6

Note that the mean of G varieties include all those from early, intermediate and late maturity groups.

Yields are expressed as a percentage of the mean of all fully recommended PRG varieties in trials. Grazing yields are measured in year 2, Conservation yields in years 1 & 3.

Grazing D-value is measured from a late-summer cut in year 2 and the Grazing ME yields are calculated as total yield multiplied by the D-value x 0.16.

Conservation D-value is measured from both the 1st and 2nd cuts in year 1.

Conservation ME yields are calculated as the first year first cut multiplied by its D-value x 0.16, plus the first year second cut yield multiplied by its D-value x 0.16.

Data for Cooky has been derived from Intermediate trials.

[] = Only 2 trials worth of data.

Recommended List of Intermediate Perennial Ryegrass Diploid Varieties 2022/2023

	Mean of G varieties	Int. Diploid Mean (G's only)	Boyne	Galgorm	Aston Conqueror	Nifty	Moira	Glenariff	AberZeus	AberWolf	AberMagic	Alecto	Gosford	Agaska	AberGreen
Recommended List status			S	PG	PS	G	G	S	G	G	G	PG	G	PS	G
Heading date			21 May	23 May	24 May	24 May	24 May	25 May	27 May	28 May	28 May	29 May	29 May	30 May	30 May
Grazing: management															
Grazing yield (% of 9.64t DM/ha)	100	102	99	106	98	102	100	99	104	100	103	102	99	101	104
Grazing D-value	76.9	77.3	74.9	77.4	77.0	77.2	76.0	75.0	78.1	77.9	77.5	76.6	77.2	76.3	77.4
ME yield (% of 119,000 MJ/ha)	100	102	96	106	98	102	99	97	105	101	103	101	99	100	104
Conservation: management															
Total yield: year 1 (% of 16.39t DM/ha)	100	101	104	104	99	103	102	100	102	102	100	104	99	100	102
1st and 2nd cut ME yield, first harvest year (% of 125,000 MJ/ha)	100	101	103	102	96	101	98	98	102	101	100	104	100	99	102
Total yield: year 3 (% of 13.28t DM/ha)	100	101	104	105	102	101	102	96	102	99	99	98	100	97	101
Total yield: mean (% of 14.88t DM/ha)	100	101	104	105	100	102	102	98	102	100	100	101	100	99	101
Agronomic characters															
Ground cover % (2nd harvest year)	69	69	68	65	69	68	66	68	75	72	68	70	68	66	70
Ground cover % (3rd harvest year)	65	67	64	63	66	66	60	66	70	70	67	66	65	65	69
Autumn ground cover (1-9, 1=poor 9=good)	6.4	6.6	6.3	6.0	6.5	6.4	5.8	6.4	7.3	7.1	6.5	6.6	6.4	6.3	6.9
Grazing: seasonal growth															
Early grazing yield (% of 1.26t DM/ha)	100	105	101	112	102	103	117	93	108	103	99	94	105	104	102
Spring (% of 2.28t DM/ha)	100	105	104	112	105	105	110	97	109	104	104	99	104	105	103
Early summer (% of 3.55t DM/ha)	100	99	98	101	94	99	96	98	103	98	100	104	98	101	102
Late summer (% of 2.43t DM/ha)	100	101	97	109	96	102	98	101	103	101	104	102	96	99	105
Autumn (% of 1.43t DM/ha)	100	103	98	105	100	102	101	100	105	98	106	102	102	101	108

	Mean of G varieties	Int. Diploid Mean (G's only)	Boyne	Galgorm	Aston Conqueror	Nifty	Moira	Glenariff	AberZeus	AberWolf	AberMagic	Alecto	Gosford	Agaska	AberGreen
Conservation: seasonal growth – Year 1															
1st cut (% of 7.22t DM/ha)	100	99	108	102	101	103	103	97	100	99	96	100	96	96	98
1st cut D-value	71.2	72.0	68.8	71.5	68.8	70.9	69.9	72.0	72.1	71.3	73.2	73.9	73.1	71.8	73.0
2nd cut (% of 3.60t DM/ha)	100	98	102	96	88	96	88	95	99	103	101	104	97	100	102
2nd cut D-value	72.6	72.6	69.0	74.4	73.4	71.2	74.1	72.5	74.0	71.8	71.6	71.3	73.3	71.5	72.4
3rd cut (% of 2.77t DM/ha)	100	103	98	110	106	102	107	107	105	102	99	104	105	102	103
4th+ cut (% of 2.88t DM/ha)	100	103	97	111	96	106	108	99	102	100	104	106	99	102	103
Agronomic characters															
Winter hardiness (1-9, 1=poor 9=good)	7.3	7.4	7.1	7.4	7.3	7.4	7.5	7.5	7.4	7.4	7.3	[7.1]	7.3	7.4	7.5
Disease resistance															
Crown rust (1-9, 1=poor 9=good)	5.6	5.5	6.0	5.1	2.6	5.2	4.5	6.3	6.3	4.9	6.2	6.3	5.8	6.8	5.6
Drechslera (1-9, 1=poor 9=good)	5.1	4.6	4.2	4.4	5.1	4.7	5.8	4.7	4.9	4.1	3.5	-	4.5	4.1	4.8
Mildew (1-9, 1=poor 9=good)	6.5	6.3	5.9	6.3	[5.2]	5.4	6.3	7.2	6.0	5.1	6.4	-	8.3	[6.4]	7.0
Year First Listed			2010	2018	2017	2014	2014	2012	2016	2014	2008	-	2016	2018	2011
Breeder			DLF Seeds A/S	AFBI, UK	DSV, UK	DLF Seeds A/S	AFBI, UK	AFBI, UK	IBERS, Aberystwyth	IBERS, Aberystwyth	IBERS, Aberystwyth	DLF Seeds A/S	AFBI, UK	DLF Seeds A/S	IBERS, Aberystwyth
Agent			DLF Seeds Ltd	Barenbrug UK Ltd	DSV	DLF Seeds Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	Germinal	Germinal	Germinal	Limagrain UK Ltd	Barenbrug UK Ltd	DLF Seeds Ltd	Germinal
Number of trials for yields															
1st harvest year			32	13	12	12	12	12	12	12	22	6	12	9	13
2nd harvest year			31	12	12	12	12	12	12	12	20	6	12	6	13
3rd harvest year			26	8	11	12	12	11	13	12	18	6	13	5	12

Note that the mean of G varieties include all those from early, intermediate and late maturity groups.

Yields are expressed as a percentage of the mean of all fully recommended PRG varieties in trials. Grazing yields are measured in year 2, Conservation yields in years 1 & 3.

Grazing D-value is measured from a late-summer cut in year 2 and the Grazing ME yields are calculated as total yield multiplied by the D-value x 0.16.

Conservation D-value is measured from both the 1st and 2nd cuts in year 1.

Conservation ME yields are calculated as the first year first cut multiplied by its D-value x 0.16, plus the first year second cut yield multiplied by its D-value x 0.16.

[] = Only 2 trials worth of data.

Recommended List of Intermediate Perennial Ryegrass Tetraploid Varieties 2022/2023

	Mean of G varieties	Int. Tetraploid Mean (G and S)	Fintona	16LP10T01*	Tollymore	Seagoe	Nolwen	AberRoot (Fest)	AberClyde	Ritchie	AstonVision	Chatsworth	AberSpey	Convey	Dunluce	Diwan	Federer	Triwarwic	Pensel	AstonEnergy
Recommended List status			S	PG	PG	G	G	PG	S	PG	PS	PG	G	PG	S	PS	PG	PG	S	S
Heading date			20 May	21 May	22 May	23 May	23 May	23 May	25 May	25 May	26 May	27 May	30 May	30 May	30 May	30 May	30 May	31 May	31 May	1 Jun
Grazing: management																				
Grazing yield (% of 9.64t DM/ha)	100	99	102	98	105	100	99	99	96	103	99	103	106	102	101	96	97	95	97	98
Grazing D-value	76.9	76.8	76.9	77.6	77.1	76.8	76.5	78.9	77.2	75.8	77.2	77.9	78.9	76.5	77.2	76.3	76.9	76.0	75.1	77.8
ME yield (% of 119,000 MJ/ha)	100	98	101	99	105	99	98	101	96	102	100	104	108	101	102	95	96	94	94	98
Conservation: management																				
Total yield: year 1 (% of 16.39t DM/ha)	100	104	106	106	106	108	103	101	102	104	100	103	105	102	102	107	101	104	105	99
1st and 2nd cut ME yield, first harvest year (% of 125,000 MJ/ha)	100	106	104	108	106	110	105	104	106	105	101	106	106	104	104	110	103	108	108	102
Total yield: year 3 (% of 13.28t DM/ha)	100	100	104	105	103	104	102	101	97	102	94	99	100	100	101	100	100	100	101	93
Total yield: mean (% of 14.88t DM/ha)	100	102	105	105	104	107	102	101	100	103	98	101	103	101	101	103	100	102	103	96
Agronomic characters																				
Ground cover % (2nd harvest year)	69	63	61	59	60	65	66	57	67	71	66	64	65	63	62	61	66	64	62	64
Ground cover % (3rd harvest year)	65	59	59	58	58	60	63	58	61	66	62	64	59	65	59	56	59	60	60	55
Autumn ground cover (1-9, 1=poor 9=good)	6.4	5.6	5.4	5.2	5.2	5.8	6.1	5.0	6.0	6.6	6.1	6.0	5.7	6.0	5.5	5.2	5.9	5.6	5.5	5.3
Grazing: seasonal growth																				
Early grazing yield (% of 1.26t DM/ha)	100	95	101	105	110	103	103	93	94	94	108	97	106	96	90	87	89	88	94	89
Spring (% of 2.28t DM/ha)	100	101	105	109	111	107	106	105	103	105	104	105	108	100	95	94	93	93	101	97
Early summer (% of 3.55t DM/ha)	100	100	100	94	103	99	97	98	97	103	94	105	105	105	106	99	99	100	99	101
Late summer (% of 2.43t DM/ha)	100	97	103	95	104	97	95	99	89	103	100	100	106	100	102	98	98	91	93	94
Autumn (% of 1.43t DM/ha)	100	95	97	95	102	97	98	91	91	102	103	103	108	103	99	90	94	94	91	96

* Variety name awaiting approval.

	Mean of G varieties	Int. Tetraploid Mean (G and S)	Fintona	16LP10T01*	Tollymore	Seagoe	Nolwen	AberRoot (Fest)	AberClyde	Ritchie	AstonVision	Chatsworth	AberSpey	Convey	Dunluce	Diwan	Federer	Triwarwic	Pensel	AstonEnergy
Conservation: seasonal growth – Year 1																				
1st cut (% of 7.22t DM/ha)	100	102	104	111	104	112	103	100	105	100	97	102	99	101	94	106	96	104	102	97
1st cut D-value	71.2	72.9	70.9	70.0	71.5	70.8	73.1	73.4	72.7	72.3	72.8	72.8	74.0	72.2	75.0	73.3	73.5	73.3	73.1	74.7
2nd cut (% of 3.60t DM/ha)	100	104	100	99	103	102	100	103	102	113	97	105	105	101	109	108	105	106	116	97
3rd cut D-value	72.6	72.6	73.8	72.8	73.5	72.7	73.1	73.1	72.4	69.6	74.6	71.6	74.0	72.7	72.3	71.3	73.2	72.3	69.9	74.6
3rd cut (% of 2.77t DM/ha)	100	106	117	104	106	109	104	101	98	100	100	101	113	104	108	105	106	103	100	105
4th+ cut (% of 2.88t DM/ha)	100	98	103	100	105	99	99	95	94	104	104	99	109	98	102	100	98	94	93	97
Agronomic characters																				
Winter hardiness (1-9, 1=poor 9=good)	7.3	7.2	7.4	7.1	[7.3]	7.3	7.4	7.0	7.2	7.1	7.4	7.2	7.6	7.4	7.3	7.2	7.4	7.2	7.1	7.1
Disease resistance																				
Crown rust (1-9, 1=poor 9=good)	5.6	4.9	2.2	4.8	4.9	6.1	8.3	4.2	6.5	5.8	6.4	3.6	5.0	5.4	2.4	7.3	5.9	6.3	5.7	6.5
Drechslera (1-9, 1=poor 9=good)	5.1	6.7	7.3	[7.3]	-	5.3	5.5	[6.6]	6.5	[7.3]	5.2	8.0	6.6	6.9	6.7	5.4	5.9	4.6	7.4	6.8
Mildew (1-9, 1=poor 9=good)	6.5	6.8	7.0	[4.7]	-	7.6	[6.6]	[6.0]	7.3	[6.6]	4.9	6.2	[4.6]	5.9	6.4	7.2	6.4	[5.9]	6.6	6.3
Year First Listed			2014	2021	-	2011	2017	2021	2013	2021	2018	2020	2017	2020	2005	2016	2017	2017	2013	2006
Breeder			AFBI, UK	AFBI, UK	AFBI, UK	AFBI, UK	R2n, France	IBERS, Aberystwyth	IBERS, Aberystwyth	DLF Seeds A/S	DSV, UK	Teagasc, Eire	IBERS, Aberystwyth	DLF Seeds A/S	AFBI, UK	DLF Seeds A/S	DLF Seeds A/S	DLF Seeds A/S	DLF Seeds A/S	DSV, UK
Agent			Barenbrug UK Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	DLF Seeds Ltd	Germinal	Germinal	Limagrain UK Ltd	DSV	DSV	Germinal	DLF Seeds Ltd	Barenbrug UK Ltd	DLF Seeds Ltd	Limagrain UK Ltd	DLF Seeds Ltd	Limagrain UK Ltd	DSV
Number of trials for yields																				
1st harvest year			12	6	6	15	12	6	12	6	13	8	12	8	28	12	11	12	13	11
2nd harvest year			12	6	6	13	12	6	11	6	12	6	12	6	27	12	11	12	12	10
3rd harvest year			12	6	6	12	11	6	13	6	8	6	11	6	24	13	8	11	12	10

Note that the mean of G varieties include all those from early, intermediate and late maturity groups.

Yields are expressed as a percentage of the mean of all fully recommended PRG varieties in trials. Grazing yields are measured in year 2, Conservation yields in years 1 & 3.

Grazing D-value is measured from a late-summer cut in year 2 and the Grazing ME yields are calculated as total yield multiplied by the D-value x 0.16.

Conservation D-value is measured from both the 1st and 2nd cuts in year 1.

Conservation ME yields are calculated as the first year first cut multiplied by its D-value x 0.16, plus the first year second cut yield multiplied by its D-value x 0.16.

[] = Only 2 trials worth of data.

* Variety name awaiting approval.

Recommended List of Late Perennial Ryegrass Diploid Varieties 2022/2023

	Mean of G varieties	Late Diploid Mean (G's only)	Kendal	Wetherby	Callan	AberTest	Dundrod	Ballyvoy	Toddington	AberAvon	AstonKing	Crossgar	Oakpark	Glenarm	Drumbo	Gleneagle	Cavendish	Clanrye	Smile	Timing	Zorgue	Timuco	AberBann	Swan	AberLee	AberThames	Delika	AberChoice	Cancan	AberDon	Bowie
Recommended List status			PG	PG	PG	PG	PS	PG	G	G	PS	PG	PG	G	G	PG	PG	G	G	G	PG	PG	PG	PS	G	PG	PG	S	G	PG	PS
Heading date			31 May	31 May	2 Jun	2 Jun	2 Jun	2 Jun	2 Jun	3 Jun	3 Jun	4 Jun	4 Jun	4 Jun	4 Jun	5 Jun	5 Jun	5 Jun	6 Jun	6 Jun	6 Jun	6 Jun	7 Jun	7 Jun	7 Jun	8 Jun	8 Jun	10 Jun	12 Jun	13 Jun	18 Jun
Grazing: management																															
Grazing yield (% of 9.64t DM/ha)	100	98	97	102	102	103	99	100	96	99	98	99	99	98	97	100	96	96	99	98	97	103	106	101	98	106	102	103	101	108	101
Grazing D-value	76.9	76.4	76.6	77.7	76.0	79.1	75.4	77.5	75.8	77.7	75.6	76.5	76.5	76.8	77.2	76.3	75.4	75.9	77.0	75.4	76.6	75.8	77.5	74.9	79.2	76.3	76.9	76.9	75.9	79.1	75.4
ME yield (% of 119,000 MJ/ha)	100	97	96	102	101	106	97	101	95	100	96	97	98	98	97	99	94	94	99	96	97	101	106	98	101	105	101	102	100	111	99
Conservation: management																															
Total yield: year 1 (% of 16.39t DM/ha)	100	94	96	100	97	97	99	100	95	93	94	97	97	97	91	95	96	98	98	93	94	97	99	93	90	98	93	97	92	94	92
1st and 2nd cut ME yield, first harvest year (% of 125,000 MJ/ha)	100	94	97	100	94	96	98	100	94	93	95	95	95	99	90	94	95	99	96	94	96	95	98	91	92	98	92	98	91	93	89
Total yield: year 3 (% of 13.28t DM/ha)	100	97	102	104	103	96	97	101	96	95	97	100	100	101	95	97	95	96	97	98	96	102	100	96	92	106	98	98	94	96	94
Total yield: mean (% of 14.88t DM/ha)	100	95	98	102	99	96	98	100	95	94	95	98	98	99	93	96	96	97	97	96	95	99	99	94	91	102	96	97	93	95	92
Agronomic characters																															
Ground cover % (2nd harvest year)	69	70	73	70	69	72	68	71	71	73	66	69	70	69	67	71	74	67	69	72	76	64	70	74	74	63	68	67	70	64	73
Ground cover % (3rd harvest year)	65	65	65	69	64	65	65	68	66	70	62	65	66	63	62	65	68	65	63	64	71	63	62	66	71	60	66	62	67	62	64
Autumn ground cover (1-9, 1=poor 9=good)	6.4	6.5	6.9	6.8	6.4	6.6	6.4	6.9	6.7	7.1	6.0	6.4	6.6	6.3	6.1	6.7	7.0	6.3	6.3	6.6	7.4	5.9	6.3	6.9	7.3	5.7	6.4	6.0	6.7	5.9	6.7
Grazing: seasonal growth																															
Early grazing yield (% of 1.26t DM/ha)	100	87	89	94	106	84	97	106	86	96	97	93	82	93	90	84	85	83	87	77	76	88	94	84	79	110	85	95	85	95	82
Spring (% of 2.28t DM/ha)	100	90	94	102	102	93	97	103	91	97	100	93	88	94	91	88	88	86	89	84	82	92	96	90	84	104	87	97	86	94	82
Early summer (% of 3.55t DM/ha)	100	102	98	100	103	106	101	98	101	101	99	103	105	99	99	108	103	103	104	106	106	109	111	107	106	108	108	106	106	112	109
Late summer (% of 2.43t DM/ha)	100	98	95	102	100	109	99	97	96	97	96	99	98	97	99	99	92	94	101	98	96	107	105	99	98	106	106	103	107	114	106
Autumn (% of 1.43t DM/ha)	100	98	100	103	100	104	101	107	94	102	97	99	101	101	97	98	97	94	99	99	97	100	105	104	101	102	101	101	101	107	105

	Mean of G varieties	Late Diploid Mean (G's only)	Kendal	Wetherby	Callan	AberTest	Dundrod	Ballyvoy	Toddington	AberAvon	AstonKing	Crossgar	Oakpark	Glenarm	Drumbo	Gleneagle	Cavendish	Clanrye	Smile	Timing	Zorgue	Timuco	AberBann	Swan	AberLee	AberThames	Delika	AberChoice	Cancan	AberDon	Bowie
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Conservation: seasonal growth – Year 1

1st cut (% of 7.22t DM/ha)	100	99	108	108	104	101	114	108	101	102	104	102	102	109	91	98	101	103	101	97	102	99	99	90	91	101	93	99	90	85	81
1st cut D-value	71.2	70.0	68.1	70.5	68.3	70.4	67.2	68.9	68.8	69.0	68.7	68.5	69.1	69.4	70.7	69.4	70.5	70.0	69.4	70.4	71.8	69.0	70.9	70.8	74.1	71.4	70.9	72.1	71.8	74.0	73.4
2nd cut (% of 3.60t DM/ha)	100	95	91	94	90	92	91	96	95	87	89	97	95	90	94	98	94	103	98	95	90	100	104	100	91	98	97	104	98	106	109
2nd cut D-value	72.6	73.3	73.5	73.3	73.6	75.8	72.0	75.6	72.3	74.0	73.0	73.1	72.9	74.0	75.1	72.4	73.5	71.5	73.4	72.7	74.5	73.1	72.8	73.2	75.3	71.8	73.6	72.3	73.2	74.6	71.6
3rd cut (% of 2.77t DM/ha)	100	94	90	95	96	107	90	98	93	92	92	96	99	91	95	95	96	95	101	92	92	97	99	98	93	98	101	95	97	103	98
4th+ cut (% of 2.88t DM/ha)	100	96	95	107	101	103	98	100	95	96	94	101	98	96	96	97	100	94	100	95	93	101	104	98	99	105	97	99	98	107	105

Agronomic characters

Winter hardiness (1-9, 1=poor 9=good)	7.3	7.1	7.2	7.6	7.2	7.2	7.2	7.5	7.1	7.4	7.2	[7.3]	7.0	7.2	6.9	7.0	6.9	7.1	7.1	6.9	7.3	[6.9]	7.4	7.2	7.4	7.4	7.1	7.2	7.0	[7.4]	7.0
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Disease resistance

Crown rust (1-9, 1=poor 9=good)	5.6	5.8	8.0	7.7	4.4	6.1	6.7	3.1	6.9	6.2	6.9	6.1	4.6	6.3	4.9	4.3	6.8	4.9	3.2	6.9	7.3	6.4	5.2	6.9	6.7	8.4	8.6	4.2	4.3	6.4	4.8
Drechslera (1-9, 1=poor 9=good)	5.1	4.5	6.0	[5.3]	3.9	[4.8]	4.5	4.1	5.3	3.7	4.3	[4.4]	5.3	3.9	4.5	5.4	4.4	5.1	4.6	4.7	[6.2]	[4.9]	5.2	5.4	4.2	[5.0]	[5.3]	2.6	4.5	[4.6]	4.1
Mildew (1-9, 1=poor 9=good)	6.5	6.5	6.8	-	7.0	6.5	[6.4]	[6.6]	6.4	6.2	7.0	-	6.5	7.2	5.8	6.4	6.6	7.0	-	6.3	-	-	6.6	[6.7]	-	-	-	7.4	6.6	-	7.1

Year First Listed			2019	2021	2018	2020	2019	2020	2010	2001	2019	-	2018	2015	2009	2019	2015	2012	2017	2015	2021	-	2018	2020	2017	2021	2021	2009	1998	-	2018
Breeder			R2n, France	DLF Seeds A/S	AFBI, UK	IBERS, Aberystwyth	AFBI, UK	AFBI, UK	DLF Seeds A/S	IBERS, Aberystwyth	DSV, UK	AFBI, UK	Teagasc, Eire	AFBI, UK	AFBI, UK	Teagasc, Eire	DLF Seeds A/S	AFBI, UK	Teagasc	DLF Seeds A/S	DLF Seeds A/S	DLF Seeds A/S	IBERS, Aberystwyth	DLF Seeds A/S	IBERS, Aberystwyth	IBERS, Aberystwyth	GIE Grass	IBERS, Aberystwyth	DLF Seeds A/S	IBERS, Aberystwyth	DLF Seeds A/S
Agent			RAGT Seeds Ltd	DLF Seeds Ltd	Barenbrug UK Ltd	Germinal	Barenbrug UK Ltd	Barenbrug UK Ltd	DLF Seeds Ltd	Germinal	DSV	Barenbrug UK Ltd	Goldcrop Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	DSV	DLF Seeds Ltd	Barenbrug UK Ltd	DLF Seeds Ltd	Limagrain UK Ltd	DLF Seeds Ltd	DLF Seeds Ltd	Germinal	DLF Seeds Ltd	Germinal	Germinal	Germinal	Germinal	DLF Seeds Ltd	Germinal	DLF Seeds Ltd

Number of trials for yields

1st harvest year			12	6	13	8	11	9	13	11	12	6	13	13	25	12	12	13	13	13	6	6	13	9	13	6	6	30	11	6	13
2nd harvest year			9	6	12	6	9	6	14	10	9	6	12	15	24	9	14	12	13	15	6	6	12	6	13	6	6	30	10	6	12
3rd harvest year			6	6	9	6	6	6	13	10	6	6	9	14	23	6	13	11	12	14	6	6	9	6	12	6	6	29	10	6	9

Note that the mean of G varieties include all those from early, intermediate and late maturity groups.

Yields are expressed as a percentage of the mean of all fully recommended PRG varieties in trials. Grazing yields are measured in year 2, Conservation yields in years 1 & 3.

Grazing D-value is measured from a late-summer cut in year 2 and the Grazing ME yields are calculated as total yield multiplied by the D-value x 0.16.

Conservation D-value is measured from both the 1st and 2nd cuts in year 1.

Conservation ME yields are calculated as the first year first cut multiplied by its D-value x 0.16, plus the first year second cut yield multiplied by its D-value x 0.16.

Data for AberTest and Dundrod has been derived from Intermediate trials.

[] = Only 2 trials worth of data.

Recommended List of Late Perennial Ryegrass Tetraploid Varieties 2022/2023

	Mean of G varieties	Late Tetraploid Mean (G and S)	Ballintoy	Bijou	Gracehill	Meiduno	Weldone	Calao	Aspect	AberGain	Nashota	AberBite	Thegn	Hopi
Recommended List status			G	S	PG	G	PG	PG	G	G	PG	G	PG	PG
Heading date			31 May	1 Jun	2 Jun	2 Jun	2 Jun	3 Jun	4 Jun	5 Jun	5 Jun	5 Jun	6 Jun	9 Jun
Grazing: management														
Grazing yield (% of 9.64t DM/ha)	100	102	102	100	104	103	102	99	100	106	103	102	102	101
Grazing D-value	76.9	76.8	77.5	75.4	76.9	76.7	77.2	77.4	77.0	78.3	77.6	77.6	77.5	76.6
ME yield (% of 119,000 MJ/ha)	100	102	102	98	103	103	102	99	100	108	104	103	103	101
Conservation: management														
Total yield: year 1 (% of 16.39t DM/ha)	100	102	104	100	102	102	100	100	98	106	105	98	98	97
1st and 2nd cut ME yield, first harvest year (% of 125,000 MJ/ha)	100	105	104	103	102	105	102	102	101	109	108	98	99	97
Total yield: year 3 (% of 13.28t DM/ha)	100	104	107	103	105	102	99	104	101	108	103	100	100	99
Total yield: mean (% of 14.88t DM/ha)	100	103	105	102	103	102	99	102	100	107	104	99	99	98
Agronomic characters														
Ground cover % (2nd harvest year)	69	65	63	66	63	60	68	66	67	66	68	64	68	65
Ground cover % (3rd harvest year)	65	60	59	61	59	57	60	61	61	62	63	62	65	62
Autumn ground cover (1-9, 1=poor 9=good)	6.4	5.8	5.6	5.9	5.5	5.2	6.1	6.0	6.1	6.0	6.3	5.8	6.4	6.0
Grazing: seasonal growth														
Early grazing yield (% of 1.26t DM/ha)	100	98	104	93	95	99	84	86	91	111	104	85	84	86
Spring (% of 2.28t DM/ha)	100	100	103	98	100	99	90	90	94	108	102	93	88	90
Early summer (% of 3.55t DM/ha)	100	106	103	104	105	107	112	105	107	106	108	107	109	110
Late summer (% of 2.43t DM/ha)	100	100	101	99	105	102	99	99	96	104	101	103	104	97
Autumn (% of 1.43t DM/ha)	100	100	99	93	102	100	100	98	102	106	94	102	101	102

	Mean of G varieties	Late Tetraploid Mean (G and S)	Ballintoy	Bijou	Gracehill	Meiduno	Weldone	Calao	Aspect	AberGain	Nashota	AberBite	Thegn	Hopi
Conservation: seasonal growth – Year 1														
1st cut (% of 7.22t DM/ha)	100	111	112	112	108	111	104	107	105	114	111	98	98	98
1st cut D-value	71.2	70.0	69.4	68.7	69.6	70.2	71.1	70.8	70.8	70.3	70.5	71.7	72.6	70.8
2nd cut (% of 3.60t DM/ha)	100	104	104	102	104	102	105	100	102	111	111	102	106	104
2nd cut D-value	72.6	72.9	72.3	71.7	73.2	74.0	74.0	73.2	73.3	72.6	74.3	74.3	73.1	72.4
3rd cut (% of 2.77t DM/ha)	100	94	98	88	99	98	99	97	95	95	101	96	101	97
4th+ cut (% of 2.88t DM/ha)	100	98	101	95	103	100	97	99	95	104	102	106	99	97
Agronomic characters														
Winter hardiness (1-9, 1=poor 9=good)	7.3	7.3	7.5	7.3	6.9	7.2	7.2	7.3	7.3	7.4	7.4	7.4	7.2	7.2
Disease resistance														
Crown rust (1-9, 1=poor 9=good)	5.6	5.9	3.2	7.9	7.7	5.6	6.8	6.0	4.1	6.1	6.4	5.8	6.8	7.1
Drechslera (1-9, 1=poor 9=good)	5.1	6.5	5.8	6.5	7.0	7.1	6.8	6.0	6.4	6.1	6.6	6.6	6.6	6.6
Mildew (1-9, 1=poor 9=good)	6.5	6.9	-	6.9	[7.0]	6.7	6.5	-	6.8	7.2	6.6	6.0	6.3	6.6
Year First Listed			2017	2014	2020	2014	2019	2017	2011	2012	2018	2009	2018	2019
Breeder			AFBI, UK	R2n, France	AFBI, UK	DLF Seeds A/S	DLF Seeds A/S	Semences de France	DLF Seeds A/S	IBERS, Aberystwyth	DLF Seeds A/S	IBERS, Aberystwyth	DLF Seeds A/S	DLF Seeds A/S
Agent			Barenbrug UK Ltd	RAGT Seeds Ltd	Barenbrug UK Ltd	Limagrain UK Ltd	Limagrain UK Ltd	Germinal	Limagrain UK Ltd	Germinal	DLF Seeds Ltd	Germinal	DLF Seeds Ltd	DLF Seeds Ltd
Number of trials for yields														
1st harvest year			13	11	9	13	12	13	14	13	13	30	13	12
2nd harvest year			13	10	6	13	9	13	13	12	12	30	12	9
3rd harvest year			12	9	6	12	6	12	12	11	9	29	9	6

Note that the mean of G varieties include all those from early, intermediate and late maturity groups.

Yields are expressed as a percentage of the mean of all fully recommended PRG varieties in trials. Grazing yields are measured in year 2, Conservation yields in years 1 & 3.

Grazing D-value is measured from a late-summer cut in year 2 and the Grazing ME yields are calculated as total yield multiplied by the D-value x 0.16.

Conservation D-value is measured from both the 1st and 2nd cuts in year 1.

Conservation ME yields are calculated as the first year first cut multiplied by its D-value x 0.16, plus the first year second cut yield multiplied by its D-value x 0.16.

[] = Only 2 trials worth of data.

Recommended List of Italian Ryegrass Diploid Varieties 2022/2023

	Mean of G varieties	Diploid Mean (G's only)	Shakira	Syntilla	Muriello	Fox	Jaccar	Pinaco	Steel	Alamo	Abys	Sendero	Melprimo	Javorio
Recommended List status			G	PG	G	G	PG	PG	G	G	G	PG	PG	G
Heading date			18 May	19 May	20 May	21 May	21 May	21 May	21 May	21 May	22 May	22 May	23 May	24 May
Total annual yields														
1st harvest year (% of 18.20t DM/ha)	100	100	100	99	99	99	103	101	99	102	99	102	99	100
2nd harvest year (% of 14.71t DM/ha)	100	100	100	100	99	100	101	101	99	99	102	103	101	97
Total yield: mean (% of 16.56t DM/ha)	100	100	100	100	99	99	102	101	99	100	101	103	100	99
1st and 2nd cut ME yield, first harvest year (% of 119,000 MJ/ha)	100	99	100	96	97	98	102	101	99	100	99	101	95	101
Year of Sowing (% of 2.07t DM/ha)	100	94	91	102	99	102	94	92	96	92	91	99	97	92
Conservation seasonal growth (1st harvest year)														
Early spring growth (% of 1.68t DM/ha)	100	101	100	108	100	104	114	92	102	98	103	109	103	96
1st conservation cut (% of 6.52t DM/ha)	100	97	103	97	94	99	104	98	101	97	98	97	94	99
1st conservation cut D-value	71.2	71.4	70.8	70.6	71.7	70.3	70.5	71.5	70.2	71.5	71.1	71.6	70.8	71.3
2nd conservation cut (% of 4.23t DM/ha)	100	101	99	97	100	98	100	105	97	104	98	105	99	102
2nd conservation cut D-value	64.9	64.7	64.1	63.6	64.7	65.0	64.8	64.7	64.6	64.9	64.5	65.2	64.2	65.6
Monthly cuts (% of 5.89t DM/ha)	100	103	97	100	104	99	101	103	98	106	100	105	102	101

	Mean of G varieties	Diploid Mean (G's only)	Shakira	Syntilla	Muriello	Fox	Jaccar	Pinaco	Steel	Alamo	Abys	Sendero	Melprimo	Javorio
Agronomic characters														
Ground cover % (1st harvest year)	57	58	57	60	58	58	59	61	58	61	59	61	61	59
Ground cover % (2nd harvest year)	52	53	47	55	54	54	53	55	53	56	56	56	54	53
Autumn ground cover (1-9, 1=poor 9=good)	3.8	4.0	3.4	4.1	4.0	4.0	4.0	4.2	3.9	4.2	4.2	4.2	4.0	3.9
Winter hardiness (1-9, 1=poor 9=good)	7.1	7.1	6.9	[7.1]	7.2	6.6	[7.4]	-	6.9	7.1	7.4	[7.2]	7.3	6.8
Disease resistance														
Ryegrass mosaic virus (1-9, 1=poor 9=good)	5.0	4.7	6.2	-	3.3	3.8	-	-	7.4	4.6	3.8	-	-	5.5
Mildew (1-9, 1=poor 9=good)	6.6	6.8	6.5	[6.6]	6.7	6.8	-	[7.0]	6.3	7.0	7.1	[7.2]	-	6.6
Brown rust (1-9, 1=poor 9=good)	6.3	5.9	6.3	[6.5]	5.8	5.8	[7.7]	-	5.8	5.1	7.3	[5.5]	6.6	6.6
Crown rust (1-9, 1=poor 9=good)	7.0	6.8	6.7	7.5	6.5	7.1	6.7	6.2	7.7	6.5	7.2	7.5	7.3	5.6
Year First Listed			2012	2020	2006	2004	-	2021	2009	2001	2004	2020	2019	2013
Breeder			DSV, France	R2n, France	ILVO/DSV	Force Limagrain	Semences de France	DSV	R2n, France	Innoseeds, NL	R2n, France	DSV	ILVO	DSV, Netherlands
Agent			DSV	RAGT Seeds Ltd	Germinal	DLF Seeds Ltd	Germinal	DSV	Barenbrug UK Ltd	DLF Seeds Ltd	Barenbrug UK Ltd	DSV	Limagrain UK Ltd	Barenbrug UK Ltd
Number of trials for yields														
Year of sowing			8	3	15	8	3	3	12	17	9	3	6	9
1st harvest year			11	9	25	11	6	6	11	27	11	9	12	11
2nd harvest year			10	6	22	10	6	6	10	24	10	6	9	10

Yields are expressed as a percentage of the mean of all fully recommended Italian ryegrass varieties in trials.

Conservation D-value is measured from both the 2nd and 3rd cuts in year 1.

Conservation ME yields are calculated as the first year 2nd cut multiplied by its D-value x 0.16, plus the first year 3rd cut multiplied by its D-value x 0.16.

[] = Only 2 trials worth of data.

Recommended List of Italian Ryegrass Tetraploid Varieties 2022/2023

	Mean of G varieties	Tetraploid Mean (G's only)	Udine	Kigezi 1	Hunter	Melsprinter	Melsitra	Barmultra II	Messina	Arman	Cazzano	Barimax
Recommended List status			G	G	G	PS	PS	G	G	PS	S	PS
Heading date			18 May	18 May	19 May	20 May	20 May	20 May	21 May	21 May	21 May	21 May
Total annual yields												
1st harvest year (% of 18.20t DM/ha)	100	100	97	100	102	102	103	101	101	101	100	102
2nd harvest year (% of 14.71t DM/ha)	100	100	101	101	98	93	95	99	100	96	101	100
Total yield: mean (% of 16.56t DM/ha)	100	100	99	100	99	98	98	100	100	98	101	101
1st and 2nd cut ME yield, first harvest year (% of 119,000 MJ/ha)	100	101	99	100	104	101	102	103	101	101	103	104
Year of Sowing (% of 2.07t DM/ha)	100	107	112	107	101	106	104	108	109	104	100	97
Conservation seasonal growth (1st harvest year)												
Early spring growth (% of 1.68t DM/ha)	100	99	96	100	96	108	105	101	107	106	96	89
1st conservation cut (% of 6.52t DM/ha)	100	103	102	104	105	97	99	105	99	103	100	104
1st conservation cut D-value	71.2	71.1	70.4	70.3	71.2	71.8	71.5	71.7	72.8	71.0	72.9	72.3
2nd conservation cut (% of 4.23t DM/ha)	100	99	97	96	104	107	105	100	99	97	101	104
2nd conservation cut D-value	64.9	65.3	65.5	65.0	64.4	64.5	64.4	65.6	65.5	65.7	66.0	64.6
Monthly cuts (% of 5.89t DM/ha)	100	97	93	97	98	103	105	97	101	102	102	102

	Mean of G varieties	Tetraploid Mean (G's only)	Udine	Kigezi 1	Hunter	Melsprinter	Melitra	Barmultra II	Messina	Arman	Cazzano	Barimax
Agronomic characters												
Ground cover % (1st harvest year)	57	56	55	55	56	53	57	57	57	58	52	56
Ground cover % (2nd harvest year)	52	50	51	50	48	42	44	51	50	44	48	45
Autumn ground cover (1-9, 1=poor 9=good)	3.8	3.7	3.7	3.7	3.5	3.0	3.2	3.8	3.7	3.2	3.5	3.2
Winter hardiness (1-9, 1=poor 9=good)	7.1	7.2	7.3	7.0	7.2	[7.2]	[7.2]	7.2	7.3	[7.1]	6.9	7.1
Disease resistance												
Ryegrass mosaic virus (1-9, 1=poor 9=good)	5.0	5.3	6.0	4.4	5.2	-	-	4.1	[6.9]	-	[4.5]	-
Mildew (1-9, 1=poor 9=good)	6.6	6.5	7.0	6.3	6.7	-	[7.2]	6.2	6.6	[7.0]	7.4	[6.4]
Brown rust (1-9, 1=poor 9=good)	6.3	6.7	6.4	7.2	7.0	[6.1]	[6.4]	6.1	7.0	[6.6]	6.8	5.4
Crown rust (1-9, 1=poor 9=good)	7.0	7.2	7.5	7.8	5.7	7.9	7.5	7.8	7.7	7.3	4.0	7.2
Year First Listed			2012	2010	2008	-	2020	2009	2017	2020	2015	2018
Breeder			DLF Seeds A/S	DLF Seeds A/S	DSV, Germany	ILVO	ILVO	Barenbrug, NL	ILVO	DSV	DLF Seeds A/S	Barenbrug, NL
Agent			Limagrain UK Ltd	DLF Seeds Ltd	DLF Seeds Ltd	Freudenberger UK Ltd	DLF Seeds Ltd	Barenbrug UK Ltd	Limagrain UK Ltd	DSV	DLF Seeds Ltd	Barenbrug UK Ltd
Number of trials for yields												
Year of sowing			8	13	11	3	3	12	7	3	8	6
1st harvest year			11	11	17	6	9	11	12	9	14	13
2nd harvest year			10	10	14	6	6	10	11	6	13	12

Yields are expressed as a percentage of the mean of all fully recommended Italian ryegrass varieties in trials.

Conservation D-value is measured from both the 2nd and 3rd cuts in year 1.

Conservation ME yields are calculated as the first year 2nd cut multiplied by its D-value x 0.16, plus the first year 3rd cut multiplied by its D-value x 0.16.

[] = Only 2 trials worth of data.

Recommended List of Hybrid Ryegrass Varieties 2022/2023

	Mean of G varieties	Diploid Mean (G and S)	Diploids				Tetraploids															
			Pirol	Barsilo	Barclamp	Tetraploid Mean (G's only)	AberSheen	AberEcho	Aston Crusader	Bannfoot	Enduro	Perkins	Tetragraze	Novial	AberOpal	RGT Cordial	AberNiche (Fest)	Kirial	Bahial	Amalgam	Perseus (Fest)	AberImage
Recommended List status			G	S	S		PS	G	G	PG	G	PG	S	G	PG	PG	S	G	G	G	PG	PS
Heading date			22 May	26 May	26 May		14 May	17 May	19 May	20 May	21 May	21 May	21 May	21 May	22 May	22 May	23 May	23 May	24 May	25 May	25 May	26 May
Total annual yields																						
1st harvest year (% of 18.28t DM/ha)	100	104	104	104	104	99	104	102	101	97	98	97	97	96	104	100	102	99	96	93	97	99
2nd harvest year (% of 14.07t DM/ha)	100	95	98	93	98	100	106	100	101	101	99	103	101	100	102	104	99	101	101	99	101	105
3rd harvest year (% of 12.82t DM/ha)	100	94	97	92	88	101	106	97	102	102	100	100	99	101	103	103	101	103	102	100	103	100
Total yield: mean (% of 15.19t DM/ha)	100	98	100	96	97	100	105	100	101	100	99	100	99	99	103	103	101	101	100	97	100	101
1st and 2nd cut ME yield, first harvest year (% of 119,000 MJ/ha)	100	101	101	101	103	100	101	104	100	99	99	95	101	97	108	99	101	99	98	97	99	100
Agronomic characters																						
Ground cover% (2nd harvest year)	60	56	59	53	58	61	55	60	60	64	62	63	66	62	60	65	54	60	60	66	57	57
Ground cover% (3rd harvest year)	57	48	48	48	48	58	50	58	58	62	60	63	62	59	55	64	51	57	59	67	57	58
Autumn ground cover (1-9, 1=poor 9=good)	4.1	3.6	3.8	3.5	3.6	4.2	3.6	4.2	4.1	4.5	4.3	4.5	4.6	4.3	4.0	4.7	3.7	4.1	4.2	4.8	4.0	4.1
Year of sowing (% of 1.75t DM/ha)	100	94	94	93	87	101	68	91	99	97	103	90	89	100	88	97	92	112	102	92	109	80
Conservation seasonal growth (1st harvest year)																						
Early spring growth (% of 1.56t DM/ha)	100	110	113	107	103	97	96	98	108	81	93	105	79	93	90	91	109	96	94	82	96	94
1st conservation cut (% of 6.66t DM/ha)	100	96	97	95	99	101	98	99	101	102	102	95	108	100	102	98	95	101	99	100	99	98
1st conservation cut D-value	71.9	72.4	71.9	72.9	72.9	72.0	71.3	73.5	71.6	71.9	72.0	72.4	71.6	71.3	74.8	72.7	72.9	71.4	72.6	72.5	72.3	73.2
2nd conservation cut (% of 3.77t DM/ha)	100	114	115	113	114	97	110	108	96	89	93	93	90	90	109	97	116	97	93	90	100	104
2nd conservation cut D-value	68.7	65.9	65.4	66.3	65.2	69.4	67.8	69.8	68.8	71.5	69.3	67.8	69.3	69.9	70.3	69.8	65.9	69.2	69.5	69.6	67.0	67.0
Monthly cuts (% of 6.17t DM/ha)	100	105	104	106	104	99	108	104	101	101	97	99	93	95	107	107	101	99	96	91	92	99

	Mean of G varieties	Diploid Mean (G and S)	Diploids			Tetraploid Mean (G's only)	Tetraploids															
			Pirol	Barsilo	Barclamp		AberSheen	AberEcho	Aston Crusader	Bannfoot	Enduro	Perkins	Tetragraze	Novial	AberOpal	RGT Cordial	AberNiche (Fest)	Kirial	Bahial	Amalgam	Perseus (Fest)	AberImage
Agronomic characters																						
Winter hardiness (1-9, 1=poor 9=good)	7.4	7.5	7.6	7.3	7.6	7.4	[7.3]	7.2	7.4	7.5	7.4	7.7	7.4	7.4	[7.2]	[7.6]	7.5	7.4	7.3	7.3	7.5	7.4
Disease resistance																						
Ryegrass mosaic virus (1-9, 1=poor 9=good)	6.4	3.8	3.9	3.7	[6.7]	7.0	-	5.7	6.8	7.8	6.8	-	6.7	7.6	-	-	6.6	7.9	7.5	7.7	7.1	-
Mildew (1-9, 1=poor 9=good)	6.3	5.8	4.4	7.2	5.6	6.7	7.8	6.2	7.1	7.0	6.4	8.3	6.5	6.5	6.6	5.9	6.7	7.1	6.0	5.5	6.1	6.8
Brown rust (1-9, 1=poor 9=good)	6.0	4.6	5.2	3.9	7.5	6.2	-	3.1	7.4	7.5	7.1	[6.9]	7.3	6.7	-	-	6.7	6.6	5.6	9.0	7.4	[6.9]
Crown rust (1-9, 1=poor 9=good)	6.2	5.3	6.1	4.5	6.8	6.3	3.8	4.2	6.4	5.4	7.1	6.2	4.2	7.0	3.5	6.8	6.0	6.7	6.5	6.7	8.3	2.8
Year First Listed			2005	1998	2017		2021	2002	2014	2018	2005	2020	2008	2010	-	2021	2011	2012	2007	2009	2018	2020
Breeder			Steinach, Germany / DSV	Barenburg, NL	Barenburg, NL		IBERS, Aberystwyth	IBERS, Aberystwyth	DSV, UK	AFBI, UK	R2n, France	DSV	DLF Seeds A/S	R2n, France	IBERS, Aberystwyth	R2n, France	IBERS, Aberystwyth	R2n, France	R2n, France	DLF Seeds A/S	DLF Seeds A/S	IBERS, Aberystwyth
Agent			Germinal	Barenbrug UK Ltd	Barenbrug UK Ltd		Germinal	Germinal	DSV	Barenbrug UK Ltd	Limagrain UK Ltd	DSV	DLF Seeds Ltd	Barenbrug UK Ltd	Germinal	RAGT Seeds Ltd	Germinal	RAGT Seeds Ltd	DLF Seeds Ltd	Limagrain UK Ltd	DLF Seeds Ltd	Germinal
Number of trials for yields																						
Year of sowing			15	7	5		3	13	5	3	7	3	5	10	3	3	7	6	4	7	3	3
1st harvest year			27	12	12		6	28	15	13	12	9	12	10	6	6	10	11	10	12	13	9
2nd harvest year			26	11	13		6	27	12	12	11	6	11	10	6	6	11	12	10	11	12	6
3rd harvest year			23	10	12		6	24	13	9	10	6	10	11	6	6	10	11	10	12	9	6

Yields are expressed as a percentage of the mean of all fully recommended hybrid ryegrass varieties in trials.

Conservation D-value is measured from both the 2nd and 3rd cuts in year 1.

Conservation ME yields are calculated as the first year first cut multiplied by its D-value x 0.16, plus the first year second cut yield multiplied by its D-value x 0.16.

Hybrid diploids have more secondary heading than hybrid tetraploids.

[] = Only 2 trials worth of data.

Recommended List of Timothy Varieties 2022/2023

	Mean of G varieties	Presto	Comer	Dolina	Promesse	Comtal	Winnetou	Baronaise	Motim
Recommended List status		G	G	G	S	G	G	PG	S
Heading date		7 Jun	8 Jun	8 Jun	8 Jun	9 Jun	10 Jun	13 Jun	16 Jun
Grazing: management									
Grazing yield (% of 9.97t DM/ha)	100	100	102	102	94	100	96	101	96
Grazing D-value	72.6	73.1	71.8	71.7	73.4	72.1	74.2	74.4	72.3
ME yield (% of 116,000 MJ/ha)	100	101	101	101	95	99	98	104	95
Conservation: management									
Total yield: year 1 (% of 14.48t DM/ha)	100	99	99	103	95	99	100	96	96
ME yield of 1st+2nd cut year 1 (% of 103,000 MJ/ha)	100	100	98	102	98	98	102	100	99
Total yield: year 3 (% of 13.20t DM/ha)	100	99	103	103	96	98	98	101	96
Total yield: mean (% of 13.86t DM/ha)	100	99	101	103	95	99	99	98	96
Agronomic characters									
Ground cover % (2nd harvest year)	67	67	67	64	69	70	70	71	73
Ground cover % (3rd harvest year)	61	62	58	57	64	63	64	63	68
Autumn ground cover (1-9, 1=poor 9=good)	4.9	4.9	4.7	4.5	5.2	5.2	5.3	5.2	5.6
Grazing: seasonal growth									
Early grazing yield (% of 1.16t DM/ha)	100	110	103	104	78	97	86	[108]	88
Spring (% of 2.27t DM/ha)	100	103	103	106	89	95	93	105	88
Early summer (% of 3.72t DM/ha)	100	99	101	99	97	103	98	98	101
Late summer (% of 2.91t DM/ha)	100	100	102	101	95	101	97	98	96
Autumn (% of 1.07t DM/ha)	100	96	105	106	90	97	95	111	94

	Mean of G varieties	Presto	Comer	Dolina	Promesse	Comtal	Winnetou	Baronnaise	Motim
Conservation: seasonal growth – Year 1									
1st cut (% of 6.12t DM/ha)	100	100	99	102	93	98	100	96	93
1st cut D-value	67.4	67.3	67.4	67.2	69.4	66.5	68.8	70.8	69.9
2nd cut (% of 3.81t DM/ha)	100	100	98	103	100	100	99	95	103
2nd cut D-value	64.7	64.3	64.4	64.3	65.0	64.3	65.9	67.4	64.7
3rd cut (% of 2.57t DM/ha)	100	98	101	105	95	96	99	90	91
4th+ cut (% of 1.98t DM/ha)	100	96	97	103	92	101	102	105	96
Agronomic characters									
Winter hardiness (1-9, 1=poor 9=good)	7.1	7.2	7.2	7.1	6.9	7.0	6.7	-	6.8
Year First Listed		2005	2001	2003	1990	1989	2003	2020	1974
Breeder		DSV, Netherlands	ILVO	ILVO	Innoseeds, NL	DLF Seeds A/S	DLF Seeds A/S	Barenbrug, NL	DLF Seeds A/S
Agent		Germinal	Limagrain UK Ltd	DLF Seeds Ltd	DLF Seeds Ltd	Limagrain UK Ltd	DLF Seeds Ltd	Barenbrug UK Ltd	Limagrain UK Ltd
Number of trials for yields									
1st harvest year		12	18	12	12	11	12	7	18
2nd harvest year		11	19	11	12	12	11	6	19
3rd harvest year		11	19	10	11	11	10	6	20

Yields are expressed as a percentage of the mean of all fully recommended timothy varieties in trials. Grazing yields are measured in year 2, Conservation yields in years 1 & 3.

Grazing D-value is measured from a late-summer cut in year 2 and the Grazing ME yields are calculated as total yield multiplied by the D-value x 0.16.

Conservation D-value is measured from both the 1st and 2nd cuts in year 1.

Conservation ME yields are calculated as the first year first cut multiplied by its D-value x 0.16, plus the first year second cut yield multiplied by its D-value x 0.16.

[] = Only 2 trials worth of data.

Recommended List of White Clover Varieties 2022/2023

	Mean of G varieties	AberAce	Aberystwyth S184	AberHerald	Coolfin	Buddy	Quartz	Iona	G Bounty	AberSwan	AberDai	AberSirius	Dublin	Violin	Barblanca	Legacy	Aran	Kakariki	Brianna	
Recommended List status		G	G	G	PG	G	PG	G	G	PG	G	PS	G	G	G	PG	G	PG	G	
Leaf area (length x breadth mm²)	953	389	644	793	794	820	824	848	887	909	914	1025	1042	1056	1118	1200	1383	1454	1541	
Light defoliation (cutting or rotational cattle grazing)																				
2nd harvest year																				
Total clover yield (% of 5.00t DM/ha) #	100	77	86	99	94	90	89	96	102	106	101	107	110	108	106	102	112	112	117	
Total yield: grass + clover (% of 11.07t DM/ha) #	100	92	98	99	97	97	99	100	101	101	101	103	103	102	102	104	103	102	104	
% clover	45	38	40	45	44	42	41	43	46	48	45	47	48	48	47	44	49	50	51	
Clover yield: first cut (% of 0.64t DM/ha) #	100	76	79	92	103	91	95	99	109	116	110	110	111	104	118	128	114	119	102	
Clover yield: last cut (% of 0.56t DM/ha) #	100	62	68	99	93	81	85	94	107	109	101	108	112	116	121	101	125	125	128	
3rd harvest year																				
Yield of clover (% of 4.13t DM/ha) #	100	71	74	112	97	92	96	101	98	119	95	123	115	113	112	112	109	117	116	
Yield of grass + clover (% of 10.30t DM/ha) #	100	90	93	103	98	97	101	98	102	105	99	110	106	104	103	108	102	103	103	
% clover	40	32	32	43	40	38	38	41	39	45	38	45	44	43	43	42	43	46	45	
Clover yield: first cut (% of 0.58t DM/ha) #	100	64	66	112	107	97	98	100	98	128	96	139	115	112	118	129	116	138	116	
Clover yield: last cut (% of 0.42t DM/ha) #	100	72	68	109	93	79	125	96	100	116	96	129	111	109	131	120	118	144	122	
Autumn ground cover																				
Light Defoliation	Ground cover % (3rd harvest year)	49	41	46	52	50	45	52	50	49	51	46	53	49	51	53	48	49	48	51
	Overall (1-9, 1=poor 9=good)	6.5	4.9	5.8	7.2	6.6	5.6	6.8	6.0	6.7	6.8	6.3	7.0	7.0	7.1	7.7	7.3	6.7	6.4	6.9
Hard Defoliation	Ground cover % (3rd harvest year)	51	56	54	47	51	50	66	51	58	50	48	44	51	55	58	54	41	52	48
	Overall (1-9, 1=poor 9=good)	7.0	7.8	7.7	6.3	7.5	6.9	8.9	6.7	8.4	7.2	6.2	5.0	6.8	7.4	8.0	7.6	5.0	6.2	6.2

		Mean of G varieties	AberAce	Aberystwyth S184	AberHerald	Coolfin	Buddy	Quartz	Iona	G Bounty	AberSwan	AberDai	AberSirius	Dublin	Violin	Barblanca	Legacy	Aran	Kakariki	Brianna
Spring ground cover																				
Hard Defoliation	Ground cover % (3rd harvest year)	49	53	47	50	52	51	56	50	49	50	48	44	49	48	48	48	41	44	48
	Overall (1-9, 1=poor 9=good)	7.4	8.7	8.8	7.1	8.6	8.1	8.3	7.6	7.8	7.3	7.1	4.6	7.2	7.6	6.8	5.9	5.5	5.4	6.4
Autumn ground cover																				
Light Defoliation	Ground cover % (1st harvest year)	51	46	55	52	48	46	49	55	53	51	51	59	52	51	54	55	51	54	48
	Ground cover % (2nd harvest year)	53	41	48	59	53	45	53	45	56	54	54	55	58	58	65	64	55	53	57
Hard Defoliation	Ground cover % (1st harvest year)	57	59	62	54	62	56	62	58	61	54	57	42	56	60	59	58	53	56	53
	Ground cover % (2nd harvest year)	62	66	68	59	68	62	67	60	69	64	58	50	61	64	66	66	53	54	58
Spring ground cover																				
Hard Defoliation	Ground cover % (1st harvest year)	34	41	39	34	40	32	32	37	34	37	35	33	36	30	32	36	31	25	28
	Ground cover % (2nd harvest year)	58	62	69	54	62	61	57	57	60	55	56	43	56	59	54	48	51	49	52
Year First Listed			2001	1969	1994	2019	2013	2021	2011	2003	2018	1997	2021	2015	2009	2001	-	1981	-	2015
Breeder			IBERS, Aberystwyth	IBERS, Aberystwyth	IBERS, Aberystwyth	Teagasc, Eire	Teagasc, Eire	Grasslands Innovation Ltds	Teagasc, Eire	AgResearch Ltd (New Zealand)	IBERS, Aberystwyth	IBERS, Aberystwyth	IBERS, Aberystwyth	Teagasc, Eire	DLF Seeds A/S	AgResearch Ltd (New Zealand)	Grasslands Innovation Ltd	Teagasc, Eire	Grasslanz Technology Ltd	DLF Seeds A/S
Agent			Germinal	Barenbrug UK Ltd	Germinal	Limagrain UK Ltd	DLF Seeds Ltd	DLF Seeds Ltd	DLF Seeds Ltd	Limagrain UK Ltd	Germinal	Germinal	Germinal	DLF Seeds Ltd	Limagrain UK Ltd	Barenbrug UK Ltd	PGG Wrightson Seeds	Germinal	Limagrain UK Ltd	DLF Seeds Ltd
Number of trials for clover yields																				
2nd harvest year			22	10	12	7	11	5	10	10	11	24	5	12	13	10	5	22	5	12
3rd harvest year			23	10	12	5	11	5	10	10	9	25	5	11	15	10	5	23	5	11

* Clover yields transformed

Yields are expressed as a percentage of the mean of all fully recommended white clover varieties in trials.

G General Use **S** Recommended for Specific Use **PG** Provisional General Use Recommendation **PS** Provisional Specific Use Recommendation

Recommended List of Red Clover Varieties 2022/2023

	Mean of G varieties	Diploids						Tetraploids					
		Merviot	Lemmon	AberClaret	Harmonie	Sinope	Fearga	Ganymed	Amos	Maro	Atlantis	Magellan	
Recommended List status		S	G	G	G	PG	PG	PG	G	G	G	G	
Conservation: management													
Total yield: 1st harvest year (% of 12.61t DM/ha)	100	106	99	102	97	100	100	103	101	100	101	100	
Total yield: 2nd harvest year (% of 12.76t DM/ha)	100	98	98	105	99	100	106	105	101	97	101	100	
Total yield: 3rd harvest year (% of 9.42t DM/ha)	100	83	99	107	99	101	111	111	95	91	104	106	
Total yield: mean (% of 11.69t DM/ha)	100	96	99	104	98	100	105	106	99	96	102	102	
Protein content %													
1st cut - 1st harvest year	17.8	17.1	17.6	17.0	18.3	17.8	17.1	16.5	18.1	18.0	17.8	18.0	
2nd cut - 2nd harvest year	19.6	19.3	19.2	18.2	19.6	19.2	18.3	18.1	20.2	19.5	20.6	19.9	
2nd cut - 3rd harvest year	19.7	19.0	19.8	18.7	20.1	-	18.6	19.0	19.9	19.7	19.7	19.9	
Agronomic characters													
Ground cover % (1st harvest year)	69	66	69	67	72	67	63	70	71	66	70	70	
Ground cover % (2nd harvest year)	58	47	60	59	64	57	58	60	57	50	60	60	
Ground cover % (3rd harvest year)	48	34	52	49	54	44	47	51	45	37	50	52	
Conservation seasonal growth													
1st harvest year	1st Cut (% of 5.20t DM/ha)	100	112	100	98	99	104	91	104	101	101	101	99
	Protein yield: 1st Cut (% of 0.93t DM/ha)	100	108	99	93	102	104	87	96	103	102	101	100
2nd harvest year	2nd Cut (% of 4.01t DM/ha)	100	98	93	106	97	92	106	103	102	95	103	104
	Protein yield: 2nd Cut (% of 0.79t DM/ha)	100	96	91	99	97	90	99	94	105	94	108	105
3rd harvest year	2nd Cut (% of 3.25t DM/ha)	100	81	91	108	99	-	111	105	102	89	105	106
	Protein yield: 2nd Cut (% of 0.64t DM/ha)	100	78	92	103	101	-	105	101	104	89	105	107
Year First Listed			1980	2003	2010	2012	2018	2018	-	2005	2010	2011	2014
Breeder			ILVO	ILVO	IBERS, Aberystwyth	Nord. Pflanz/ DSV	DLF Seeds A/S	Teagasc, Eire	DLF Seeds A/S	Slechtitelská stanice, The Czech Republic	LSPB	Nord. Pflanz/ DSV	Nord. Pflanz/ DSV
Agent			Limagrain UK Ltd	Barenbrug UK Ltd	Germinal	DSV	DLF Seeds Ltd	Goldcrop Ltd	Limagrain UK Ltd	DLF Seeds Ltd	Limagrain UK Ltd	DSV	DLF Seeds Ltd
Number of trials for yields													
1st harvest year		18	18	18	18	7	10	6	18	18	18	18	
2nd harvest year		17	15	15	15	6	9	6	17	15	15	15	
3rd harvest year		18	14	14	14	5	8	6	18	14	14	12	

Descriptive List of Lucerne Varieties 2022/2023

	Daisy
Conservation: management	
Total yield: 1st harvest year (% of 12.17t DM/ha)	102
Total yield: 2nd harvest year (% of 15.35t DM/ha)	100
Total yield: mean (% of 13.68t DM/ha)	101
Seasonal growth: 1st harvest year	
1st Cut (% of 4.44t DM/ha)	103
Protein Content %: 1st Cut	18.2
Agronomic characters	
Ground cover % (1st harvest year)	58
Ground cover % (2nd harvest year)	49
Year First Listed	2003
Breeder	DLF Seeds A/S
Agent	DLF Seeds Ltd
Number of trials for yields	
1st harvest year	10
2nd harvest year	9

Descriptive List of Cocksfoot Varieties 2022/2023

	Mean of descriptive list varieties	Sparta	Lidacta	RGT Lovely #
Conservation management				
Total yield 1st harvest year (% of 15.48t DM/ha)	100	98	102	106
Total yield 2nd harvest year (% of 15.25t DM/ha)	100	99	101	114
Total yield: mean (% of 15.37t DM/ha)	100	99	102	110
Seasonal growth: 1st harvest year				
1st cut (% of 5.41t DM/ha)	100	99	101	101
1st conservation cut D-Value	66.1	65.8	66.5	66.8
2nd cut (% of 3.40t DM/ha)	100	97	103	105
2nd conservation cut D-Value	67.1	67.7	66.5	67.5
3rd cut (% of 3.02t DM/ha)	100	96	104	105
4th+ cut (% of 3.66t DM/ha)	100	98	102	113
Agronomic characters				
Ground cover % (2nd harvest year)	66.8	67.2	66.3	59.6
Ground cover (1-9, 9=good)	6.5	6.5	6.5	5.8
Winter hardiness (1-9, 9=good)	5.8	6.1	5.4	-
Disease resistance				
Resistance to Mildew (1-9, 9=good)	7	7	7	-
Resistance to Mastigosporium (1-9, 9=good)	6	6	5	2
Resistance to Yellow Rust (1-9, 9=good)	5	3	6	-
Year First Listed		1982	1991	-
Breeder		DLF Seeds A/S	DSV, Germany	R2n, France
Agent		DLF Seeds Ltd	DSV	RAGT Seeds Ltd
Number of trials for yields				
1st harvest year		5	5	2
2nd harvest year		5	5	2

* Only 2 trials worth of data



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What's different in this year's RGCL?

New varieties

On the 2022/23 RGCL, twelve new varieties have been added.

The challenge with new varieties is that seed availability may not be high enough for them to be in many mixtures, but they are ones to watch.

Name	Type	Page
Barwave	Early perennial ryegrass	6
Alecto	Intermediate perennial ryegrass	8
Tollymore	Intermediate perennial ryegrass	10
Crossgar	Late perennial ryegrass	12
Timuco	Late perennial ryegrass	12
AberDon	Late perennial ryegrass	12
Jaccar	Italian ryegrass	16
Melsprinter	Italian ryegrass	18
AberOpal	Hybrid ryegrass	20
Legacy	White Clover	24
Kakariki	White Clover	24
Ganymed	Red Clover	26

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: _____

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



Recommended Grass and Clover Lists are funded by plant breeders through the British Society of Plant Breeders and the ruminant levy boards (AHDB & HCC).

The full Lists can be found at www.britishgrassland.com/product-category/recommended-grass-and-clover-lists/

Detailed descriptions of each variety are available from NIAB-TAG. They are listed within their Forage Variety Advantage publication, which can be purchased by non-members from www.niab.com

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