



Recommended Grass and Clover Lists for England and Wales



2013



DairyCo



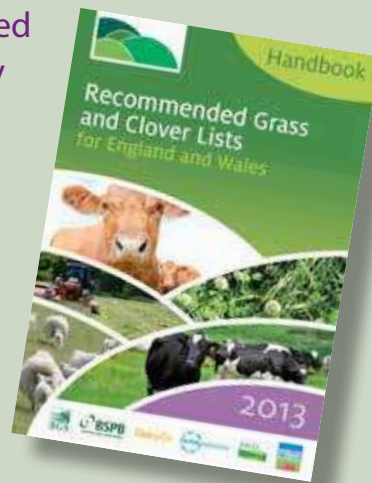
Introduction

Welcome to the new full Recommended Grass and Clover List (RGCL). This version of the RGCL has been developed specifically for industry specialists to aid producers 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 is available to all. The testing is funded by plant breeders through the British Society of Plant Breeders and the ruminant levy boards - Agriculture and Horticulture Development Board operating through EBLEX and DairyCo, and Hybu Cig Cymru (HCC/Meat Promotion Wales).



Both the full and the partial lists are available at www.britishgrassland.com/RGCL



A spreadsheet with the full data set will be 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
eg 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	Aber-Avon	Tyrella	Toddington	Romark	Pastour
Recommended List Status			G	S	PG	G	G
Heading date			1 Jun	1 Jun	2 Jun	3 Jun	3 Jun
Grazing: Management							
Grazing Yield (% of 10.53 t/ha)	100	101	102	99	100	101	99
Grazing D-value	76.5	76.4	77.6	75.9	75.7	76.3	75.5
Grazing: Seasonal Growth							
Early Grazing Yield (% of 1.22 t/ha)	100	94	106	107	92	91	94
Spring (% of 2.20 t/ha)	100	88	99	99	91	88	91
Early Summer (% of 4.07 t/ha)	100	104	101	98	105	104	101
Late Summer (% of 2.92 t/ha)	100	105	106	97	100	106	101
Autumn (% of 1.45 t/ha)	100	104	106	103	102	103	101
Conservation: Management							
Total Yield: 1st Harvest Year (% of 17.29 t/ha)	100	96	96	96	97	94	96
Total Yield: 3rd Harvest Year (% of 12.84 t/ha)	100	97	99	98	101	97	97
Total Yield: Mean (% of 15.16 t/ha)	100	-	97	97	98	96	97

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

Variety comments can be used as a summary of the key features for each variety.

Agronomic Characters					
Ground Cover(1-9, 9=good)	54	57	61	52	56
Ground Cover%: 3rd harvest year	57	61	62	61	60
Ground Cover%: Autumn	6.2	6.7	7.1	6.4	6.5
Winter Hardiness (1-9, 9=good)	6.7	6.5	7.1	6.7	6.8
Disease Resistance					
Crown Rust (1-9, 9=good)	7	7	8	6	7
Drechslera (1-9, 9=good)	6	6	6	5	6
Mildew (1-9, 9=good)	7	6	6	9	7
Year First Listed	-	-	2001	2006	-
Breeder			IBERS, Aberystwyth	Barenbr UK Ltd	
UK Agent			British Seed Houses Ltd	Barr	
Number of Trials for Yields					
1st Harvest Year	-	-	13	-	-
2nd Harvest Year	-	-	12	-	-
3rd Harvest Year	-	-	-	-	-

White Clover

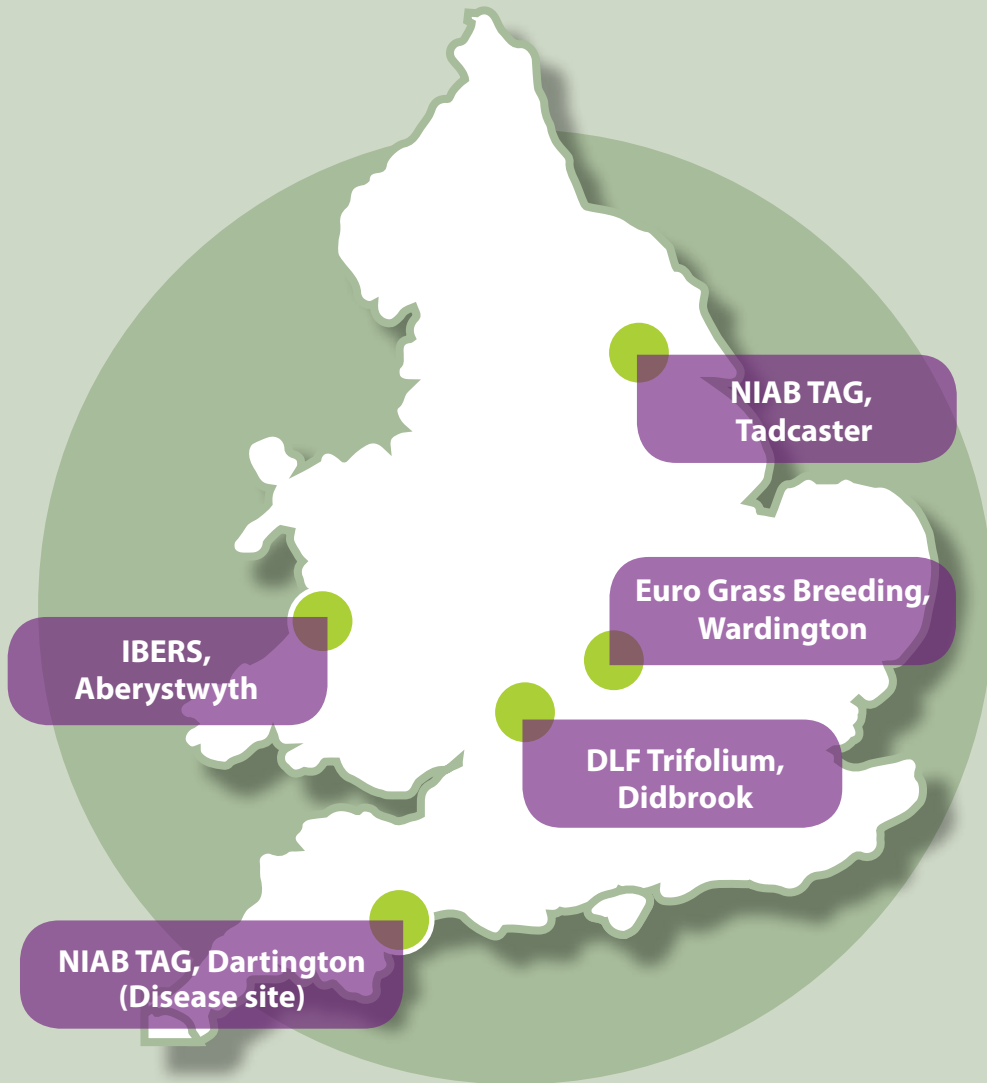
White clover varieties include additional or alternative measures including:

- 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.

3rd Harvest Year		
Total Clover Yield (% of 3.76 t/ha) #	100	64
Total Yield: Clover & Grass (% of 12.37 t/ha) #	100	93
% of Clover in Sward	31	21
Clover Yield: First cut (% of 0.49 t/ha)	100	55
Clover Yield: Last cut (% of 0.33 t/ha)	100	57
Autumn Ground Cover		
Cutting/Rotational Grazing	% Cover 1st Harvest Year	48
	% Cover 2nd Harvest Year	41
	% Cover 3rd Harvest Year	42
	Overall (1-9 good)	6.0
Continuous Grazing (heavy defoliation)	% Cover 1st Harvest Year	55
	% Cover 2nd Harvest Year	54
	% Cover 3rd Harvest Year	54
	Overall (1-9 good)	6.5

Frequently Asked Questions



How and where is this information gathered?

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

Are the results representatives 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
PRG	Diploid candidates	25 kg/ha
	Tetraploid candidates	37 kg/ha
IRG and HRG & Festulolium	Diploid candidates	33 kg/ha
	Tetraploid candidates	50 kg/ha
Timothy		16 kg/ha
White clover (along with 18kg/ha of companion ryegrass)		3.5 kg/ha
Red clover		13 kg/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 6 week intervals thereafter (this usually results in up to 5 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 1.5 t/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 stimulated grazing.

All yields are converted to tonnes of dry matter per ha. In the tables t per ha refers to t DM per ha.

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 Dartington site (NIAB TAG), Devon, diseases are encouraged through late season management and recorded. In 2013 there will be two sites specifically managed to encourage natural infection of disease to increase the accuracy of diseases resistance values in varieties.

What if I want to know the ME value?

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.

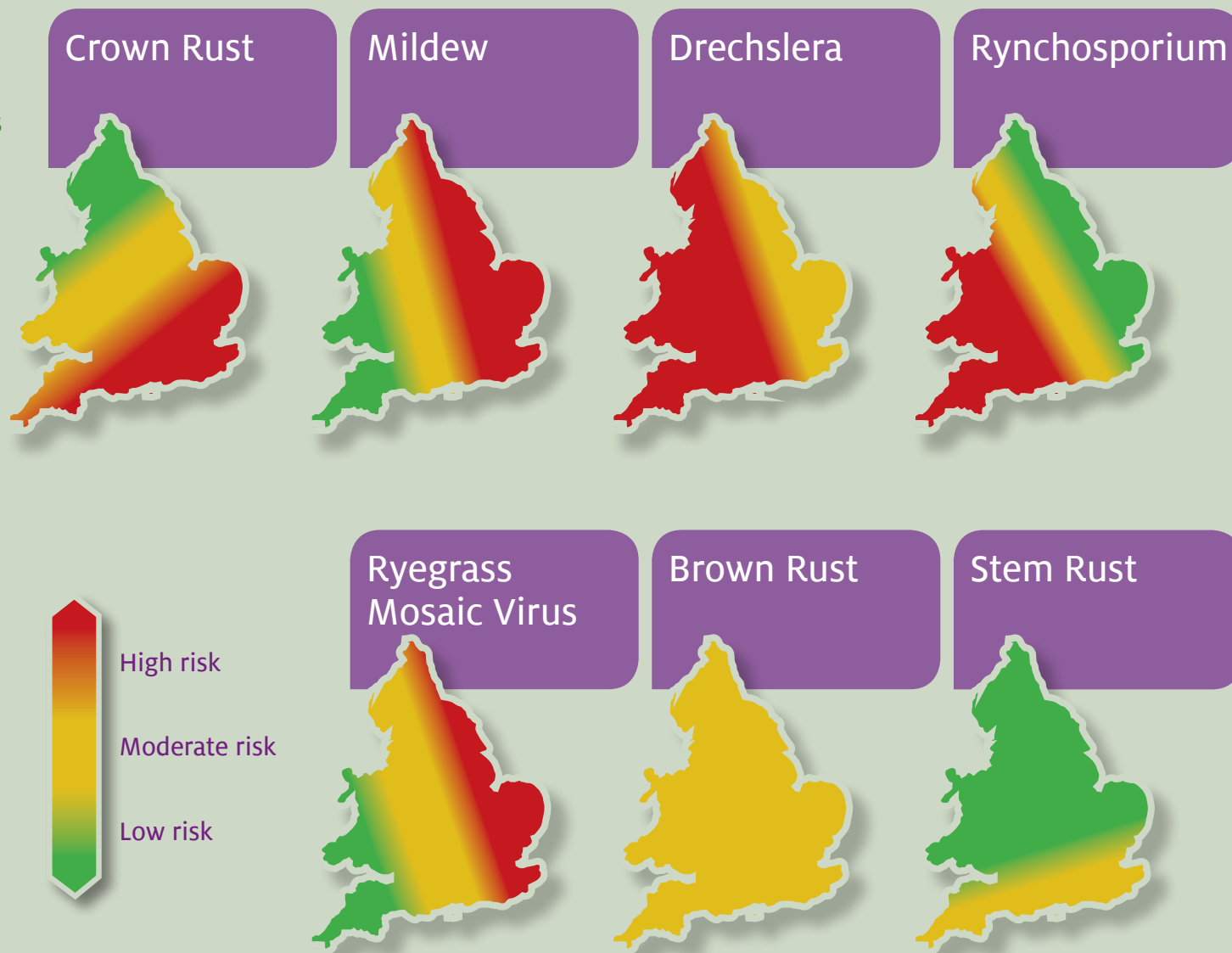
Rule of thumb
1 D-Value unit = ME of 0.16

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

Regional Disease Information

Records taken since the early 1980s have shown that some are the high priority diseases. 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 seeds mixtures for high risk areas provide 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 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 1 t DM/ha of dry matter, which is about 3% of the average yield of the varieties used. Individual site and variety effects were larger, or instance controlling *Drechslera* leaf spot at one site on a susceptible variety gave a yield response of nearly 1.25 t DM per 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 thus 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, re-seeding 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 grass diseases

Selection of a proportion of resistant varieties in seed mixtures provides an effective means of suppressing grass 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 2013/2014

	Diploids						Tetraploids				
	Mean of G Varieties	Early Diploid Mean	Genesis	Moyola	Kilrea	Kimber	Glenvale	Early Tetraploid Mean	Anaconda	AberTorch	Carriag
Recommended List Status			G	G	G	G	PG		S	G	PG
Heading Date			9 May	10 May	13 May	15 May	16 May		6 May	7 May	14 May
Grazing: Management											
Grazing Yield (% of 10.53 t/ha)	100	98	101	103	97	98	100	97	96	98	103
Grazing D-value	76.5	75.0	75.3	75.5	75.3	74.8	74.7	76.3	76.0	76.5	76.0
Grazing: Seasonal Growth											
Early Grazing Yield (% of 1.22 t/ha)	100	118	133	118	117	120	117	123	120	126	110
Spring (% of 2.20 t/ha)	100	117	128	119	117	116	112	120	119	122	118
Early Summer (% of 4.07 t/ha)	100	89	89	90	88	91	98	90	88	91	100
Late Summer (% of 2.92 t/ha)	100	96	99	106	96	97	96	95	95	94	99
Autumn (% of 1.45 t/ha)	100	97	98	109	99	94	98	88	84	92	102
Conservation: Management											
Total Yield: 1st Harvest Year (% of 17.29 t/ha)	100	100	107	105	100	100	101	103	101	105	108
Total Yield: 3rd Harvest Year (% of 12.84 t/ha)	100	98	105	108	98	99	104	97	95	100	103
Total Yield: Mean (% of 15.16 t/ha)	100		107	106	99	100	102		98	103	106
Conservation: Year 1: Seasonal Growth											
1st cut (% of 6.88 t/ha)	100	95	105	102	96	95	103	95	89	101	111
1st cut D-Value	72.3	73.4	70.4	71.3	73.2	73.7	67.0	73.3	73.8	72.8	69.8
2nd cut (% of 4.08 t/ha)	100	95	101	95	91	98	98	104	107	102	107
2nd cut D-value	73.5	72.6	73.3	72.8	72.9	72.2	72.4	71.8	71.5	72.0	72.4
3rd cut (% of 3.18 t/ha)	100	108	114	112	110	106	102	111	109	112	107
4th+ cut (% of 3.23 t/ha)	100	101	105	109	102	99	97	101	101	102	104

	Diploids							Tetraploids			
	Mean of G Varieties	Early Diploid Mean	Genesis	Moyola	Kilrea	Kimber	Glenvale	Early Tetraploid Mean	Anaconda	AberTorch	Carraig
Agronomic Characters											
Ground Cover (1-9, 9=good)	6.2	6.8	6.4	6.2	6.8	6.8	6.2	6.2	6.1	6.3	6.2
Ground Cover %: 3rd Harvest Year	54	56	53	52	56	56	54	56	56	55	54
Ground Cover %: Autumn	57	63	59	58	63	63	57	55	54	57	58
Winter Hardiness (1-9, 9=good)	6.7	6.9	6.5	6.5	6.8	7.0	[5.4]	6.8	6.5	7.1	6.8
Disease Resistance											
Crown Rust (1-9, 9=good)	7	6	6	6	6	6	7	5	5	6	7
Drechslera (1-9, 9=good)	6	6	6	5	6	6	[7]	6	6	6	[7]
Mildew (1-9, 9=good)	7	8	7	8	8	7	8	5	6	5	6
Year First Listed			2009	2009	2005	2004	2012		1992	2000	2013
Breeder			Teagasc, Eire	AFBI, UK	AFBI, UK	DLF Trifolium, Denmark	Teagasc, Eire		DLF Trifolium, Denmark	IBERS, Aberystwyth	Teagasc, Eire
UK Agent			DLF Trifolium Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd		Limagrain UK Ltd	British Seed Houses Ltd	DLF Trifolium Ltd
Number of Trials for Yields											
1st Harvest Year			12	12	14	14	6		12	14	6
2nd Harvest Year			10	10	12	12	5		13	16	6
3rd Harvest Year			8	8	11	12	6		12	12	6

Note that the mean of G varieties include all those from early, intermediate and late heading 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.
Conservation D-value is measured from both the 1st and 2nd cuts in year 1.

Glenvale and Carraig have values derived from Intermediate trials.
[] = limited data.

Recommended List of Intermediate Perennial Ryegrass Diploid Varieties 2013/2014

	Mean of G varieties	Int. Diploid Mean	Solomon	Boyne	AberDart	AberStar	Gandalf	Glenariff	Rodrigo	Premium	Copeland	AberMagic	AberFarrell	Calvano 1	Contrast	AberGreen
Recommended List Status			G	PS	G	S	G	PG	PG	G	PS	G	S	PG	PS	PG
Heading date			16 May	19 May	23 May	25 May	25 May	25 May	26 May	26 May	27 May	27 May	27 May	28 May	28 May	28 May
Grazing: Management																
Grazing Yield (% of 10.53 t/ha)	100	101	101	105	100	105	98	103	98	98	98	107	101	98	103	108
Grazing D-value	76.5	77.1	75.7	75.1	78.5	78.0	76.4	74.7	76.4	75.7	75.0	77.7	77.5	75.8	75.7	78.0
Grazing: Seasonal Growth																
Early Grazing Yield (% of 1.22 t/ha)	100	102	107	111	117	109	89	105	101	101	100	99	98	97	106	97
Spring (% of 2.20 t/ha)	100	103	113	111	110	107	97	99	103	106	106	98	98	101	105	104
Early Summer (% of 4.07 t/ha)	100	97	95	104	94	100	96	101	97	96	97	102	98	97	102	106
Late Summer (% of 2.92 t/ha)	100	100	98	101	98	102	98	105	94	95	95	110	103	97	97	108
Autumn (% of 1.45 t/ha)	100	108	103	104	104	115	103	111	101	99	99	125	111	100	113	115
Conservation: Management																
Total Yield: 1st Harvest Year (% of 17.29 t/ha)	100	99	105	107	99	98	99	106	100	99	99	100	98	94	101	103
Total Yield: 3rd Harvest Year (% of 12.84 t/ha)	100	100	106	111	99	101	97	103	100	101	104	103	98	101	103	107
Total Yield: Mean (% of 15.16 t/ha)	100		105	108	99	100	98	104	100	100	101	101	98	97	102	105
Conservation: Year 1: Seasonal Growth																
1st cut (% of 6.88 t/ha)	100	99	113	113	100	99	102	107	100	102	100	95	92	96	102	97
1st cut D-Value	72.3	71.9	67.8	68.8	73.1	72.0	71.3	70.3	71.1	69.3	71.3	74.0	75.2	70.0	72.5	73.3
2nd cut (% of 4.08 t/ha)	100	97	93	107	97	93	93	97	99	95	95	102	96	91	100	102
2nd cut D-value	73.5	73.1	72.6	70.5	74.7	73.0	72.5	72.0	74.1	72.4	73.3	72.6	75.8	73.1	72.3	73.6
3rd cut (% of 3.18 t/ha)	100	99	103	99	101	98	99	109	102	100	101	96	100	90	98	108
4th+ cut (% of 3.23 t/ha)	100	101	103	102	97	100	101	108	97	98	102	109	108	95	101	109

	Mean of G varieties	Int. Diploid Mean	Solomon	Boyne	AberDart	AberStar	Gandalf	Glenariff	Rodrigo	Premium	Copeland	AberMagic	AberFarrell	Calvano 1	Contrast	AberGreen
Agronomic Characters																
Ground Cover (1-9, 9=good)	6.2	6.8	6.8	7.5	7.3	7.2	6.8	6.6	7.0	6.8	7.3	6.5	6.5	6.3	5.9	7.3
Ground Cover %: 3rd harvest year	54	58	60	62	61	60	56	53	57	57	60	57	57	55	51	60
Ground Cover %: Autumn	57	62	59	65	64	64	63	64	63	62	64	57	58	57	55	66
Winter Hardiness (1-9, 9=good)	6.7	6.4	6.7	6.8	7.0	7.2	5.6	[6.3]	6.9	6.4	6.9	6.7	6.8	6.6	6.5	7.0
Disease Resistance																
Crown Rust (1-9, 9=good)	7	6	6	5	6	6	6	8	5	6	7	7	6	7	5	7
Drechslera (1-9, 9=good)	6	5	7	8	3	3	5	[6]	5	7	6	[5]	6	[8]	2	[5]
Mildew (1-9, 9=good)	7	7	7	8	7	6	7	[8]	7	7	8	7	8	6	8	8
Year First Listed			2009	2010	1999	2005	2005	2012	2010	1998	2010	2008	2009	2008	2009	2011
Breeder			Teagasc, Eire	DLF Trifolium, Denmark	IBERS, Aberystwyth	IBERS, Aberystwyth	DLF Trifolium, Denmark	AFBI, UK	Euro Grass Breeding, NL	Innoseeds, NL	AFBI, UK	IBERS, Aberystwyth	IBERS, Aberystwyth	Innoseeds, NL	DLF Trifolium, Denmark	IBERS, Aberystwyth
UK Agent			DLF Trifolium Ltd	DLF Trifolium Ltd	British Seed Houses Ltd	British Seed Houses Ltd	Limagrain UK Ltd	Barenbrug UK Ltd	British Seed Houses Ltd	DLF Trifolium Ltd	Barenbrug UK Ltd	British Seed Houses Ltd	British Seed Houses Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	British Seed Houses Ltd
Number of Trials for Yields																
1st Harvest Year			11	12	15	15	15	6	12	34	12	12	11	12	11	9
2nd Harvest Year			10	8	15	13	13	6	8	32	8	10	10	10	10	6
3rd Harvest Year			8	6	14	15	15	6	6	30	6	10	8	10	8	6

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

[] = limited data.

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.

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

Recommended List of Intermediate Perennial Ryegrass Tetraploid Varieties 2013/2014

	Mean of G varieties	Int. Tetraploid Mean	Malone	Trintella	AberGlyn	Magician	Glenstal	Seagoe	Aubisque	AberClyde	Eurostar	AstonBonus	Dunluce	Braid	Montova	Pensel	Catabi 1	Orion	AstonEnergy	Hybrids		
Recommended List Status			G	S	G	G	G	PG	G	PG	G	PS	G	PG	G	PS	PS	G	G	S	S	S
Heading date			18 May	18 May	18 May	19 May	20 May	21 May	21 May	23 May	24 May	28 May	28 May	28 May	29 May	29 May	29 May	30 May	31 May	18 May	21 May	25 May
Grazing: Management																						
Grazing Yield (% of 10.53 t/ha)	100	101	100	97	98	102	104	103	98	102	98	102	104	104	102	103	98	96	101	98	100	100
Grazing D-value	76.5	76.7	76.9	76.3	76.6	75.9	75.8	76.5	77.7	77.1	75.6	77.5	77.2	75.6	75.5	75.5	76.1	78.4	73.8	75.3	72.9	
Grazing: Seasonal Growth																						
Early Grazing Yield (% of 1.22 t/ha)	100	103	110	99	117	109	112	110	97	102	95	96	102	102	92	92	88	81	91	122	109	112
Spring (% of 2.20 t/ha)	100	107	113	110	119	112	117	107	105	109	101	103	103	103	98	107	99	91	97	114	113	112
Early Summer (% of 4.07 t/ha)	100	100	93	92	96	99	101	101	98	104	101	101	105	105	106	107	100	103	103	97	99	99
Late Summer (% of 2.92 t/ha)	100	98	98	95	90	98	101	106	94	93	96	100	104	100	103	99	95	92	100	89	96	95
Autumn (% of 1.45 t/ha)	100	97	100	93	90	99	98	96	92	101	92	108	102	109	96	97	99	91	101	90	96	94
Conservation: Management																						
Total Yield: 1st Harvest Year (% of 17.29 t/ha)	100	103	103	101	106	103	105	111	101	104	102	106	104	101	103	109	103	101	101	106	105	108
Total Yield: 3rd Harvest Year (% of 12.84 t/ha)	100	103	102	101	102	102	104	105	101	100	101	101	109	106	107	105	101	99	97	99	102	102
Total Yield: Mean (% of 15.16 t/ha)	100		103	101	104	102	104	109	101	102	101	103	106	103	105	107	103	100	99	103	103	105
Conservation: Year 1: Seasonal Growth																						
1st cut (% of 6.88 t/ha)	100	105	110	107	116	105	110	118	102	104	104	108	96	93	100	109	107	97	97	111	105	109
1st cut D-Value	72.3	72.5	70.7	70.5	70.4	70.8	72.3	71.0	71.5	73.2	71.9	73.0	75.1	73.1	74.3	72.2	73.6	74.5	75.3	70.6	72.9	71.5
2nd cut (% of 4.08 t/ha)	100	103	94	97	108	102	104	105	100	111	104	104	110	102	108	117	101	109	102	111	114	116
2nd cut D-value	73.5	73.2	74.6	73.8	71.7	72.6	72.4	71.7	72.9	73.1	73.5	74.2	73.1	72.6	72.1	71.5	74.1	72.7	76.0	70.1	68.9	68.5
3rd cut (% of 3.18 t/ha)	100	102	101	98	94	102	100	108	101	102	100	104	109	108	108	109	104	99	104	99	101	107
4th+ cut (% of 3.23 t/ha)	100	99	99	95	94	101	98	106	97	94	98	104	105	109	98	96	97	97	101	95	98	94

	Mean of G varieties	Int. Tetraploid Mean	Malone	Trintella	AberGlyn	Magician	Glenstal	Seagoe	Aubisque	AberClyde	Eurostar	AstonBonus	Dunluce	Braid	Montova	Pensel	Catabi 1	Orion	AstonEnergy	Hybrids		
																				Citeliac	Foyle	Storm
Agronomic Characters																						
Ground Cover (1-9, 9=good)	6.2	5.7	5.5	5.5	5.6	5.5	5.7	5.6	6.3	6.5	6.4	5.1	5.4	5.7	6.6	5.6	4.9	5.7	4.7	4.7	4.4	5.3
Ground Cover %: 3rd harvest year	54	52	48	49	51	50	53	49	56	56	55	45	50	50	56	52	45	51	45	46	43	49
Ground Cover %: Autumn	57	53	53	53	53	51	52	54	57	59	58	51	51	55	61	51	48	54	46	45	44	50
Winter Hardiness (1-9, 9=good)	6.7	6.8	6.5	6.8	6.9	6.8	7.3	6.1	6.7	6.6	7.1	5.8	6.7	7.0	6.7	6.5	6.3	6.5	6.5	7.1	6.8	6.6
Disease Resistance																						
Crown Rust (1-9, 9=good)	7	7	7	8	7	6	5	7	8	8	8	7	5	7	7	8	8	7	8	8	8	7
Drechslera (1-9, 9=good)	6	7	7	7	7	[5]	8	[9]	8	[7]	8	[6]	7	[6]	[9]	[8]	8	8	8	8	[8]	7
Mildew (1-9, 9=good)	7	7	9	8	7	6	5	9	6	9	8	8	8	6	8	8	8	7	8	8	8	8
Year First Listed			2006	2007	2004	1998	2004	2011	1993	2013	2002	2013	2005	2011	2004	2013	2009	2000	2006	2001	2004	1995
Breeder			AFBI, UK	DLF Trifolium, Denmark	IBERS, Aberystwyth	Teagasc, Eire	Teagasc, Eire	AFBI, UK	DLF Trifolium, Denmark	IBERS, Aberystwyth	DLF Trifolium, Denmark	Euro Grass Breeding, UK	AFBI, UK	AFBI, UK	DLF Trifolium, Denmark	DLF Trifolium, Denmark	Innos-eeds, NL	Lembke KG, Germany	Euro Grass Breeding, UK	DLF Trifolium, Denmark	AFBI, UK	DLF Trifolium, Denmark
UK Agent			Baren-brug UK Ltd	Lim-agrain UK Ltd	British Seed Houses Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd	Baren-brug UK Ltd	Lim-agrain UK Ltd	British Seed Houses Ltd	Lim-agrain UK Ltd	Euro Grass Bv	Baren-brug UK Ltd	Baren-brug UK Ltd	Lim-agrain UK Ltd	Lim-agrain UK Ltd	DLF Trifolium Ltd	KWS UK Ltd	British Seed Houses Ltd	DLF Trifolium Ltd	Baren-brug UK Ltd	DLF Trifolium Ltd
Number of Trials for Yields																						
1st Harvest Year			15	15	13	16	14	9	47	6	14	6	15	9	11	6	11	19	15	11	11	12
2nd Harvest Year			14	12	13	16	13	6	47	6	13	6	14	6	10	6	10	17	13	10	12	12
3rd Harvest Year			13	11	14	16	15	6	43	6	11	6	15	6	10	6	8	16	13	10	14	12

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

[] = limited data.

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.

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

Recommended List of Late Perennial Ryegrass Diploid Varieties 2013/2014

	Mean of G varieties	Late Diploid Mean	AberAvon	Tyrella	Toddington	Romark	Pastour	Foxtrot	Clanrye	Drumbo	Tyrconnell	Portrush	AberChoice	Matiz	Cancan
Recommended List Status			G	S	PG	G	G	G	PS	G	PS	G	S	S	G
Heading date			1 Jun	1 Jun	2 Jun	3 Jun	3 Jun	3 Jun	3 Jun	3 Jun	4 Jun	8 Jun	9 Jun	10 Jun	11 Jun
Grazing: Management															
Grazing Yield (% of 10.53 t/ha)	100	101	102	99	100	101	99	101	97	102	97	96	105	99	101
Grazing D-value	76.5	76.4	77.6	75.9	75.7	76.3	75.6	75.8	74.6	76.9	75.1	76.3	76.9	76.7	76.7
Grazing: Seasonal Growth															
Early Grazing Yield (% of 1.22 t/ha)	100	94	106	107	92	91	96	92	85	101	79	91	98	84	83
Spring (% of 2.20 t/ha)	100	88	99	99	91	88	87	90	82	94	75	88	94	79	77
Early Summer (% of 4.07 t/ha)	100	104	101	98	105	104	103	106	103	104	104	99	111	103	105
Late Summer (% of 2.92 t/ha)	100	105	106	97	100	106	100	101	98	105	100	97	105	105	110
Autumn (% of 1.45 t/ha)	100	104	106	103	102	103	104	102	97	107	101	102	106	103	106
Conservation: Management															
Total Yield: 1st Harvest Year (% of 17.29 t/ha)	100	96	96	96	97	94	97	97	100	94	94	93	99	92	96
Total Yield: 3rd Harvest Year (% of 12.84 t/ha)	100	97	99	98	101	97	96	96	104	98	97	97	99	97	99
Total Yield: Mean (% of 15.16 t/ha)	100		97	97	98	96	97	97	102	96	95	95	99	94	97
Conservation: Year 1: Seasonal Growth															
1st cut (% of 6.88 t/ha)	100	97	102	109	103	92	103	100	106	92	93	98	98	89	86
1st cut D-Value	72.3	71.1	71.0	70.1	70.5	71.2	69.3	70.3	71.5	72.4	70.9	71.7	74.1	71.9	73.7
2nd cut (% of 4.08 t/ha)	100	94	89	83	95	91	92	97	103	97	95	87	102	95	103
2nd cut D-value	73.5	74.4	75.6	75.1	73.5	74.8	74.0	73.4	71.9	76.2	73.5	75.1	73.5	74.1	74.1
3rd cut (% of 3.18 t/ha)	100	96	93	91	94	100	94	93	91	97	95	92	97	91	102
4th+ cut (% of 3.23 t/ha)	100	100	100	94	96	102	98	100	97	99	98	96	102	98	103

	Mean of G varieties	Late Diploid Mean	AberAvon	Tyrella	Toddington	Romark	Pastour	Foxtrot	Clanrye	Drumbo	Tyrconnell	Portrush	AberChoice	Matiz	Cancan
Agronomic Characters															
Ground Cover (1-9, 9=good)	54	57	61	52	56	57	54	57	55	51	63	57	53	53	56
Ground Cover %: 3rd harvest year	57	61	62	61	60	61	58	60	59	58	69	66	56	62	63
Ground Cover %: Autumn	6.2	6.7	7.1	6.4	6.6	6.7	6.3	6.7	6.4	6.2	7.8	7.0	6.1	6.6	6.8
Winter Hardiness (1-9, 9=good)	6.7	6.5	7.1	6.7	6.7	6.3	6.5	6.3	6.4	6.3	6.1	6.9	7.0	6.2	6.2
Disease Resistance															
Crown Rust (1-9, 9=good)	7	7	8	6	8	7	7	6	[5]	6	6	6	5	7	7
Drechslera (1-9, 9=good)	6	6	6	5	[7]	5	6	6	[6]	6	5	6	3	6	5
Mildew (1-9, 9=good)	7	6	6	9	7	6	5	6	*	5	7	8	9	6	7
Year First Listed			2001	2006	2010	2000	2001	1997	2012	2009	2008	2004	2009	2008	1998
Breeder			IBERS, Aberystwyth	AFBI, UK	DLF Trifolium, Denmark	Innoseeds, NL	DLF Trifolium, Denmark	DLF Trifolium, Denmark	AFBI, UK	AFBI, UK	Teagasc, Eire	AFBI, UK	IBERS, Aberystwyth	DLF Trifolium, Denmark	DLF Trifolium, Denmark
UK Agent			British Seed Houses Ltd	Barenbrug UK Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	DLF Trifolium Ltd	Barenbrug UK Ltd	British Seed Houses Ltd	Limagrain UK Ltd	DLF Trifolium Ltd
Number of Trials for Yields															
1st Harvest Year			13	14	11	18	18	15	6	11	12	14	11	12	19
2nd Harvest Year			12	14	7	16	15	14	6	10	10	13	10	10	15
3rd Harvest Year			12	13	5	16	11	14	6	8	10	16	8	10	17

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

[] = limited data.

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.

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

Recommended List of Late Perennial Ryegrass Tetraploid Varieties 2013/2014

	Mean of G Varieties	Late Tetraploid Mean	Elital	Drift	Delphin	Alfonso	Elgon	Dundrum	Aspect	Novello	AberGain	Irondal	Polim	Diams	AberBite	Twymax	AstonPrincess	Xenon	Herbal	Fornido	Dunloy	AberPlentiful	Ideal	AstonAmber	Maurice	
Recommended List Status			PG	PG	G	PS	G	PS	PG	PG	PG	PS	G	PG	G	G	G	PS	G	G	S	PG	G	PS	S	
Heading Date			29 May	31 May	31 May	31 May	1 Jun	2 Jun	3 Jun	3 Jun	3 Jun	3 Jun	3 Jun	3 Jun	4 Jun	4 Jun	5 Jun	6 Jun	6 Jun	6 Jun	6 Jun	7 Jun	8 Jun	10 Jun	13 Jun	
Grazing: Management																										
Grazing yield (% of 10.53 t/ha)	100	100	97	102	97	97	97	102	101	103	107	97	100	97	103	101	102	100	99	98	99	102	100	100	95	
Grazing D-value	76.5	76.6	76.5	75.8	76.8	76.9	76.5	76.8	77.5	76.6	78.3	77.8	75.8	77.0	77.6	76.7	76.7	77.7	76.4	76.5	76.8	77.6	77.2	77.3	76.2	
Grazing: Seasonal Growth																										
Early Grazing Yield (% of 1.22 t/ha)	100	91	89	95	98	90	86	86	96	97	105	85	97	86	90	90	93	96	92	88	79	90	90	97	70	
Spring (% of 2.20 t/ha)	100	87	90	90	94	97	83	85	87	89	101	83	90	82	90	91	91	87	86	85	81	93	83	88	69	
Early Summer (% of 4.07 t/ha)	100	105	103	110	101	102	101	109	108	109	109	103	104	100	108	109	109	106	102	103	106	105	104	106	106	
Late Summer (% of 2.92 t/ha)	100	102	96	102	96	94	103	104	101	105	108	97	101	103	103	100	102	103	103	99	102	104	105	101	98	
Autumn (% of 1.45 t/ha)	100	101	94	95	95	101	99	104	103	100	111	101	101	98	106	98	98	100	107	101	102	104	105	101	97	
Conservation: Management																										
Total Yield: 1st Harvest Year (% of 17.29 t/ha)	100	98	98	103	102	104	95	103	102	99	106	98	100	95	102	102	101	96	97	97	98	97	97	95	93	
Total Yield: 3rd Harvest Year (% of 12.84 t/ha)	100	100	98	102	99	98	98	104	101	95	105	101	101	98	103	102	99	97	100	99	103	100	99	91	98	
Total Yield: Mean (% of 15.16 t/ha)	100		98	102	100	101	96	104	102	98	105	99	100	97	102	102	100	96	99	98	101	99	98	94	95	
Conservation: Year 1: Seasonal Growth																										
1st cut (% of 6.88 t/ha)	100	98	105	112	116	117	95	109	105	97	113	95	103	94	102	105	105	90	94	93	95	96	94	91	89	
1st cut D-Value	72.3	73.4	72.4	71.9	69.3	72.6	72.1	71.6	73.6	73.1	73.1	73.2	71.7	72.5	73.1	73.3	74.0	73.4	74.2	74.7	74.1	73.9	74.1	74.7	74.1	
2nd cut (% of 4.08 t/ha)	100	103	95	108	96	101	97	106	105	105	110	104	105	98	105	107	105	107	102	102	106	104	102	104	99	
2nd cut D-value	73.5	74.2	73.7	72.5	71.5	75.3	73.1	73.1	74.7	73.4	74.6	75.3	72.7	74.6	74.3	74.4	74.9	73.9	75.1	74.3	74.1	74.8	75.1	74.3	73.5	
3rd cut (% of 3.18 t/ha)	100	95	93	89	90	90	91	95	98	98	96	100	91	93	96	98	96	98	98	96	99	95	95	94	91	
4th+ cut (% of 3.23 t/ha)	100	100	97	95	93	101	98	100	99	102	99	100	100	102	109	97	98	99	103	101	100	101	103	99	98	

	Mean of G Varieties	Late Tetraploid Mean	Elital	Drift	Delphin	Alfonso	Elgon	Dundrum	Aspect	Novello	AberGain	Irondal	Polim	Diams	AberBite	Twymax	AstonPrincess	Xenon	Herbal	Fornido	Dunloy	AberPlentiful	Ideal	AstonAmber	Maurice	
Agronomic Characters																										
Ground Cover (1-9, 9=good)	6.2	6.0	6.2	6.0	4.8	5.9	5.4	5.6	5.8	5.9	5.1	6.2	5.3	5.8	5.6	6.1	5.9	6.4	6.4	6.2	5.7	5.2	6.3	5.9	7.0	
Ground Cover %: 3rd Harvest Year	54	52	53	53	45	50	49	49	51	51	48	54	48	49	48	54	52	53	54	52	49	48	54	49	59	
Ground Cover %: Autumn	57	56	58	55	48	56	52	54	55	56	49	57	51	55	54	56	55	61	60	58	56	51	59	56	62	
Winter Hardiness (1-9, 9=good)	6.7	6.7	6.8	6.6	6.8	6.4	6.5	6.8	7.0	7.3	6.6	6.4	6.8	6.5	6.9	6.7	6.9	6.8	6.6	6.8	6.6	6.7	6.7	6.9	6.5	
Disease Resistance																										
Crown Rust (1-9, 9=good)	7	7	7	7	8	[5]	8	3	8	8	6	6	8	8	7	7	7	6	7	7	3	[6]	8	8	6	
Drechslera (1-9, 9=good)	6	7	6	[7]	8	[6]	6	8	[8]	9	[8]	[8]	7	9	8	8	7	[7]	7	6	5	[7]	7	7	7	
Mildew (1-9, 9=good)	7	6	6	7	7	[8]	5	8	7	6			5	5	6	8	8	5	6	7	8		5	7	7	
Year First Listed			2008	2011	2000	2013	1993	2010	2011	2010	2012	2012	2005	2009	2009	2004	2007	2011	2003	2006	2005	2012	2005	2010	2000	
Breeder			R 2n, France	DLF Trifolium, Denmark	Lembke KG, Germany	Euro Grass Breeding, UK	DLF Trifolium, Denmark	AFBI, UK	DLF Trifolium, Denmark	DLF Trifolium, Denmark	IBERS, Aberystwyth	R 2n, France	Inno-seeds, NL	R 2n, France	IBERS, Aberystwyth	CPB Twyford	Euro Grass Breeding, UK	DLF Trifolium, Denmark	R 2n, France	Euro Grass Breeding, NL	AFBI, UK	IBERS, Aberystwyth	R 2n, France	Euro Grass Breeding, UK	DLF Trifolium, Denmark	
UK Agent			DLF Trifolium Ltd	Lim-agrain UK Ltd	KWS UK Ltd	DLF Trifolium Ltd	Lim-agrain UK Ltd	Baren-brug UK Ltd	Lim-agrain UK Ltd	Lim-agrain UK Ltd	British Seed Houses Ltd	RAGT	DLF Trifolium Ltd	DLF Trifolium Ltd	British Seed Houses Ltd	Lim-agrain UK Ltd	British Seed Houses Ltd	Lim-agrain UK Ltd	Organic Seed Producers	British Seed Houses Ltd	Baren-brug UK Ltd	British Seed Houses Ltd	Baren-brug UK Ltd	Euro Grass Bv	DLF Trifolium Ltd	
Number of Trials for Yields																										
1st Harvest Year			12	9	13	6	11	12	9	12	6	6	14	11	11	23	14	9	14	13	13	6	14	12	17	
2nd Harvest Year			10	6	12	6	11	8	6	8	6	6	13	10	10	20	13	6	13	13	14	6	14	8	17	
3rd Harvest Year			10	6	12	6	11	6	6	6	6	6	15	8	8	20	11	6	13	13	15	6	15	6	16	

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

[] = limited data.

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.

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

Recommended List of Italian Ryegrass Diploid Varieties 2013/2014

	Mean of 6 varieties	Shakira	Muriello	Meribel	Ligrande	Fox	Alamo	Limeta	Steel	Abys	Davinci	Javorio	Belluna
Recommended List Status		PS	G	G	G	G	G	G	G	G	G	PG	G
Heading date		15 May	18 May	18 May	19 May	19 May	19 May	19 May	19 May	20 May	22 May	22 May	22 May
Conservation: Management													
Total Yield: 1st Harvest Year (% of 20.72 t/ha)	100	101	100	101	99	98	101	98	100	97	101	102	100
Total Yield: 2nd Harvest Year (% of 15.58 t/ha)	100	103	104	97	98	101	101	98	100	99	103	99	102
Total Yield: Mean (% of 18.31 t/ha)	100	102	102	99	99	99	101	98	100	98	102	101	101
Total Yield: Year of Sowing (% of 2.75 t/ha)	100	98	97	93	97	108	95	92	102	100	96	102	98
Conservation: Year 1: Seasonal Growth													
1st Harvest Year: Early Spring Growth (% of 1.94 t/ha)	100	102	104	99	99	100	101	95	103	104	96	96	99
1st cut (% of 6.61 t/ha)	100	105	93	97	102	96	97	102	104	96	96	105	93
1st cut D-Value	71.5	69.6	71.1	72.3	69.9	70.4	71.9	71.3	70.4	70.0	71.2	71.0	71.6
2nd cut (% of 4.85 t/ha)	100	100	98	102	100	100	102	96	98	97	101	103	101
2nd cut D-Value	66.5	65.4	66.9	66.8	64.3	65.9	66.8	65.6	66.4	65.9	66.6	65.9	66.7
Monthly cuts (% of 7.30 t/ha)	100	96	106	104	95	99	104	96	97	97	106	99	106
Agronomic Characters													
Ground Cover (1-9, 9=good)	3.6	3.2	3.8	3.4	3.6	3.7	4.5	3.9	4.1	3.7	4.0	3.0	4.1
Ground Cover %: 1st Harvest Year	46	47	45	45	48	46	50	47	49	48	49	41	46
Ground Cover %: 2nd Harvest Year	46	42	48	44	46	47	53	48	50	47	49	43	50
Winter Hardiness (1-9, 9=good)	7.1	7.0	7.5	7.4	7.1	6.7	7.4	6.5	6.8	7.3	6.9	6.5	7.1

	Mean of 6 varieties	Shakira	Muriello	Meribel	Ligrande	Fox	Alamo	Limeta	Steel	Abys	Davinci	Javorio	Belluna
Disease Resistance													
Ryegrass Mosaic Virus (1-9, 9=good)	5	[7]	4	4	4	6	5	3	8	7	6	[7]	6
Mildew (1-9, 9=good)	6	[6]	7	5	6	6	7	5	6	7	6	6	7
Brown Rust (1-9, 9=good)	6	[5]	6	[7]	4	6	3	3	[6]	8	8	[7]	3
Crown Rust (1-9, 9=good)	5			[8]	4	[6]	[4]			[7]			
Rhynchosporium (1-9, 9=good)	7	[8]	[7]	[7]	[7]	[7]	[6]	[8]	[7]	[7]	[6]	[7]	[6]
Year First Listed		2012	2006	1991	1998	2004	2001	2002	2009	2004	2005	2013	2005
Breeder		Euro Grass Breeding, France	Euro Grass Breeding, Germany	IVLO	Euro Grass Breeding, Germany	Force Limagrain	Innoseeds, NL	Euro Grass Breeding, Germany	R 2n, France	R 2n, France	IVLO	Euro Grass Breeding, NL	IVLO
UK Agent		DLF Trifolium Ltd	British Seed Houses Ltd	Limagrain UK Ltd	Euro Grass Bv	DLF Trifolium Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd	British Seed Houses Ltd	Barenbrug UK Ltd	Limagrain UK Ltd	Euro Grass Bv	Limagrain UK Ltd
Number of Trials for Yields													
1st Harvest Year		4	9	8	20	12	12	11	8	13	11	4	11
2nd Harvest Year		6	12	10	28	14	14	13	12	13	11	6	11
3rd Harvest Year		6	11	10	25	12	12	12	11	11	10	6	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.

[] = Limited data

Recommended List of Italian Ryegrass Tetraploid Varieties 2013/2014

	Mean of 6 varieties	Itarzi	Dorike	Udine	Barmega	Hunter	Salome	Kigezi 1	Gemini	Barmultra II	Litonio	Danergo
Recommended List Status		G	G	PG	S	G	S	PG	G	G	G	G
Heading date		15 May	15 May	15 May	16 May	16 May	17 May	17 May	17 May	18 May	19 May	21 May
Conservation: Management												
Total Yield: 1st Harvest Year (% of 20.72 t/ha)	100	100	100	100	100	104	99	101	104	102	99	100
Total Yield: 2nd Harvest Year (% of 15.58 t/ha)	100	101	97	101	98	102	100	100	100	101	99	99
Total Yield: Mean (% of 18.31 t/ha)	100	100	99	101	99	103	99	101	102	102	99	100
Total Yield: Year of Sowing (% of 2.75 t/ha)	100	107	100	115	103	105	106	108	102	109	110	106
Conservation: Year 1: Seasonal Growth												
1st Harvest Year: Early Spring Growth (% of 1.94 t/ha)	100	101	101	101	109	103	99	100	102	104	100	96
1st cut (% of 6.61 t/ha)	100	108	105	112	100	109	102	113	103	108	106	106
1st cut D-Value	71.5	70.7	71.9	71.8	71.5	71.2	73.2	70.8	72.8	71.6	72.6	72.1
2nd cut (% of 4.85 t/ha)	100	99	97	95	101	103	94	99	106	101	95	102
2nd cut D-Value	66.5	66.2	67.1	67.6	65.8	66.5	67.7	65.8	66.7	66.0	68.1	66.4
Monthly cuts (% of 7.30 t/ha)	100	92	96	94	96	99	100	92	103	95	95	95
Agronomic Characters												
Ground Cover (1-9, 9=good)	3.6	4.1	3.0	4.2	3.6	3.4	3.2	3.9	2.9	3.8	3.4	3.6
Ground Cover %: 1st Harvest Year	46	44	45	43	43	47	44	49	42	43	46	43
Ground Cover %: 2nd Harvest Year	46	50	41	52	46	44	42	48	40	48	44	46
Winter Hardiness (1-9, 9=good)	7.1	7.0	7.3	7.4	7.1	7.3	7.2	6.6	7.2	7.1	7.3	6.9

	Mean of 6 varieties	Itarzi	Dorike	Udine	Barmega	Hunter	Salome	Kigezi 1	Gemini	Barmultra II	Litonio	Danergo
Disease Resistance												
Ryegrass Mosaic Virus (1-9, 9=good)	5	7	6	[8]	6	6	6	5	5	6	5	5
Mildew (1-9, 9=good)	6	5	5	[8]	5	6	8	6	7	5	7	5
Brown Rust (1-9, 9=good)	6	[6]	3	[8]	5	7	8	[8]	8	[5]	5	7
Crown Rust (1-9, 9=good)	5		[5]		[6]				2		[6]	2
Rhynchosporium (1-9, 9=good)	7	[7]	[7]	[8]	[7]	[7]	[6]	[7]	[7]	[8]	[6]	[7]
Year First Listed		2009	2007	2012	2005	2008	2006	2010	2000	2009	2007	1994
Breeder		DLF Trifolium, Denmark	Euro Grass Breeding, NL	DLF Trifolium, Denmark	Barenbrug, NL	Euro Grass Breeding, Germany	DLF Trifolium, Denmark	DLF Trifolium, Denmark	IVLO	Barenbrug, NL	Euro Grass Breeding, Germany	DLF Trifolium, Denmark
UK Agent		DLF Trifolium Ltd	British Seed Houses Ltd	Limagrain UK Ltd	Barenbrug UK Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	Barenbrug UK Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd
Number of Trials for Yields												
1st Harvest Year		8	7	3	13	8	9	9	11	9	9	29
2nd Harvest Year		12	13	6	12	12	13	12	13	12	12	31
3rd Harvest Year		11	11	6	11	11	10	8	12	11	10	26

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.
 [] = Limited data

Recommended List of Hybrid Ryegrass Varieties 2013/2014

		Diploids			Tetraploids													Festulolium
	Mean of 6 varieties	Pitrol	Barsilo	Holesome	Palmata	Solid	AberEcho	Enduro	Tetragraze	AberExcel	Novial	Drumlin	AberEve	Kirial	Bahial	Amalgam	Scapino	
Recommended List Status		S	G	S	PS	G	G	G	S	G	PG	S	G	PG	G	G	PS	PG
Heading date		20 May	23 May	25 May	7 May	15 May	15 May	17 May	18 May	18 May	18 May	18 May	20 May	21 May	21 May	22 May	22 May	23 May
Conservation: Management																		
Total Yield: 1st Harvest Year (% of 19.62 t/ha)	100	105	106	93	98	96	105	97	95	99	98	94	100	98	97	95	96	103
Total Yield: 2nd Harvest Year (% of 15.03 t/ha)	100	102	98	97	102	99	102	103	102	95	105	101	99	102	104	102	95	102
Total Yield: 3rd Harvest Year (% of 13.92 t/ha)	100	100	98	101	103	100	101	105	101	95	102	100	99	106	101	102	98	100
Total Yield: Mean (% of 16.38 t/ha)	100	102	101	97	101	98	103	101	99	96	101	98	99	102	100	99	96	102
Total Yield: Year of Sowing (% of 2.29 t/ha)	100	91	99	83	87	94	95	101	90	99	105	100	104	[109]	108	97	101	104
Conservation: Year 1: Seasonal Growth																		
1st Harvest Year: Early Spring Growth (% of 1.72 t/ha)	100	111	123	78	102	79	106	96	78	102	98	80	99	91	96	79	101	107
1st cut (% of 6.75 t/ha)	100	96	93	95	98	105	101	99	104	100	104	97	102	100	99	106	98	99
1st cut D-Value	71.6	69.8	72.3	71.6	69.0	70.6	71.9	70.2	70.3	72.0	71.3	71.0	73.1	71.7	71.2	71.3	73.3	71.8
2nd cut (% of 4.20 t/ha)	100	116	111	94	87	90	111	94	91	102	90	87	100	96	92	87	97	112
2nd cut D-Value	70.7	66.4	68.4	69.1	72.8	71.0	71.7	71.2	70.3	69.8	71.2	70.5	71.9	71.6	71.0	70.5	70.0	67.2
Monthly cuts (% of 7.00 t/ha)	100	107	111	95	104	95	106	97	93	96	97	98	98	98	98	94	92	102
Agronomic Characters																		
Ground Cover(1-9, 9=good)	4.1	3.4	3.2	4.5	4.4	4.7	4.2	4.5	4.7	4.0	4.1	4.1	4.0	4.1	4.3	4.8	3.9	3.4
Ground Cover %: 1st Harvest Year	52	52	47	57	50	56	52	54	55	52	52	53	48	52	52	53	48	44
Ground Cover %: 2nd Harvest Year	48	42	43	51	49	53	49	51	51	47	46	48	47	47	48	52	44	41
Ground Cover %: 3rd Harvest Year	48	38	33	53	53	56	48	53	58	46	50	48	46	48	51	58	47	39
Winter Hardiness (1-9, 9=good)	7.2	7.0	7.2	7.2	7.3	7.0	7.2	7.3	7.3	6.9	7.3	6.7	7.3	7.2	7.2	6.9	7.1	7.2

		Diploids			Tetraploids													Festulolium
	Mean of 6 varieties	Pirol	Barsilo	Holesome	Palmata	Solid	AberEcho	Enduro	TetraGraze	AberExcel	Novial	Drumlin	AberEve	Kirial	Bahial	Amalgam	Scapino	AberNiche
Disease Resistance																		
Ryegrass Mosaic Virus (1-9, 9=good)	6	4	4	6	[8]	7	6	6	7	6	7	8	7	[9]	7	7	4	6
Mildew (1-9, 9=good)	7	4	7	7	7	7	6	7	7	8	7	8	8	*	6	7	7	8
Brown Rust (1-9, 9=good)	6	7	3	7	6	9	4	8	8	7	[6]	8	8	[9]	7	[9]	[3]	[8]
Crown Rust (1-9, 9=good)	6	[4]	[7]	[6]		[8]			[8]	[4]			[3]					
Rhynchosporium (1-9, 9=good)	7	[6]	[7]	[8]	[6]	[8]	[6]	[8]	[7]	[7]	[7]	[9]	[7]	[8]	[6]	[8]	[8]	[9]
Year First Listed		2005	1998	2008	2013	1994	2002	2005	2008	1997	2010	2000	2004	2012	2007	2009	2011	2011
Breeder		Steinach, Germany / Euro Grass Breeding	Barenburg, NL	DLF Trifolium, Denmark	ARTS, Swiz / Euro Grass Breeding	DLF Trifolium, Denmark	IBERS, Aberystwyth	R 2n, France	DLF Trifolium, Denmark	IBERS, Aberystwyth	R 2n, France	AFBI, UK	IBERS, Aberystwyth	R 2n, France	R 2n, France	DLF Trifolium, Denmark	DLF Trifolium, Denmark	IBERS, Aberystwyth
UK Agent		British Seed Houses Ltd	Barenburg UK Ltd	DLF Trifolium Ltd	British Seed Houses Ltd	DLF Trifolium Ltd	British Seed Houses Ltd	Lim-agrain UK Ltd	DLF Trifolium Ltd	British Seed Houses Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	British Seed Houses Ltd	RAGT	DLF Trifolium Ltd	Lim-agrain UK Ltd	Lim-agrain UK Ltd	British Seed Houses Ltd
Number of Trials for Yields																		
Year of Sowing		12	9	6	3	19	10	9	6	9	8	11	12	2	6	6	5	5
1st Harvest Year		13	12	12	6	28	13	17	12	11	12	12	13	6	15	11	9	9
2nd Harvest Year		15	12	11	6	24	11	16	11	12	9	11	15	6	13	11	6	6
3rd Harvest Year		13	11	10	6	20	11	12	10	10	6	11	13	6	10	8	6	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. [] = Limited data.

Recommended List of Timothy Varieties 2013/2014

	Mean of 6 varieties	Presto	Comer	Dolina	Promesse	Comtal	Winnetou	Moverdi	Narnia	Motim	Barrett
Recommended List Status		G	G	G	G	G	G	G	G	S	PS
Heading date		8 Jun	9 Jun	9 Jun	10 Jun	10 Jun	11 Jun	12 Jun	16 Jun	17 Jun	20 Jun
Grazing: Management											
Grazing Yield (% of 11.10 t/ha)	100	102	102	102	96	102	97	101	97	96	97
Grazing D-value	7.1	7.5	5.3	6.3	8.1	6.4	8.0	7.8	7.7	7.3	7.4
Grazing: Seasonal Growth											
Early Grazing Yield (% of 1.49 t/ha)	100	114	110	103	91	107	91	94	90	91	99
Spring (% of 2.63 t/ha)	100	109	108	106	93	102	97	100	86	90	92
Early Summer (% of 4.12 t/ha)	100	100	99	101	98	103	97	100	102	101	101
Late Summer (% of 3.12 t/ha)	100	101	101	101	97	102	98	102	98	95	98
Autumn (% of 1.28 t/ha)	100	99	103	100	90	100	96	109	102	91	96
Conservation: Management											
Total Yield: 1st Harvest Year (% of 14.10 t/ha)	100	103	104	100	97	100	100	100	98	98	95
Total Yield: 3rd Harvest Year (% of 12.94 t/ha)	100	103	105	101	95	99	99	99	99	99	99
Total Yield: Mean (% of 13.53 t/ha)	100	103	104	100	96	100	100	100	99	99	97
Conservation: Year 1: Seasonal Growth											
1st Cut (% of 5.16 t/ha)	100	106	108	100	99	100	101	102	84	93	88
1st Cut D-Value	68.0	65.7	66.4	66.6	68.6	67.5	68.9	67.6	72.5	70.6	70.6
2nd Cut (% of 3.59 t/ha)	100	100	99	102	98	98	97	93	114	109	105
2nd Cut D-value	64.9	65.5	64.1	63.2	65.8	64.7	65.1	66.4	64.2	63.3	64.0
3rd Cut (% of 2.84 t/ha)	100	103	104	102	95	97	101	101	98	95	87
4th+ Cut (% of 2.51 t/ha)	100	101	101	97	93	102	100	103	103	97	105

	Mean of 6 varieties	Presto	Comer	Dolina	Promesse	Comtal	Winnetou	Moverdi	Narnia	Motim	Barrett
Agronomic Characters											
Ground Cover (1-9, 9=good)	5.2	5.4	4.9	3.3	6.5	4.9	5.0	3.2	8.6	7.5	6.8
Ground Cover %: 3rd harvest year	52	51	49	44	57	51	54	42	65	63	58
Ground Cover %: Autumn	54	56	54	45	61	51	50	46	72	63	62
Winter Hardiness (1-9, 9=good)	6.9	7.1	7.2	7.1	6.7	6.9	6.5	[6.3]	[7.3]	6.7	
Year First Listed		2005	2001	2003	1990	1989	2003	2005	2008	1974	2012
Breeder		Euro Grass Breeding, NL	IVLO	DLF Trifolium, Denmark	Innoseeds, NL	DLF Trifolium, Denmark	DLF Trifolium, Denmark	DLF Trifolium, Denmark	DLF Trifolium, Denmark	DLF Trifolium, Denmark	AFBI, UK
UK Agent		British Seed Houses Ltd	Limagrain UK Ltd	DLF Trifolium Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	Barenbrug UK Ltd
Number of Trials for Yields											
1st Harvest Year		9	12	10	11	12	10	9	9	22	6
2nd Harvest Year		9	11	9	10	12	9	9	9	23	6
3rd Harvest Year		9	11	9	10	12	9	9	9	23	6

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.

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

[] = limited data.

Recommended List of White Clover Varieties 2013/2014

	Mean of G varieties	AberAce	Galway	Aber S.184	Grasslands Demand	AberPearl	Saracen	AberHerald	Crusader	Iona	Grasslands Bounty	AberConcord	Avoca	AberDai	Buddy	Violin	Katy	Alice	Barblanca	Aran	
Recommended List Status		G	G	G	G	G	PG	G	G	PG	G	G	G	G	PG	G	PG	G	G	G	
Leaf Area (length x breadth mm²)	770	346	516	560	635	679	697	725	727	761	763	774	813	816	829	883	926	1005	1064	1356	
Cutting/Rotational Grazing (light defoliation) : 2nd Harvest Year																					
Total Clover Yield (% of 4.35 t/ha) #	100	75	75	83	85	88	103	106	103	110	100	99	106	116	128	148	126	122	108	143	
Total Yield: Clover & Grass (% of 12.92 t/ha) #	100	96	95	98	98	98	102	99	101	104	101	98	103	103	105	111	102	102	102	105	
% of Clover in Sward	34	27	26	29	29	30	34	36	34	36	34	34	34	38	41	45	42	40	36	46	
Clover Yield: First cut (% of 0.65 t/ha)	100	73	92	80	79	109	106	97	102	127	96	99	114	113	146	125	109	119	99	137	
Clover Yieldt: Last cut (% of 0.42 t/ha)	100	53	61	67	97	65	133	113	126	92	110	96	102	112	99	139	106	128	148	159	
3rd Harvest Year																					
Total Clover Yield (% of 3.76 t/ha) #	100	64	80	71	90	74	99	121	108	118	108	107	104	118	113	122	117	115	122	134	
Total Yield: Clover & Grass (% of 12.37 t/ha) #	100	93	97	96	99	96	104	102	102	103	101	100	105	103	104	107	103	102	101	105	
% of Clover in Sward	31	21	25	22	28	23	29	36	32	35	33	33	30	35	33	35	35	34	37	39	
Clover Yield: First cut (% of 0.49 t/ha)	100	55	75	64	84	76	100	119	116	107	113	113	114	119	110	104	103	118	126	132	
Clover Yieldt: Last cut (% of 0.33 t/ha)	100	57	67	73	94	65	134	130	116	109	108	94	90	117	92	135	85	117	149	156	
Autumn Ground Cover																					
Cutting/ Rotational Grazing	% Cover 1st Harvest Year	48	51	49	51	45	48	47	48	52	47	50	46	50	44	51	55	45	47	50	43
	% Cover 2nd Harvest Year	41	33	30	33	40	38	41	48	45	42	43	42	41	45	45	52	44	45	46	47
	% Cover 3rd Harvest Year	42	31	39	36	42	37	40	51	47	42	46	42	44	42	42	45	44	42	47	43
	Overall (1-9 good)	6.0	3.9	4.5	4.5	5.9	5.1	5.7	7.7	7.0	6.1	6.7	6.1	6.2	6.5	6.5	7.3	6.5	6.4	7.1	6.7
Continuous Grazing (heavy defoliation)	% Cover 1st Harvest Year	55	59	59	61	58	55	53	51	57	59	58	54	59	52	60	58	55	52	52	44
	% Cover 2nd Harvest Year	54	61	59	57	58	58	54	50	54	61	57	49	58	54	59	60	51	51	53	42
	% Cover 3rd Harvest Year	54	63	61	56	58	56	54	49	51	62	56	51	53	54	63	57	50	49	52	43
	Overall (1-9 good)	6.8	8.4	8.0	7.3	7.6	7.3	6.7	5.8	6.5	8.3	7.3	5.9	7.1	6.8	8.2	7.6	6.1	5.9	6.6	4.4

		Mean of G varieties	AberAce	Galway	Aber S.184	Grasslands Demand	AberPearl	Saracen	AberHerald	Crusader	Iona	Grasslands Bounty	AberConcord	Avoca	AberDai	Buddy	Violin	Katy	Alice	Barblanca	Aran
Spring Ground Cover																					
Continuous Grazing (heavy defoliation)	% Cover 1st Harvest Year	36	42	33	38	36	34	34	34	39	36	35	32	41	35	41	30	34	35	35	30
	% Cover 2nd Harvest Year	58	67	61	67	60	61	53	54	55	62	61	54	58	58	67	67	58	56	50	47
	% Cover 3rd Harvest Year	51	59	61	57	54	57	43	48	45	55	56	47	48	52	58	48	44	47	47	40
	Overall (1-9 good)	7.2	8.7	8.4	8.5	7.7	8.1	5.9	6.5	6.2	7.9	8.0	6.4	6.9	7.3	8.7	7.5	6.4	6.5	6.0	5.0
Year First Listed			2001	2005	1969	1994	2004	2011	1994	2002	2011	2003	2001	1993	1997	2013	2009	2012	1985	2001	1981
Breeder			IBERS, Aberystwyth	Teagasc, Eire	IBERS, Aberystwyth	AgResearch Ltd (New Zealand)	IBERS, Aberystwyth	AgResearch Ltd (New Zealand)	IBERS, Aberystwyth	AgResearch Ltd (New Zealand)	Teagasc, Eire	AgResearch Ltd (New Zealand)	IBERS, Aberystwyth	Teagasc, Eire	IBERS, Aberystwyth	Teagasc, Eire	DLF Trifolium, Denmark	AgResearch Ltd (New Zealand)	IBERS, Aberystwyth	AgResearch Ltd (New Zealand)	An Foras Taluntais, Eire
UK Agent			British Seed Houses Ltd	DLF Trifolium Ltd	Barenbrug UK Ltd	Limagrain UK Ltd	British Seed Houses Ltd	Limagrain UK Ltd	British Seed Houses Ltd	Barenbrug UK Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	British Seed Houses Ltd	DLF Trifolium Ltd	British Seed Houses Ltd	DLF Trifolium Ltd	Limagrain UK Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	Barenbrug UK Ltd	British Seed Houses Ltd
Number of Trials for Clover Yields																					
2nd Harvest Year			20	12	12	14	13	6	11	13	6	14	15	13	26	6	7	6	36	15	33
3rd Harvest Year			18	10	10	15	10	5	10	15	5	15	13	12	21	6	6	5	39	14	36

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 Special Use **PG** Provisional General Use Recommendation **PS** Provisional Special Use Recommendation

Descriptive List of Red Clover Varieties 2013/2014

		Diploids					Tetraploids			
	Mean of DL varieties	Lemmon	Merviot	AberClaret	AberChianti	Avisto	Harmonie	Amos	Maro	Atlantis
Conservation: Management										
Total yield: 1st Harvest Year (% of 14.77 t/ha)	100	101	99	101	97	102	92	105	104	100
Total yield: 2nd Harvest Year (% of 12.46 t/ha)	100	102	97	97	102	105	98	99	104	102
Total yield: Mean (% of 13.68 t/ha)	100	101	98	99	99	103	95	102	104	101
Conservation: Year 1: Seasonal Growth										
1st Cut (% of 5.24 t/ha)	100	99	98	99	95	100	96	106	111	100
Protein Content %: 1st Cut	17.6	17.6	18.0	17.0	16.9	16.4	18.8	18.1	17.0	18.3
Agronomic Characters										
Ground Cover %: 1st Harvest Year	58	58	54	60	57	57	61	61	68	63
Ground Cover %: 2nd Harvest Year	54	55	48	54	59	50	67	52	58	63
Year First Listed		2003	1980	2010	2011	2011	2012	2005	2010	2011
Breeder		IVLO	IVLO	IBERS, Aberystwyth	IBERS, Aberystwyth	IVLO	Nord. Pflan	Slechtitelská stanice, The Czech Republic	DLF Trifolium, Denmark	Nord. Pflan
UK Agent		Barenbrug UK Ltd	Limagrain UK Ltd	British Seed Houses Ltd	British Seed Houses Ltd	Barenbrug UK Ltd	LSPB	DLF Trifolium Ltd	Limagrain UK Ltd	LSPB
Number of Trials for Yields										
1st Harvest Year		8	8	3	3	3	2	6	3	3
2nd Harvest Year		6	8	2	2	2	2	7	2	2

Descriptive List of Lucerne Varieties 2013/2014

	Mean of all varieties	Daisy	Diane	Marshall
Conservation: Management				
Total Yield: 1st Harvest Year (% of 11.26 t/ha)	100	102	100	98
Total Yield: 2nd Harvest Year (% of 16.27 t/ha)	100	99	99	102
Total Yield: Mean (% of 13.19 t/ha)	100	101	100	100
Conservation: Year 1: Seasonal Growth				
1st Cut (% of 4.29 t/ha)	100	103	101	96
Protein Content %: 1st Cut	17.2	17.1	17.2	17.1
Agronomic Characters				
Ground Cover %: 1st Harvest Year	53	55	52	51
Ground Cover %: 2nd Harvest Year	34	37	32	34
Year First Listed		2003	2003	2003
Breeder		DLF Trifolium, Denmark	Innoseeds, NL	Limagrain UK Ltd
UK Agent		DLF Trifolium Ltd	DLF Trifolium Ltd	Limagrain UK Ltd
Number of Trials for Yields				
1st Harvest Year		8	8	8
2nd Harvest Year		5	5	5

Descriptive List of Cocksfoot Varieties

2013/2014

	Mean of all varieties	AberTop	Prairial	Sparta	Lidacta
Conservation: Management					
Total Yield: 1st Harvest Year (% of 15.13 t/ha)	100	99	97	101	103
Total Yield: 2nd Harvest Year (% of 14.13 t/ha)	100	95	101	101	103
Total Yield: Mean (% of 14.66 t/ha)	100	97	99	101	103
Conservation: Year 1: Seasonal Growth					
1st cut (Mean = 4.73 t/ha)	100	91	98	104	107
1st cut D-Value	71.1	73.0	69.5	70.4	71.3
2nd cut (Mean = 2.45 t/ha)	100	102	93	101	104
2nd Cut D-Value	70.5	70.5	69.9	70.8	70.7
3rd cut (Mean = 2.87 t/ha)	100	97	99	101	103
4th+ cut (Mean = 5.07 t/ha)	100	105	98	97	100
Agronomic Characters					
Ground Cover (1-9, 9=good)	6.3	6.1	6.3	6.5	6.5
Ground Cover %: 2nd Harvest Year	59.7	58.9	59.5	60.2	60.2
Winter Hardiness (1-9, 9=good)	5.5	6.0	6.0	5.4	4.5
Disease Resistance					
Mildew (1-9, 9=good)	6	6	4	7	7
Mastigosporium (1-9, 9=good)	5	5	5	5	6
Yellow Rust (1-9, 9=good)	6	8	7	3	6
Year First Listed		2003	1970	1982	1991
Breeder		IBERS, Aberystwyth	INRA, France	DLF Trifolium, Denmark	Euro Grass Breeding, Germany
UK Agent		British Seed Houses Ltd	Limagrain UK Ltd	DLF Trifolium Ltd	Euro Grass Bv
Number of Trials for Yields					
1st Harvest Year		9	13	13	13
2nd Harvest Year		7	12	12	12

Note: Yellow rust ratings are based on 3 trials only.

Example Mixtures - may not fit every system

Adapted from an IGER leaflet by Charlie Morgan with comments from IBERS, Limagrain and Barenbrug

Short term ley

Duration

1 - 3 years

Uses

Frequent silage cuts and grazing
Allows herbicide use as no clover sown
Useful arable break

Type	kg/acre
Hybrid ryegrass	8
Intermediate perennial ryegrass	6
TOTAL	14

Notes

For 1-2 year leys, Italian ryegrass (66% diploid and 17% tetraploid) and tetraploid hybrids (17%) could be used instead of PRG if yield more important than quality
Select varieties with similar heading dates
Grass could be reduced by 1 kg each and substituted with 1.5 kg red clover and 0.5 kg white clover (large leaved) to reduce nitrogen requirements and boost protein levels

Short term ley for dry areas

Duration

1 - 2 years

Uses

Frequent silage cuts and grazing
Less need for nitrogen, plus good protein levels

Type	kg/acre
Italian ryegrass	7
Festulolium	7
TOTAL	14

Notes

Festulolium is a cross between IRG or PRG and meadow or tall fescues – developed for better rooting system
Reduce proportion of festulolium if drought risk is low or winters are cold
Add hybrid ryegrass – with 1/3 HRG, 1/3 IRG and 1/3 festulolium
Select varieties with similar heading dates

Red clover ley

Duration

2 - 4 years
(new varieties 4-5 years)

Uses

2-3 silage cuts with aftermath grazing

Type	kg/acre
Hybrid ryegrass (tetraploid)	6
Intermediate perennial ryegrass	4
Red clover	2
TOTAL	12

Notes

Select varieties with similar heading dates
Red clover seed rate could be increased (up to 30%) but be careful about clover dominance, especially in second cut

Medium term cut and graze ley

Duration

5 - 7 years

Uses

1-2 silage cuts and grazing

Type	kg/acre
Intermediate perennial ryegrass	4
Late perennial ryegrass (tetraploid)	3
Late perennial ryegrass (diploid)	5
White clover (medium leaved)	1
TOTAL	13

Notes

Select varieties with similar heading dates
A blend of medium and large leaved white clovers could be used
Persistent hybrids could be included at up to 3 kg per acre and replace some of the PRG
Timothy is optional (up to 1 kg per acre)

Long term grazing ley

Duration

7 years plus

Uses

For intensive grazing with sheep and beef cattle

Type	kg/acre
Intermediate perennial ryegrass	5
Late perennial ryegrass (diploid)	7
Timothy	1
White clover (medium leaved)	1
TOTAL	14

Notes

A blend of small and medium leaved clovers could be used, especially with sheep
All late perennial ryegrasses could be used
0.5 kg of chicory could be added in for sheep grazing
For beef grazing, remove timothy and add more PRG

Long term grazing ley for dry areas

Duration

7 years plus

Uses

For cutting and intensive grazing with sheep and beef cattle in dry areas

Type	kg/acre
Late perennial ryegrass	7.5
Timothy	1
Cocksfoot	2.5
Meadow or Tall Fescue	1.5
White clover (medium leaved)	1
TOTAL	13.5

Notes

A blend of small and medium leaved clovers could be used, especially with sheep
0.5 kg of chicory or herbal mix could be added in

Grass seed order form



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: _____

My Details

Name: _____ Phone: _____

Email: _____

Address: _____

Postcode: _____



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The full List can be found at www.britishgrassland.com

Detailed descriptions of each variety is 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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