Grass and **Clover**

Recommended Varieties for Northern Ireland 2012/13

Department of
Agriculture and
Rural Development
www.dardni.gov.uk

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Recommended Booklet

This booklet provides information on the grass and clover varieties currently recommended by DARD for use in Northern Ireland.

The Agri-Food and Biosciences Institute at the Plant Testing Station in Crossnacreevy conducts these recommended list variety trials on behalf of the Department of Agriculture and Rural Development.

The booklet is designed to act as a variety selection tool for farmers when planning to reseed, as an information source to assist seeds merchants compile and develop their seeds mixtures in response to the latest advances in plant breeding and as a technical document to assist DARD extension staff.

These recommendations are also available on-line at:
www.afbini.gov.uk/recommendedlists

The recommendations are reviewed and published annually.

Acknowledgements
The plant breeders, merchants and maintainers who supplied seed of the varieties tested, are thanked for their assistance.

Cover photograph
Different varieties of perennial ryegrass, sown in plots, in their third year of trials at the Plant Testing Station, AFBI Crossnacreevy.

A large print version of this booklet can be supplied on request.

GRASS AND CLOVER VARIETIES FOR 2012-13

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HOW TO USE THIS BOOKLET

This booklet can be used to provide:

- A quick reference to which varieties are recommended by scanning the name lists in **Summary of Recommended Varieties**.
- A guide to variety performance and classification by examining the main yields in the **Performance Tables for Recommended Varieties**.
- A resource for comparing the seasonal growth patterns of varieties in **'Seasonal Yields' on the Performance Tables for Recommended Varieties**.
- A description of the main agronomic features of varieties in **Indexed Lists of Variety Descriptions.**
- A merchant's reference to breeder and UK agent details as listed in **Key Contacts and Services**.
- As a guide to DARD services and contacts in **Key Contacts and Services**.

Summary of Recommended Varieties

This section lists the names of the recommended grass and clover varieties for 2012/13 and indicates their recommended status.

Recommendation Categories

As varieties progress through the DARD recommended list testing programme and more information is gained on their performance over years, so the varieties can advance through a rising scale of recommended list categories. These recommendation categories are awarded and indicated as follows:

Indicator		Stipulation
'BOLD TYPE'	-	Varieties that have been tested in at least 5 separate trials and found to maintain very high performance levels
'Plain Type'	-	Varieties that may be very high performing but have as yet completed less than 5 separate trials
	-	Varieties which have consistently performed well in 5 or more trials but not with quite as high a performance as the 'Bold Type' varieties
(S)	-	Varieties recommended for a SPECIFIC USE as detailed in the text
(P)	-	Varieties which, as yet, have completed only 3 trials and are PROVISIONALLY RECOMMENDED pending further data (Seed may be in short supply)
(O)	-	Varieties which are BECOMING OUTCLASSED

The following summary table lists all the currently recommended varieties and indicates their current recommended status. Varieties are listed in heading date or leaf size order in each category. (T = Tetraploid)

Recommended Grass and White Clover Varieties 2012/13

Perennial Ryegrass

Early Diploid	Intermediate Diploid		Late Diploid	
(S) **January**	**Solomon**	(S) Bahima 1	**Denver**	(S) **AberChoice**
Donard	**Boyne**	Bree	(S) **AberZest**	Foxtrot
Genesis	**AberStar**	Gandalf	**AberAvon**	(S) Twytop
Moyola	**AberMagic**	Copeland	**Tyrella**	(P) Majestic
Kilrea	Spelga	AberGreen	**Pastour**	(P) Glenveagh
Kimber	Gerrison	(P) Glenariff	**Drumbo**	(P) Clanrye
	(S) AberDart	(O) Betty	**Mateon1**	(O) Portstewart

Early Tetraploid	Intermediate Tetraploid		Late Tetraploid	
AberTorch	**Niagara**	(S) AberGlyn	(S) **Delphin**	Elgon
	Malone	Glenstal	**AberCraigs**	Dundrum
	Trintella	Seagoe	**Twymax**	Navan
	Magician		**AberBite**	Fornido
	Eurostar		**AstonPrincess**	Tivoli
	Dunluce		**Kintyre**	Millennium
	AstonEnergy		**Dunloy**	(P) AberGain
			Glencar	

Italian Ryegrass	Hybrid Ryegrass		Timothy	
			Early	Intermediate
Meribel	**AberEcho (HT)**	AberExcel (HT)	**Presto**	**Narnia**
Meryl	**Ligunda (HD)**	Drumlin (HT)	**Comer**	**Motim**
Dorike (T)	**Pirol (HD)**	Hymer (HT)	**Dolina**	
Hunter (T)		AberEve (HT)	Promesse	Late
Barmultra II (T)		Foyle (HT)	Erecta	(S) **Aber S48**
Fox		Scapino (HT)	Comtal	
Litonio (T)		Barsilo (HD)		
(P) Shakira		(P) Amalgam (HT)		

White Clover				Red Clover	
Small Leaved	Medium Leaved		Large & Very Large Leaved		
AberAce	**Crusader**	AberHerald	**Alice**	**Lemmon**	Gr. Sensation
Gr. Demand	**Gr. Bounty**	Gr. Huia	**Barblanca**	**Atlantis (T)**	Maro (T)
	Avoca	AberVantage	Triffid	**Merviot**	Rotra (T)
	AberDai		Aran	**Amos (T)**	Mercury
	Chieftain			**AberClaret**	Harmonie
				Avisto	

Key: (S) - Specific Use (P) - Provisional (O) - Outclassed (HD, HT) - Hybrid Diploid or Tetraploid
Note: Varieties listed in heading date or leaf size order in each recommendation category.
Red clover is in order of three year average yield.

Testing Procedures

Variety trials are sown annually at the Plant Testing Station, Crossnacreevy in mid-summer, and evaluated over three growing seasons.

Perennial Ryegrass trials are grazed with cattle in the first year and measurements are taken during the second and third years to assess long-term potential. **Perennial Ryegrass** and **Timothy** varieties are assessed under both a simulated rotational grazing management with 320 kg/ha nitrogen applied per annum and under a 3-cut silage management with backend simulated grazing, with 350 kg/ha nitrogen applied per annum.

Hybrid Ryegrass, being best suited to medium-term use, is assessed over three harvest years under a 3-cut silage management with spring and backend simulated grazing, at 425 kg/ha nitrogen applied per annum.

Italian Ryegrass, being best suited to short-term conservation use, is assessed in both first and second harvest years under a silage management with spring plus backend simulated grazing, at 425 kg/ha nitrogen applied per annum.

White Clover, sown with Premium perennial ryegrass, is assessed in the second and third harvest years. Reaction to rotational cattle grazing is assessed using either 50 kg/ha nitrogen applied in spring (Low N) or 200 kg/ha nitrogen applied throughout the season (High N). Yield potential is measured separately in a simulated rotational grazing trial at 'High N'.

Red Clover, normally sown as a high yielding, high protein conservation crop with or without companion perennial or hybrid ryegrasses. It is regarded as a short term ley, normally for three years but not longer than five years.

Key to Performance Tables:

The recommended varieties are grouped into tables according to species and maturity and are listed within each category in order of heading date or leaf size and within red clovers according to the three year average yield.

Therefore, the variety at the top of a list is not necessarily the best.

The parameters recorded in the tables are as follows:

Heading Date: Indicates the relative maturity of varieties, recorded when half of a set of individual indicator plants of each variety produce seed heads in an average season at Crossnacreevy. Dates are about 4-6 days earlier than ear emergence in swards and **are not the date of the first silage cut**.

Leaf Size: Indicates the relative leaf size of clover varieties as a percentage of Grasslands Huia.

Total Yield: Total annual dry matter yields (t/ha DM) as a percentage of the bold type diploid varieties in each table. The tetraploid perennials are expressed as a percentage of the diploid perennial controls and for Italian ryegrasses, yields are given as a percentage of the first year control yield.

Early Spring Growth: The yield in t/ha DM available by the end of March at Crossnacreevy.

Spring Growth: The yield in t/ha DM available by the end of April at Crossnacreevy.

2-Cut Silage Yield: The combined yield from the first two silage cuts as a percentage of the mean of the bold type diploid varieties.

2-Cut Digest Yield: The total yield of digestible material produced in the first two silage cuts.

Grazing Grass Quality: The D-value of leafy grazing swards in August (differences of less than 2% should be treated as not significant).

Sward Density: Assessed at the end of a harvest year on a 0-9 scale of increasing density. Ratings above 6.0 for diploid and 5.0 for tetraploid ryegrasses indicate a high level of persistence.

Grazing Density: Indicates the relative tolerance of white clover to grazing on a 0-9 scale. High values represent good persistence and a potential to proliferate under a suitable management.

The data in the tables are an accumulation from a large over-years data matrix from different trials at Crossnacreevy. The number of years of data representing each variety depends on its stage in the testing programme (see 'Recommended Categories' on page 2).(see 'Recommended Categories' on page 2).

Performance Tables for Recommended Varieties

This section presents, as an over-years average, the main production and sward density or persistency results for varieties.

RECOMMENDED PERENNIAL RYEGRASS VARIETIES

Perennial Ryegrass Maturity Groups:
Perennial ryegrass varieties are grouped into three heading date classes, mainly for ease of management of trials. When comparing varieties for farming use, they are best regarded as existing in a continuum that currently extends from the earliest maturing variety, January, to the latest maturing Twytop.

It is vital to realise that the latest maturing varieties in one group may be of a similar type to the earliest maturing in the next. For example, in terms of maturity, there is a greater difference between the intermediate varieties Solomon and AberGreen (12 days), than between AberGreen and the 'late' variety Denver (1 day). Consequently, the perennial ryegrass varieties have been listed in one table to assist growers to compare across the maturity groups and avoid excluding varieties simply because of their classification label.

Throughout this continuum, however, there is an expected progression of higher spring yields associated with earlier heading dates and the development of secondary mid-season heading being lower the later the maturity. Similarly, the rate of stem development and yield accumulation prior to the first silage cut should show a progressive delay from the earliest to the latest maturing variety. Varieties that outperform these conventions, based on their position in the maturity continuum, can be regarded as elite performers.

Recommendation changes for 2012/13:

There have been no changes to the recommended list status of the early varieties this year.

Thirteen intermediate varieties had their recommended list status changed. In the diploids, one new provisional recommendation, Glenariff, was added to the list. AberGreen and Copeland were moved up from provisional to 'Plain Type' and Bahima 1 was moved up to plain type with an 'S' status. Solomon and Boyne were moved up to 'Bold Type'. Spelga, Bree and Gandalf have moved down from 'Bold Type' to 'Plain Type' and Betty was downgraded to 'outclassed'. Cashel, having been outclassed last year was removed from the list. In the tetraploids, AberGlyn was moved down to 'Plain Type' and Seagoe was moved up from provisional to 'Plain Type'.

Fifteen late varieties had their recommended status changed. In the diploids, two varieties, AberChoice and Tyrella, were upgraded from 'Plain Type' to 'Bold Type' and two new provisional recommendations, Majestic and Clanrye were added. Foxtrot moved down from 'Bold Type' to 'Plain Type' and Portstewart has been downgraded to 'outclassed'. In the tetraploids, two varieties, AstonPrincess and Kintyre, were upgraded to 'Bold Type' status, whereas Glencar and Navan were downgraded from 'Bold Type' to 'Plain Type' status. Dundrum was upgraded from provisional to 'Plain Type' status. Delphin, a 'Bold Type' variety, was given 'S' type status. AberGain has been added as a new provisional recommendation. Diasa had been added as a new provisional last year but will no longer be commercially available and has been removed from the list. Loporello, which was outclassed last year, was also removed from the list.

Diploid Perennial Ryegrass Varieties

These varieties comprise the majority of the seed sold in Northern Ireland either as 'straights' or in mixtures. They are long lived and form swards of good density, giving them a high damage resistance. They are well suited to a wide range of enterprises as the diverse selection of varieties is capable of producing high silage yields or maintaining high grazing outputs throughout the growing season.

	VARIETY	Heading Date	Silage			Grazing		
			Total Yield 16.3*	2-Cut Yield Total 10.4*	2-Cut Yield Digest 7.5*	Total Yield 12.1*	Grass Quality D-Value	Sward Density
			%	%	%	%	%D	(0-9)
(S)	**January**	**7 May**	**100**	**97**	**94**	**97**	**73.0**	**5.9**
	Donard	**7 May**	**98**	**94**	**93**	**101**	**72.5**	**6.2**
	Genesis	**8 May**	**107**	**103**	**100**	**107**	**72.9**	**6.2**
	Moyola	**10 May**	**106**	**101**	**100**	**109**	**72.7**	**6.0**
	Kilrea	**12 May**	**96**	**89**	**93**	**98**	**73.2**	**6.5**
	Kimber	**14 May**	**95**	**92**	**94**	**95**	**73.7**	**6.3**
	Solomon	**16 May**	**103**	**104**	**107**	**100**	**73.3**	**6.4**
	Boyne	**17 May**	**108**	**110**	**108**	**104**	**73.2**	**6.4**
	AberStar	**23 May**	**98**	**97**	**102**	**102**	**75.7**	**6.4**
	AberMagic	**26 May**	**106**	**103**	**101**	**108**	**73.7**	**6.3**
	Denver	**29 May**	**100**	**106**	**102**	**97**	**72.3**	**6.7**
(S)	**AberZest**	**29 May**	**104**	**108**	**98**	**102**	**75.5**	**6.0**
	AberAvon	**31 May**	**98**	**100**	**105**	**99**	**75.2**	**6.2**
	Tyrella	**1 Jun**	**102**	**109**	**101**	**97**	**73.8**	**6.4**
	Pastour	**2 Jun**	**100**	**105**	**110**	**100**	**73.6**	**6.2**
	Drumbo	**3 Jun**	**97**	**99**	**107**	**99**	**75.3**	**6.3**
	Mateon 1	**3 Jun**	**101**	**105**	**106**	**95**	**75.3**	**6.6**
(S)	**AberChoice**	**8 Jun**	**100**	**101**	**107**	**105**	**74.8**	**5.9**
	Spelga	17 May	101	104	99	99	71.6	6.4
	Gerrison	22 May	102	102	103	101	73.0	6.2
(S)	AberDart	22 May	95	96	97	97	76.0	6.7
(S)	Bahima1	22 May	106	109	108	101	71.3	6.0
	Bree	23 May	98	98	97	97	73.2	6.6
	Gandalf	24 May	98	98	97	96	73.6	6.8
	Copeland	26 May	101	99	100	100	72.6	6.6
	AberGreen	28 May	102	98	113	109	74.2	6.5
	Foxtrot	2 Jun	96	99	102	100	74.2	6.3
(S)	Twytop	13 Jun	94	96	99	101	72.9	6.2
(P)	Glenariff	24 May	102	99	106	104	73.2	6.2
(P)	Majestic	28 May	101	104	103	100	73.7	6.6
(P)	Glenveagh	31 May	98	102	103	96	74.2	6.6
(P)	Clanrye	2 Jun	102	105	104	97	73.5	6.3
(O)	Betty	21 May	99	96	98	91	70.4	6.5
(O)	Portstewart	2 Jun	97	99	101	96	72.9	6.1

* = Control yield as average of 'Bold Type' diploid varieties in t/ha DM

Seasonal Yields of Diploid Perennial Ryegrass

The seasonal yield distribution of these varieties shows a progression of increasing early season yields from the latest to the earliest varieties and increasing summer production with later heading. The varieties all undergo the same cycle of simulated rotational grazing cuts with 'Spring' growth up to the end of April, 'Early Summer' growth to the end of July, 'Late Summer' to the end of September and the 'Autumn' period ending in early November. The first silage cuts are normally completed by mid-May for the early, the end of May for the intermediate and during early June for the late varieties. This gives a three to four week spread in most years, which is maintained to the end of the third cut, resulting in different periods of 'Aftermath'.

Seasonal Silage Yields				Seasonal Grazing Yields				
1st Cut 6.9*	2nd Cut 3.5*	3rd Cut 3.5*	Aftermath Grazing 2.4*	Spring 2.5*	Early Summer 4.6*	Late Summer 3.3*	Autumn 1.7*	Maturity Class
%	%	%	%	%	%	%	%	
102	**87**	**103**	**110**	**114**	**90**	**96**	**92**	**Early**
95	**91**	**97**	**118**	**122**	**94**	**97**	**101**	**Early**
106	**99**	**111**	**119**	**131**	**98**	**108**	**100**	**Early**
105	**94**	**109**	**122**	**129**	**97**	**110**	**105**	**Early**
84	**98**	**104**	**114**	**113**	**92**	**96**	**95**	**Early**
88	**98**	**94**	**108**	**109**	**90**	**94**	**93**	**Early**
104	**106**	**105**	**94**	**112**	**97**	**99**	**96**	**Inter**
111	**111**	**102**	**102**	**112**	**101**	**103**	**99**	**Inter**
93	**104**	**97**	**106**	**97**	**104**	**100**	**106**	**Inter**
98	**115**	**113**	**110**	**101**	**107**	**111**	**112**	**Inter**
110	**98**	**95**	**85**	**79**	**107**	**97**	**92**	**Late**
112	**100**	**98**	**96**	**92**	**103**	**104**	**108**	**Late**
104	**95**	**90**	**99**	**84**	**104**	**100**	**105**	**Late**
115	**97**	**92**	**86**	**94**	**99**	**98**	**96**	**Late**
106	**102**	**97**	**86**	**88**	**106**	**101**	**101**	**Late**
96	**106**	**97**	**85**	**85**	**105**	**99**	**102**	**Late**
102	**111**	**96**	**89**	**76**	**103**	**98**	**95**	**Late**
92	**121**	**97**	**94**	**87**	**115**	**105**	**107**	**Late**
106	102	101	86	108	94	100	100	Inter
101	106	103	93	109	98	102	96	Inter
92	101	93	102	97	97	96	98	Inter
112	102	101	102	109	97	103	99	Inter
94	103	103	93	93	99	97	98	Inter
97	102	100	93	95	99	95	93	Inter
96	106	106	100	105	96	101	100	Inter
87	122	106	108	112	106	111	111	Inter
101	96	95	83	83	107	102	101	Late
81	124	91	92	74	113	105	102	Late
101	98	104	102	107	99	106	106	Inter
107	100	98	88	86	106	101	101	Late
104	99	98	84	86	103	97	92	Late
103	110	99	95	78	109	96	95	Late
86	114	111	96	87	97	91	83	Inter
98	103	100	82	80	104	98	93	Late

* = Control yield as average of 'Bold Type' diploid varieties in t/ha DM

Tetraploid Perennial Ryegrass Varieties

These varieties tend to have high sugar contents and a tall upright growth habit that promotes high intakes when grazed. They also contain some of the highest yielding perennial ryegrass varieties. Although equally long lived, they are more open growing than the diploid varieties with which they are normally mixed in order to increase sward density and damage resistance.

	VARIETY	Heading Date	Silage			Grazing		
			Total Yield 16.3*	2-Cut Yield Total 10.4*	2-Cut Yield Digest 7.5*	Total Yield 12.1*	Grass Quality D-Value	Sward Density
			%	%	%	%	%D	(0-9)
	AberTorch(T)	**6 May**	**97**	**95**	**99**	**99**	**74.9**	**5.7**
	Niagara(T)	**16 May**	**103**	**102**	**107**	**100**	**77.2**	**6.3**
	Malone(T)	**17 May**	**110**	**110**	**115**	**103**	**75.6**	**5.3**
	Trintella(T)	**17 May**	**105**	**107**	**113**	**99**	**74.7**	**5.5**
	Magician(T)	**18 May**	**105**	**110**	**114**	**103**	**75.3**	**5.5**
	Eurostar(T)	**23 May**	**105**	**106**	**105**	**102**	**75.1**	**6.0**
	Dunluce(T)	**28 May**	**106**	**104**	**113**	**106**	**75.7**	**5.6**
	AstonEnergy(T)	**30 May**	**103**	**100**	**108**	**105**	**78.0**	**5.4**
(S)	**Delphin(T)**	**31 May**	**106**	**112**	**114**	**102**	**74.9**	**5.1**
	AberCraigs(T)	**1 Jun**	**105**	**112**	**109**	**100**	**77.6**	**5.7**
	Twymax(T)	**4 Jun**	**105**	**110**	**114**	**100**	**74.7**	**6.0**
	AberBite(T)	**4 Jun**	**108**	**112**	**111**	**105**	**77.9**	**5.6**
	AstonPrincess(T)	**4 Jun**	**102**	**107**	**113**	**99**	**76.0**	**6.1**
	Kintyre(T)	**5 Jun**	**105**	**109**	**111**	**102**	**75.5**	**5.7**
	Dunloy(T)	**6 Jun**	**102**	**104**	**109**	**100**	**76.4**	**6.0**
(S)	AberGlyn(T)	17 May	102	108	106	98	73.7	5.6
	Glenstal(T)	18 May	106	110	108	103	73.0	5.7
	Seagoe(T)	20 May	105	107	115	106	73.8	5.4
	Glencar(T)	30 May	105	112	111	98	74.1	5.9
	Elgon(T)	31 May	100	102	105	99	76.6	5.7
	Dundrum(T)	1 Jun	105	111	110	99	76.4	5.5
	Navan(T)	3 Jun	103	104	108	100	76.4	5.5
	Fornido(T)	6 Jun	103	106	107	98	75.9	6.2
	Tivoli(T)	7 Jun	103	106	110	97	76.6	5.6
	Millennium(T)	9 Jun	100	101	100	102	75.5	5.8
(P)	AberGain(T)	3 Jun	111	116	120	111	75.9	5.4

* = Control yield as average of 'Bold Type' diploid varieties in t/ha D

Seasonal Yields of Tetraploid Perennial Ryegrass

The yielding pattern of these varieties shows the same progression of seasonal yields as the diploid varieties. The same cycle of simulated rotational grazing cuts is used, with 'Spring' growth up to the end of April, 'Early Summer' growth to the end of July, 'Late Summer' to the end of September and the 'Autumn' period ending in early November. The same silage system is also used to give a '1ST cut' by mid-May for the early, by the end of May for the intermediate and during early June for the late varieties. This three to four week spread in most years means that the 'Aftermath Grazing' begins in mid-August for the early, late August for the intermediate and early September for the late varieties.

Seasonal Silage Yields				Seasonal Grazing Yields				
1st Cut 6.9*	2nd Cut 3.5*	3rd Cut 3.5*	Aftermath Grazing 2.4*	Spring 2.5*	Early Summer 4.6*	Late Summer 3.3*	Autumn 1.7*	Maturity Class
%	%	%	%	%	%	%	%	
99	**88**	**99**	**104**	**123**	**91**	**95**	**92**	**Early**
101	**107**	**109**	**99**	**108**	**97**	**99**	**99**	**Inter**
110	**111**	**117**	**100**	**120**	**96**	**100**	**99**	**Inter**
107	**108**	**105**	**94**	**110**	**95**	**99**	**93**	**Inter**
110	**111**	**96**	**95**	**112**	**99**	**103**	**97**	**Inter**
106	**107**	**108**	**94**	**109**	**101**	**98**	**99**	**Inter**
93	**127**	**114**	**105**	**104**	**107**	**107**	**104**	**Inter**
90	**121**	**109**	**105**	**99**	**105**	**107**	**104**	**Inter**
114	**109**	**95**	**93**	**99**	**105**	**101**	**101**	**Late**
112	**112**	**98**	**87**	**95**	**104**	**102**	**96**	**Late**
112	**107**	**101**	**88**	**90**	**110**	**98**	**93**	**Late**
109	**117**	**105**	**98**	**88**	**111**	**107**	**112**	**Late**
108	**105**	**96**	**88**	**90**	**108**	**96**	**93**	**Late**
106	**116**	**101**	**93**	**90**	**106**	**102**	**105**	**Late**
100	**112**	**103**	**92**	**87**	**108**	**98**	**100**	**Late**
111	102	97	88	116	94	93	89	Inter
108	113	104	92	112	100	102	98	Inter
105	112	101	101	112	100	111	104	Inter
115	107	97	84	93	102	98	93	Late
106	96	103	81	99	101	98	97	Late
110	113	97	87	82	109	97	99	Late
101	112	111	86	83	104	106	103	Late
104	112	105	87	83	106	100	93	Late
102	116	108	84	85	106	95	97	Late
95	114	99	97	91	108	103	103	Late
116	117	105	101	107	114	114	105	Late

* = Control yield as average of 'Bold Type' diploid varieties in t/ha D

Recommended Hybrid Ryegrass Varieties

Hybrid Ryegrass Types:

Hybrid ryegrass varieties are a cross between perennial and Italian ryegrass and some strongly express the perennial or Italian parentage. 'Italian-like' hybrids have the highest yields but lowest sward densities, whereas 'perennial-like' hybrids are expected to live longer, potentially up to five years if carefully managed. Varieties achieving both high yield and density can be regarded as elite performers.

Recommendation changes for 2012/13:

Two hybrid ryegrass varieties have had their recommended list status changed this year. Amalgam (HT) has been added to the list as a new provisional and Scapino has been moved up from provisional to 'Plain Type'.

	VARIETY	Heading Date	Silage Yields			Sward Density
			1st Year 19.7*	2nd Year 17.7*	3rd Year 16.9*	
			%	%	%	(0-9)
	AberEcho(HT)	**13 May**	**99**	**98**	**98**	**5.0**
	Ligunda(HD)	**17 May**	**101**	**102**	**101**	**4.7**
	Pirol(HD)	**18 May**	**100**	**100**	**101**	**5.3**
	AberExcel(HT)	17 May	91	89	91	4.9
	Drumlin(HT)	17 May	91	89	91	5.0
	Hymer(HT)	19 May	92	94	93	4.6
	AberEve(HT)	19 May	94	93	94	5.0
	Foyle(HT)	20 May	90	90	90	5.0
	Scapino(HT)	21 May	94	92	95	4.9
	Barsilo(HD)	22 May	96	96	95	4.6
(P)	Amalgam(HT)	21 May	90	89	90	5.6

* = Average yield of 'Bold Type' varieties in t/ha DM (HD, HT) Hybrid diploid or tetraploid

Seasonal Yields of Hybrid Ryegrass

The seasonal yield distribution of these varieties is strongly influenced by the differing seasonal growth characteristics of their Italian and perennial parentage. The very high early spring performance of some varieties by the end of March is an Italian ryegrass derived feature. All these varieties continue growing strongly after the two silage cuts are completed by mid-July, to provide substantial aftermath outputs.

VARIETY	Seasonal Yields			
	Spring Grazing 2.0*	1st Cut Silage 5.5*	2nd Cut Silage 4.1*	Aftermath Grazing 6.4*
	%	%	%	%
AberEcho(HT)	**99**	**107**	**90**	**97**
Ligunda(HD)	**103**	**96**	**103**	**103**
Pirol(HD)	**98**	**97**	**107**	**100**
AberExcel(HT)	81	102	82	88
Drumlin(HT)	64	110	75	91
Hymer(HT)	86	107	82	91
AberEve(HT)	75	104	85	95
Foyle(HT)	57	108	77	93
Scapino(HT)	88	110	79	92
Barsilo(HD)	88	90	98	102
Amalgam(HT)	69	106	79	88

* = Average yield of 'Bold Type' varieties in t/ha DM (HD, HT) Hybrid diploid or tetraploid

Recommended Italian Ryegrass Varieties

Italian Ryegrass Performance:

Italian ryegrass is the highest yielding of all recommended grasses but is short lived and best utilized for silage. Higher density varieties may be more damage resistant but none form dense soles. Second year yields are shown as a percentage of the first year control yield, to highlight the difference in annual outputs.

Recommendation changes for 2012/13:

Two Italian ryegrass varieties had their recommended list status changed this year. Shakira has been added as a new provisional and Ligrande, having been outclassed last year, was removed from the list.

	VARIETY	Heading Date	Silage Yields		Early Spring Growth	Sward Density
			1st Year 20.3*	2nd Year 20.3*		
			%	%	(t/ha DM)	(0-9)
	Meribel	**17 May**	**100**	**90**	**2.1**	**4.9**
	Meryl	**20 May**	**100**	**91**	**2.3**	**4.8**
	Dorike(T)	14 May	100	88	2.3	4.3
	Hunter(T)	15 May	99	90	2.3	4.4
	Barmultra II(T)	16 May	100	89	2.3	4.3
	Fox	17 May	99	90	2.3	4.7
	Litonio(T)	18 May	99	88	2.2	4.5
(P)	Shakira	14 May	103	87	2.4	4.4

* = Average first year yield of 'Bold Type' varieties in t/ha DM

Seasonal Yields of Italian Ryegrass

The seasonal yield distribution of these varieties comprises a very high output by the end of March ('Spring Grazing') followed by two excellent yielding silage cuts, completed by mid-July, to leave the option of further cuts or a very substantial aftermath grazing performance as indicated below.

VARIETY	Spring Grazing 2.2*	Seasonal Yields		Aftermath Grazing 7.2*
		1st Cut Silage 5.6*	2nd Cut Silage 4.4*	
	%	%	%	%
Meribel	**96**	**100**	**101**	**100**
Meryl	**104**	**100**	**99**	**100**
Dorike(T)	102	106	96	93
Hunter(T)	104	102	101	93
Barmultra II(T)	105	107	96	93
Fox	102	103	96	95
Litonio(T)	99	101	96	95
Shakira	111	107	102	94

* = Average yield of 'Bold Type' varieties in t/ha DM

Recommended Timothy Varieties

Timothy Maturity Types:

The overall yield potential of Timothy is less than perennial ryegrass but can be more productive in cold springs or can maintain density and growth on heavy, less fertile soils. 'EARLY' maturing varieties are generally erect and highly productive in spring and 'LATER' maturing varieties are more dense growing pasture-types.

Recommendation changes for 2012/13:

One variety, Narnia, has had its recommended list status changed this year as it has moved up from 'Plain Type' to 'Bold Type'.

	VARIETY	Heading Date	Silage		Grazing		Maturity Class
			Total Yield 14.3*	2-Cut Silage 9.0*	Total Yield 11.7*	Sward Density	
		%	%	%	%	(0-9)	
	Presto	**8 Jun**	**102**	**100**	**103**	**5.5**	**Early**
	Comer	**9 Jun**	**105**	**105**	**104**	**5.4**	**Early**
	Dolina	**9 Jun**	**103**	**101**	**104**	**5.5**	**Early**
	Narnia	**16 Jun**	**101**	**101**	**98**	**7.0**	**Inter**
	Motim	**17 Jun**	**97**	**99**	**99**	**6.1**	**Inter**
(S)	**Aber S 48**	**23 Jun**	**93**	**96**	**90**	**7.0**	**Late**
	Promesse	10 Jun	92	88	97	5.8	Early
	Erecta	10 Jun	95	92	100	5.4	Early
	Comtal	10 Jun	94	90	101	5.2	Early

* = Average yield of 'Bold Type' varieties in t/ha DM

Seasonal Yields of Timothy

There is normally a sharp distinction between the early season performance of early Timothy varieties and the summer production of the late varieties, particularly under a silage management. The grazing and silage systems used on all these varieties were as used for the intermediate perennial ryegrasses.

	VARIETY	Seasonal Silage Yields				Seasonal Grazing Yields			
		1st Cut 5.5*	2nd Cut 3.5*	3rd Cut 3.1*	Autumn Grazing 2.2*	Spring 2.7*	Early Summer 4.3*	Late Summer 3.5*	Autumn 1.2*
		%	%	%	%	%	%	%	%
	Presto	**111**	**82**	**109**	**100**	**114**	**96**	**102**	**100**
	Comer	**113**	**92**	**109**	**99**	**119**	**93**	**105**	**106**
	Dolina	**108**	**89**	**113**	**97**	**116**	**98**	**104**	**103**
	Narnia	**89**	**119**	**96**	**105**	**90**	**100**	**101**	**107**
	Motim	**96**	**103**	**95**	**97**	**99**	**100**	**99**	**99**
(S)	**Aber S 48**	**72**	**134**	**74**	**107**	**53**	**113**	**90**	**93**
	Promesse	99	71	96	97	99	99	97	91
	Erecta	101	78	106	96	105	96	102	98
	Comtal	101	73	99	101	105	97	101	104

* = Average yield of 'Bold Type' varieties in t/ha DM

Recommended White Clover Varieties

White Clover Leaf Classification:

As variety leaf size increases yield should rise and grazing persistence decrease. Large leaved varieties tend to be the most tolerant of tall grass stands but least tolerant of close defoliation. Varieties achieving yield and persistency above the expected leaf size trend are elite performers.

Recommendation changes for 2012/13:

All varieties remained with the same recommended list status.

VARIETY	Relative leaf size (% Huia)	Grazing Yield Potential			Grazing Persistence	
		Total 12.8*	Clover 4.2*	Grass 8.6*	Low N	High N
	%	%	%	%	(0-9)	(0-9)
AberAce	**42**	**90**	**61**	**105**	**6.3**	**4.4**
Grasslands Demand	**81**	**98**	**86**	**103**	**6.2**	**4.9**
Crusader	**93**	**100**	**97**	**101**	**5.8**	**5.0**
Grasslands Bounty	**98**	**101**	**99**	**101**	**5.8**	**4.6**
Avoca	**101**	**102**	**103**	**102**	**6.0**	**5.0**
AberDai	**105**	**101**	**108**	**97**	**5.5**	**4.6**
Chieftain	**113**	**103**	**117**	**96**	**5.3**	**4.5**
Alice	**131**	**103**	**114**	**97**	**5.1**	**4.2**
Barblanca	**135**	**103**	**115**	**97**	**5.6**	**4.6**
AberHerald	95	100	104	98	5.1	4.4
Grasslands Huia	100	98	87	104	5.8	4.6
AberVantage	106	102	103	102	5.2	3.7
Triffid	136	101	104	99	5.2	4.0
Aran	171	102	121	93	4.4	3.4

* = Average yield of 'Bold Type' varieties in t/ha DM

Production and Sward Content of White Clover

Total yield (grass + clover) of grass/clover swards depends on the clover contributing nitrogen to enhance grass growth, but the nutritional value of the sward is enhanced by higher clover contents. All clovers were grown with Premium (perennial ryegrass) at 250 kg/ha N.

VARIETY	Clover Content	Seasonal Clover Yields				Leaf Size Class
		Spring 0.5*	Early Summer 1.3*	Late Summer 1.5*	Autumn 0.9*	
	%	%	%	%	%	
AberAce	**23**	**55**	**80**	**70**	**45**	**Small**
Gr. Demand	**30**	**82**	**85**	**89**	**81**	**Small**
Crusader	**32**	**123**	**91**	**90**	**114**	**Medium**
Gr. Bounty	**33**	**116**	**96**	**97**	**99**	**Medium**
Avoca	**33**	**91**	**103**	**104**	**110**	**Medium**
AberDai	**36**	**104**	**113**	**110**	**99**	**Medium**
Chieftain	**38**	**113**	**115**	**120**	**120**	**Medium**
Alice	**37**	**109**	**113**	**118**	**107**	**Large**
Barblanca	**37**	**107**	**103**	**101**	**125**	**Large**
AberHerald	35	89	103	111	100	Medium
Gr. Huia	29	77	86	93	79	Medium
AberVantage	33	104	100	106	99	Medium
Triffid	34	118	109	106	108	V. Large
Aran	39	110	110	126	136	V. Large

* = Average yield of 'Bold Type' varieties in t/ha DM

Recommended Red Clover Varieties

Red Clover Classification:

These yields were achieved without nitrogen fertiliser, but required up to 100 -150kg/ha of phosphate (P_2O_5) and 250-300kg/ha potash (K_2O) (depending on soil indices). In comparison, the top yielding (Italian-type) hybrid ryegrass varieties can produce up to 20, 18 and 17 t/ha DM in the first, second and third harvest years, respectively, but require over 400 kg/ha of nitrogen per annum. Similarly, recommended perennial ryegrass varieties, given 350 kg/ha nitrogen, produce total silage yields of around 17 t/ha DM in their first harvest year, falling to around 15 t/ha DM by the third year. Red clover will perform best on well-drained, fertile soils with a pH of 6.0–6.5 and supplies its own nitrogen. Ewes are kept off red clover for 6 weeks either side of "tupping".

The varieties are listed in order of three year average yield within a 'Bold Type' group and a 'Plain Type' group.

VARIETY	Three Year Average		Harvest Year 1		Harvest Year 2		Harvest Year 3	
	DM Yield 17.5	Rel. Pers.	DM Yield 19.0	Rel. Pers.	DM Yield 18.2	Rel. Pers.	DM Yield 15.2	Rel. Pers.
	%	(0-9)	%	(0-9)	%	(0-9)	%	(0-9)
Lemmon	**102**	**4.4**	**100**	**5.1**	**98**	**4.3**	**108**	**3.8**
Atlantis (T)	**102**	**4.4**	**104**	**4.6**	**100**	**4.3**	**101**	**4.4**
Merviot	**100**	**4.3**	**99**	**4.9**	**100**	**4.2**	**102**	**3.7**
Amos (T)	**99**	**4.0**	**101**	**4.1**	**100**	**3.8**	**97**	**4.2**
AberClaret	**98**	**4.9**	**94**	**5.4**	**104**	**4.7**	**95**	**4.6**
Avisto	**98**	**4.5**	**98**	**4.6**	**102**	**4.5**	**94**	**4.6**
Gr. Sensation	100	3.8	94	4.1	99	3.8	108	3.6
Maro (T)	99	3.7	98	3.6	97	3.6	101	3.8
Rotra (T)	98	3.7	95	4.3	96	3.3	106	3.4
Mercury	96	4.1	95	4.6	96	3.9	97	3.8
Harmonie	92	4.6	92	4.8	93	4.4	91	4.7

* = Control yield as average of 'Bold Type' diploid varieties in t/ha DM

Rel. Pers. = Relative Persistence (0-9 high)

Indexed Lists of Variety Descriptions

This section provides outline descriptions of the main agronomic features of each variety.

Varieties are listed in alphabetical order within each category

Variety Descriptions:
Variety descriptions provide an overview of the main agronomic characteristics of each variety, highlighting the main strengths and specific uses as appropriate. These overall performance descriptions should assist farmers and grassland specialists compare varieties and select those that best suit a particular enterprise. By referring back to the preceding tables, varieties that are flexible and multipurpose and those that tend to optimise performance when grazed or ensiled can be identified and the performance potential of seeds mixtures containing these varieties can be assessed.

Diploid Perennial Ryegrass

Early Diploids

Donard Very high total grazing and good silage yields, with excellent spring and autumn production and exceptional aftermath growth, from erect swards.

Genesis This variety provides extremely high total silage and total grazing yields, has the highest spring yields of all varieties as well as very high production after the second silage cut.

January (S) Specifically recommended for its very high silage yields with a large early first cut followed by a high autumn or aftermath growth. It also has excellent spring grazing yields.

Kilrea Although a late maturing member of the early group, it provides very high spring grazing yields and creates good grass quality from swards of a high grazing density. Silage productivity is notably high in the second and third cuts, followed by an impressive aftermath performance.

Kimber At the very late end of the early group, it produces high second cut silage yields. It will also deliver very high spring grazing yields and maintain a very high grazing grass quality for an early diploid.

Moyola This variety has similarly very high total silage and grazing yields. It has extremely high spring yields, excellent aftermath grazing and if required delivers a high third silage cut from erect growing swards.

Intermediate Diploids

AberDart (S) Specifically recommended for producing good annual grazing yields of very high quality grass at a high sugar content for a diploid. It has a similarly high grazing production ranking throughout the growing season and forms erect but dense swards.

AberGreen This variety has very high grazing yields and an exceptionally high 2-cut digestible yield driven by a very high second cut.

AberMagic This variety has impressively high total grazing and silage yields, plus superb production across the main summer months and into the autumn, under both management systems.

AberStar Capable of producing notably high grazing yields throughout the summer/autumn season at a high digestibility, high sugar level. It also delivers high digestible yields over the first two silage cuts and has an erect growth habit.

Bahima 1 (S) Specifically recommended for it produces very high total silage yields, a high 2-cut digestible yield and has an excellent first cut silage yield, plus spring growth is high for an erect growing intermediate variety.

Betty (O) Produces high total annual silage yields with high second and if required third silage cuts. Total grazing yields, grass quality and the early summer growth are only moderate to low and the variety is now outclassed.

Boyne This variety has exceptionally high total and two-cut silage yields, which are driven by an impressively high first cut. Total grazing yields are also extremely high, most notably in spring, are of high quality and are delivered from dense growing swards.

Bree Produces high annual grazing yields, especially in the main summer growing period; high total annual and 2-cut digestible silage yields, and has an erect though dense growth habit.

Copeland This variety produces similarly high silage and grazing yields. It forms dense grazing swards that are very highly productive in spring and from late summer to the end of the growing season.

Gandalf High two-cut silage yields boosted by its second cut performance, plus good grazing production that is maintained through the summer from very dense grazing swards.

Gerrison This variety has high silage yields that deliver notably high two-cut digestible yields. It delivers very high grazing production in spring and from late summer to the end of the growing season.

Glenariff (P) A new provisional recommendation with similarly high silage and grazing yields. It forms dense grazing swards that are very highly productive in spring and from late summer to the end of the growing season.

Solomon A variety with remarkably high 2-cut digestible yields that is still capable of a very high third cut, if required. Its high grazing yields comprise uncharacteristically high spring yields for its maturity, followed by a consistently strong performance to the end of the grazing season.

Spelga An early member of the intermediate group with notably high silage yields, featuring a very high first cut performance and an erect growth habit, plus high grazing yields in spring and for later season grazing.

Late Diploids

AberAvon Its high annual grazing yield at a very high digestibility level and high sugar content reaches optimal production during early summer to autumn. Its high silage yields are enhanced by its high quality characteristic giving excellent 2-cut digestible yields from an erect open growth habit.

AberChoice (S) This variety delivers excellently high 2-cut digestible silage yields, driven by a very high second cut. Its total grazing yields are similarly excellent, providing high quantities of highly digestible grass from early summer. Its open growth makes it specifically recommended for use on drier ground or mixed with dense diploids.

AberZest (S) Produces very high total silage yields particularly in the first two cuts plus a high grazing yield and digestibility with excellent late summer and autumn growth. Specifically recommended for mixtures that balance its open growth habit.

Clanrye (P) This new provisional recommendation combines an excellent 2 cut digestible yield with a high grazing yield especially in early summer from erect growing swards.

Denver Produces very high 2-cut total and digestible silage yields. Grazing performance is best during the main summer growing period and forms swards of good density.

Drumbo This variety provides impressively high 2-cut digestible silage yields and high total grazing yields of highly digestible grass. It also offers a high third silage cut, if required, and as a late variety has its highest seasonal grazing performance from early summer onwards.

Foxtrot A high yielding diploid variety when grazed, with a high grazing digestibility, and is particularly productive during the main summer growth period. Produces very good 2-cut digestible silage yields and forms tall erect growing swards.

Glenveagh (P) This provisional recommendation gives high 2-cut digestible silage yields, shows good digestibility from grazed swards that peak in production during the main summer periods, and maintains a high level of sward density.

Majestic (P) This new provisional variety produces high total and grazing yields, a very high 2 cut digestible yield and its dense swards maintain excellent grazing performance from early summer into autumn.

Mateon 1 Produces high total silage yields that are at their greatest during the first two highly digestible silage cuts. It also produces excellent quality grazing grass from dense swards, that peak in production during the main summer growing periods.

Pastour Forms erect swards and delivers high silage yields that become extremely high when digestible yield in the first two silage cuts is measured. Its high total annual grazing yields are strongest during the main summer growth period, which is typical of a late maturing variety.

Portstewart (O) Forms erect silage swards, produces a high 2-cut digestible yield, provides good total annual grazing yields but has now become outclassed.

Twytop (S) This, the latest maturing diploid variety, is specifically recommended on account of its excellent grazing yields and superior summer production. Also very valuable for contributing to the second silage cutting cycle.

Tyrella Has high total annual silage yields with an exceptional first cut silage yield for a late maturing variety and may benefit from earlier cutting to raise the 2-cut digestible yield. Its high annual grazing yields are distributed relatively evenly across the growing season and it has a sward density typical of a dual-purpose type variety.

Tetraploid Perennial Ryegrass

Early Tetraploids

AberTorch A very early heading variety with an erect open growth habit and extremely high spring grazing yields at a high grazing digestibility with excellent aftermath grazing.

Intermediate Tetraploids

AberGlyn (S) Produces excellent silage yields comprising of an enormous first cut, and it has a good grazing yield supplemented by an impressive spring performance.

AstonEnergy Produces excellent grazing yields of impressively high quality herbage and this high quality characteristic is also apparent in the very high 2-cut digestible silage yields. Second cut silage yield is very high plus excellent aftermath and late summer growth.

Dunluce Creates a very high total grazing yield on the list, has a very high silage production outputs, retains its high productivity potential late into the season and maintains a high herbage quality in both management systems.

Eurostar A very dense variety for a tetraploid, with large annual and spring grazing yields and high silage production in all categories. Silage production is very high and consistent across all three silage cuts plus it has good herbage quality characteristics.

Glenstal Excellent production of a large 2-cut bulk of grass for silage or very high total grazing yields, though digestibility levels offset some of this advantage. Typical of its maturity, grazing yields are particularly high in spring and it has a classic tetraploid sward structure.

Magician High total silage yields that are enhanced greatly when digestibility over two cuts is considered. Grazing yield is also high in combination with good grazing quality and very high spring growth, from classically erect tetraploid swards.

Malone Impressively high silage productivity in all categories from the classically tall open tetraploid-type swards. The high grazing yields comprise excellent spring growth, with high performance in late summer and a high grass D-value.

Niagara The high silage productivity is enhanced when 2-cut digestible yield is calculated. The good grazing yields comprise of very high quality herbage from impressively dense swards for a tetraploid.

Seagoe This variety produces an extremely high 2-cut digestible silage yield and a very high total grazing yield of good quality grass with excellent spring growth.

Trintella Produces impressively high 2-cut total and digestible silage yields from typical tall open tetraploid-type swards. The good grazing yields of good quality grass include notably high spring yields typical of an earlier member of the intermediate maturing varieties.

Late Tetraploids

AberBite This variety has impressively high total and 2-cut silage yields that continue to bulk into the third cut. Grazing quality is superbly high, with excellent total yields that are delivered most strongly from early summer to an extended high autumn productivity.

AberCraigs Excellent 2-cut silage total and digestible yields plus a good sward density for its type. Grazing output is maintained at a high level throughout the main summer growing period, with an impressively high grass quality.

AberGain (P) A new tetraploid provisional variety which produces the highest total grazing yield, highest total silage yield and highest 2 cut digestible yield of any variety on the list.

AstonPrincess This late maturing variety produces excellently high 2-cut digestible silage yields from swards of high density for a tetraploid. Grazing production is also high particularly in early summer.

Delphin (S) One of the highest yielding late tetraploid varieties for silage in all categories and very high 2 cut digestibility, plus a high grazing performance. It gives its strongest grazing performances in mid-season and forms tall erect open tetraploid swards.

Dundrum This variety has an excellent 2-cut silage yield, that is maintained when herbage digestibility is measured. It also maintains an impressively high grass quality for grazing combined with a notably high early summer grazing yield.

Dunloy This variety has excellent 2-cut digestible yields that comprise an impressively high second cut and, if required, high third cut. The very dense grazing swards, for a tetraploid, have high grazing digestibility and are at their highest productivity levels in early summer.

Elgon Produces strong total annual grazing and silage yields which are enhanced by its high grass quality characteristics. This maintains its high 2-cut silage yield when digestible yield is measured and gives it a high grazing D-value from a classical bold tetraploid sward structure.

Fornido This variety has a consistently high yielding silage performance in the 'total', '2-cut' and '2-cut digestible' categories. It also forms highly dense swards for a tetraploid and gives its strongest grazing performances during the main summer growth period.

Glencar One of the highest total silage yielding varieties for 2-cut bulk yield. It also has high grazing yields throughout the summer from swards of a good density. Such excellent high productivity is partially offset when digestibility is considered.

Kintyre A variety with excellent 2-cut silage performances, which will continue to a high third cut, if required. The good grazing yields are at their strongest after spring is over with particularly good autumn productivity for extending the grazing season.

Millennium This, the latest maturing tetraploid variety, forms high density swards for a tetraploid, delivers similarly good silage yields in all categories, with an excellent summer grazing performance and a high total season grazing yield.

Navan High yielding under both sward managements, it maintains its high productivity across all three silage cuts. Grazing performance is at an optimum during the main summer season and into the autumn while the grass quality is maintained at a very high D-value.

Tivoli The generally good total silage yield is greatly enhanced by its quality of production to give an excellent 2-cut digestible yield. The quality of the grazing grass is also high with productivity maintained through summer from a typically bold growing tetraploid-type sward.

Twymax Another variety with very high 2-cut digestible silage yields that are similarly highly performing in both cuts. Grazing yields are high, particularly in early summer and forms very dense swards for a tetraploid.

Hybrid Ryegrass

AberEcho (HT) Produces high total yields consistently over three years with a spring growth and first silage cut performance typical of an 'Italian type' hybrid, yet develops a good sward density similar to the 'perennial type' hybrids.

AberEve (HT) This variety has a dense sward typical of a perennial-type hybrid, average total annual yields plus a strong first cut yield all typical of a balanced Italian-perennial combination.

AberExcel (HT) Has performance characteristics typical of a 'perennial-type' hybrid having a high sward density relative to its yield performance, though with a good first cut of silage for its type.

Amalgam (HT) (P) This new provisional recommendation has a perennial type growth habit forming dense swards, average total annual yields and a strong first cut of silage.

Barsilo (HD) A diploid variety and the latest maturing of all the recommended hybrids. It provides good total annual yields in all harvest years, seasonal yields distributed towards excellent late season outputs and has an open 'Italian-type' sward structure.

Drumlin (HT) A very 'perennial-type' variety that has a sward structure similar to a perennial tetraploid and a lower tendency to produce secondary seed heads than the 'Italian-types'. It is slow to awaken in spring but produces one of the highest first cut silage yields.

Foyle (HT) Another particularly 'perennial-type' recommendation that has very similar characteristics to Drumlin, being slow in spring, highly productive at the first silage cut and giving a good sward structure and reduced mid-season heading.

Hymer (HT) Produces good total yields and retains its performance relative to other varieties in the second and third years from swards that are more typical of an 'Italian-type hybrid.

Ligunda (HD) This diploid 'Italian-type' hybrid ryegrass has the typical open bold growth habit, yet maintains excellently high yields into the third year and features exceptional spring, second cut and autumn productivity.

Pirol (HD) This diploid variety produces exceptionally high total yields in all three harvest years, yet is also very dense. Seasonal performance comprises of high spring vigour and strongest silage performance delivered in the second cut.

Scapino (HT) This variety produces high total yields and a good sward density relative to other perennial-type varieties and also has an excellent first cut silage yield.

Italian Ryegrass

Barmultra II (T) This recommendation is for a variety with first and second year yields similar to Meribel but with a higher early spring growth and an exceptionally high first silage cut. The sward density is typical of a tetraploid variety.

Dorike (T) Among the highest yielding 'Plain-type' varieties for first and second year total silage yields, it has an exceptional first cut silage yield and an open sward density typical of a tetraploid Italian ryegrass.

Fox This variety is one of the highest performing diploid varieties in the 'Plain-type' classification. Its spring growth and density are similar to the best of the other 'Plain-types', but with a notably high first cut silage yield and high total annual yields in both years.

Hunter (T) Good spring grazing and first and second year yields typical of other tetraploids, it also has a high sward density for a tetraploid variety.

Litonio (T) This variety has a first year yield, plus a first silage cut similar to the 'Bold-Types' and is very dense for a tetraploid. Its other performance figures are more typical of the performance levels of the other 'Plain-Type' varieties.

Meribel One of the more dense Italian ryegrasses with a high yield ranking in both harvest years. Seasonal production is distributed more towards the latter part of the growing season.

Meryl Produces very high first harvest year and second harvest year total annual yield results, plus very good spring yields, followed by a consistently high performance throughout the year, from swards of a good density.

Shakira (P) A new provisional recommendation, this diploid produces the highest first year yield of any grass on the list and maintains exceptionally high spring grazing and first cut silage yields.

Timothy

Early

Comer Notably high total annual grazing and silage yields, produces very high spring grazing yields and excellent 2-cut silage yields from swards of a typical erect type for an early Timothy.

Comtal Delivers high total annual yields under the grazing management from erect growing swards. Seasonal grazing growth is best in spring and again towards late summer and autumn. First and third silage cuts produce high yields and there is a high aftermath grazing in autumn.

Dolina Creates a high combination of grazing and silage yields. It has a sward structure similar to Comer and its seasonal grazing yield distribution remains very high throughout most of the growing year.

Erecta A reliable variety for many years, it is capable of achieving good yield performances for grazing production from erect growing swards. Silage and grazing production peaks in spring and again in the late summer period.

Presto A consistently high yielding variety under both management systems, it forms swards of a higher density than most other early varieties and its spring grazing yield performance is also very high.

Promesse Forms swards of a very high density for an early maturing variety, produces good grazing yields that are most productive during the spring and early summer.

Intermediate & Late

Aberystwyth S48 (S) A specialist very late maturing variety, with very dense prostrate growth, that provides average annual yields but displays an excellent early summer grazing performance and a very high second silage cut and high aftermath grazing.

Motim An intermediate maturing variety that achieves good annual yields under both management systems and forms a compact dense sward. Seasonal grazing yields feature a consistently high performance throughout and high second cut silage productivity.

Narnia Similar in maturity to Motim, but with a much higher silage yield performance, including an exceptional second cut productivity. It has similar grazing yields to Motim, though with greater productivity in the late grazing season plus a sward density equal to Aber S48.

White Clover

Small Leaved

AberAce The smallest recommended variety, it has very high grazing persistency at low nitrogen levels and while having the low yield potential expected of such a very small clover variety, it supports a high grass yield.

Grasslands Demand With a leaf size at the upper end of the small group, it produces a predictably excellent grazing persistency at low nitrogen levels and a higher than expected performance at high-N plus good yields for its leaf size.

Medium Leaved:

AberDai Produces very high clover yields, is at its most vigorous in the main summer periods and maintains a good persistency rating for its leaf size.

AberHerald Its good clover yield performance supports a good overall sward production, maintains good clover persistence and retains high clover content throughout the season but particularly in late summer period.

AberVantage Achieves a high output of grass and clover and a similarly high total sward output, supported by a good clover content and good grazing persistence, though survives best when applied nitrogen levels are low.

Avoca This variety has a very high grazing persistency for its leaf size. Given its medium leaf size, it also has high clover and total herbage yields, plus it maintains a high clover content in the grazing diet.

Chieftain Production results comprising the highest clover yield total yield and overall clover content in the medium group. Clover persistency scores are consistent with its leaf size.

Crusader This variety produces very high yields with a dense, highly persistent growth under both nitrogen levels plus an exceptional spring vigour for a medium-leaf variety.

Grasslands Bounty This variety supports very high grass yields and also high total yields of grass and clover. It has good persistency for its leaf size and has good spring productivity.

Grasslands Huia Known as 'New Zealand White Clover', it produces moderate clover yields but supports a good grass yield with a good grazing persistence.

Large Leaved

Alice Produces high total sward and excellent clover yields, which are maintained at a high level throughout the growing season. It also achieves a high clover content and has a high grazing persistency given its large leaf size.

Barblanca Achieves very high clover yield performance results typical of its large leaf size, with highest productivity in spring and again in autumn, plus its grazing persistent scores are atypically high for such a large leaved variety.

Very Large Leaved

Aran A very high yielding variety that maintains notably high clover productivity throughout the late summer and autumn, although not highly persistent when tightly grazed, it is excellent for conservation use as it has a high tolerance of tall grass canopy competition.

Triffid This very large leaved variety produces an impressively high spring yield and performs consistently well throughout the remainder of the season whilst maintaining a relatively high persistence for its leaf size.

Red Clover

AberClaret This variety has the highest persistence over three years with very strong production in the second year.

Amos (T) This tetraploid variety has a very good first and second year yield maintains good persistence.

Atlantis (T) This tetraploid variety maintains vary good yields over three years and a consistently good persistence.

Avisto This variety produces the highest first year yield and maintains good persistence throughout the three years

Grasslands Sensation Produces a similarly good yield in its first and second years and one of the highest third year yields.

Harmonie This variety maintains good persistence and yield over three years.

Lemmon This variety produces the highest three year average yield and one of the highest yields in the third year with a good average persistence.

Maro (T) This tetraploid variety maintains consistently good yields over three years.

Mercury Produces consistently good yields over a three year period.

Merviot Produces consistently good yields and maintains persistence over three years with a particularly strong yield in the third year.

Rotra (T) A tetraploid variety with good yields in first and second year and one of the highest third year yields.

KEY CONTACTS and SERVICES

This section provides contact information for merchants and growers.

Breeder and UK Agent Details:

The breeder, country of origin and UK Agent of each variety is presented below. These are normally not retail outlets to growers but are provided to assist local merchants in procuring supplies of seed to meet the market needs in Northern Ireland. (Addresses of UK agents are listed overleaf)

Variety	Breeder (country)	UK Agent
ITALIAN RYEGRASS		
Barmultra II (T)	Barenbrug BV (NL)	Bar
Dorike (T)	Euro Grass (NL)	BSH
Fox	Limagrain (FR)	DLF
Hunter (T)	Euro Grass (D)	DLF
Litonio (T)	Euro Grass (D)	EG
Meribel	ILVO (B)	LG
Meryl	ILVO (B)	EG
Shakira	Euro Grass (FR)	EG
WHITE CLOVER VARIETIES		
AberAce	IBERS (UK)	BSH
AberDai	IBERS (UK)	BSH
AberHerald	IBERS (UK)	BSH
AberVantage	IBERS (UK)	BSH
Alice	IBERS (UK)	Bar
Aran	Teagasc (RoI)	BSH
Avoca	Teagasc (RoI)	DLF
Barblanca	AgResearch (NZ)	Bar
Chieftain	Teagasc (RoI)	DLF
Crusader	AgResearch (NZ)	Bar
Glds. Bounty	Wrightson (NZ)	LG
Glds. Demand	AgResearch (NZ)	LG
Glds. Huia	AgResearch (NZ)	DLF
Triffid	AgResearch (NZ)	Bar

Variety	Breeder (country)	UK Agent
HYBRID RYEGRASS		
AberEcho (HT)	IBERS (UK)	BSH
AberEve (HT)	IBERS (UK)	BSH
AberExcel (HT)	IBERS (UK)	BSH
Amalgam (HT) (P)	DLF Trifolium (DK)	LG
Barsilo (HD)	Barenbrug BV (NL)	Bar
Drumlin (HT)	DARD (UK)	Bar
Foyle (HT)	DARD (UK)	Bar
Hymer (HT)	ILVO (B)	LG
Ligunda (HD)	BfAL (A)	DLF
Pirol (HD)	Saatzucht Steinach (D)	BSH
Scapino (HT)	DLF Trifolium (DK)	LG
TIMOTHY VARIETIES		
Aber S48 (S)	IBERS (UK)	BSH
Comer	ILVO (B)	LG
Comtal	DLF Trifolium (DK)	LG
Dolina	ILVO (B)	DLF
Erecta	ILVO (B)	LG
Motim	DLF Trifolium (DK)	LG
Narnia	DLF Trifolium (DK)	DLF
Presto	Euro Grass (NL)	BSH
Promesse	Cebeco Seeds BV (NL)	DLF
RED CLOVER VARIETIES		
AberClaret	IBERS (UK)	BSH
Amos (T)	Šlechtitelskà stanice (CZ)	DLF
Atlantis (T)	NPZ (D)	LSPB
Avisto	ILVO (B)	Bar
Gr. Sensation	AgResearch (NZ)	LG
Harmonie	Nord Pflan. (D)	LSPB
Lemmon	ILVO (B)	Bar
Maro (T)	Limagrain (UK)	Lem*
Mercury	ILVO (B)	CAR*
Merviot	ILVO (B)	LG
Rotra (T)	ILVO (B)	ILVO*

Variety	Breeder (country)	UK Agent
DIPLOID PERENNIAL RYEGRASS		
AberAvon	IBERS (UK)	BSH
AberChoice (S)	IBERS (UK)	BSH
AberDart (S)	IBERS (UK)	BSH
AberGreen	IBERS (UK)	BSH
AberMagic	IBERS (UK)	BSH
AberStar	IBERS (UK)	BSH
AberZest (S)	IBERS (UK)	BSH
Bahima 1 (S)	Cebeco Seeds BV (NL)	DLF
Betty (O)	Euro Grass (D)	EG
Boyne	DLF Trifolium (DK)	DLF
Bree	Cebeco Seeds BV (NL)	DLF
Clanrye (P)	DARD (UK)	Bar
Copeland	DARD (UK)	Bar
Denver	DLF Trifolium (DK)	LG
Donard	DARD (UK)	Bar
Drumbo	DARD (UK)	Bar
Foxtrot	Limagrain Genetics (NL)	DLF
Gandalf	DLF Trifolium (DK)	LG
Genesis	Teagasc (RoI)	DLF
Gerrison	DLF Trifolium (DK)	DLF
Glenariff (P)	DARD (UK)	Bar
Glenveagh (P)	Teagasc (RoI)	DLF
January (S)	Teagasc (RoI)	DLF
Kilrea	DARD (UK)	Bar
Kimber	DLF Trifolium (DK)	DLF
Majestic (P)	Teagasc (RoI)	DLF
Mateon 1	Cebeco Seeds BV (NL)	DLF
Moyola	DARD (UK)	Bar
Pastour	Limagrain Genetics (NL)	DLF
Portstewart (O)	DARD (UK)	Bar
Solomon	Teagasc (RoI)	DLF
Spelga	DARD (UK)	Bar
Twytop (S)	Advanta Seeds BV (NL)	DLF
Tyrella	DARD (UK)	Bar

Variety	Breeder (country)	UK Agent
TETRAPLOID PERENNIAL RYEGRASS		
AberBite	IBERS (UK)	BSH
AberCraigs	IBERS (UK)	BSH
AberGain (P)	IBERS (UK)	BSH
AberGlyn (S)	IBERS (UK)	BSH
AberTorch	IBERS (UK)	BSH
AstonEnergy	Euro Grass (UK)	EG
AstonPrincess	Euro Grass (UK)	EG
Delphin (S)	NPZ Lembke (D)	DLF
Dundrum	DARD (UK)	Bar
Dunloy	DARD (UK)	Bar
Dunluce	DARD (UK)	Bar
Elgon	DLF Trifolium (DK)	LG
Eurostar	DLF Trifolium (DK)	LG
Fornido	Euro Grass (NL)	EG
Glencar	Teagasc (RoI)	DLF
Glenstal	Teagasc (RoI)	DLF
Kintyre	Teagasc (RoI)	DLF
Magician	Teagasc (RoI)	DLF
Malone	DARD (UK)	Bar
Millennium	Teagasc (RoI)	DLF
Navan	DARD (UK)	Bar
Niagara	DLF Trifolium (DK)	LG
Seagoe	DARD (UK)	Bar
Tivoli	DLF Trifolium (DK)	DLF
Trintella	DLF Trifolium (DK)	LG
Twymax	DLF Trifolium (DK)	LG

Country Codes

A - Austria; B Belgium; CZ - Czech Republic;
D - Germany; DK - Denmark; FR - France;
NL - Netherlands; NZ - New Zealand;
RoI - Ireland; UK - United Kingdom.

Addresses of UK (and non UK*) Agents/ Maintainers:

- **Bar** Barenbrug UK Ltd 33 Perkins Road, Rougham industrial Estate, Rougham, Bury St Edmunds, Suffolk IP30 9NW
- **BSH** British Seed Houses Ltd, Portview Road, Avonmouth, Bristol BS11 9JH
- **CAR*** SA Carneau Freres Eurogazon, 21 ZAC Carrière Dorée, BP No 2008, 59358 Orchies, France
- **DLF** DLF Trifolium UK & N. Ireland Ltd, 9-14 Bellevue Mansions, Bellevue Road, Clevedon, N. Somerset BS21 7NU
- **EG** Eurograss Unit 1 Apple Tree Business Park, Appletree, Nr. Daventree, Northants, NN11 6UG
- **ILVO*** ILVO Plant (Applied Genetics +Breeding) Caritasstraat 21, 9090 Melle, Belgium
- **Lem*** Hans-Georg Lembke KG, Norddeutsche Pflanzenzucht, D 24363 Holtsee, Germany
- **LG** Limagrain UK Ltd, Rothwell, Market Rasen, Lincs, LN7 6DT
- **LSPB** LS Plant Breeding, North Barn, Manor Farm, Milton Road Cambridge CB24 9NF

AFBI Crossnacreevy CONTACTS and SERVICES

The Plant Testing Station produces the following variety performance booklets:

Cereals - Recommended Varieties for Northern Ireland
Forage Maize - Recommended Varieties for Northern Ireland
Potatoes - Varieties for Northern Ireland

Online copies of all these lists produced by AFBI-Crossnacreevy are available at www.afbini.gov.uk/reclists

Farmers and growers wanting guidance on selection and use of varieties from these lists should contact CAFRE Technology & Business Division Services, Tel: 028 9442 6770

Plant breeders, merchants and other specialists requiring technical data on trials, testing procedures and variety details should contact:

Agri-Food and Biosciences Institute
Plant Testing Station,
Crossnacreevy
Castlereagh
Belfast BT6 9SH

Tel: +44 (0) (28 90) 548000
Fax: +44 (0) (28 90) 548001
Email: info@afbini.gov.uk
eamonn.meehan@afbini.gov.uk
trevor.gilliland@afbini.gov.uk

Applied Plant Science and Biometrics Division: An extensive range of technical services is available on request to farmers, growers, public sector bodies and industry. The main services include:

Seed germination, purity and wild oat check
Variety performance and identity testing
Cereal Take-all test
Pest and disease identification and control
Potato cyst nematode (PCN) service
Mushroom compost and casing analyses

The DARD Grass and Clover Recommended List varieties are selected by a committee consisting of:

T. Gilliland (AFBI) (Chair)
E. Meehan (AFBI)
A. Johnston (Senior Grass Technologist, CAFRE, DARD)
M. Mulholland (Senior Dairying Technologist, CAFRE, DARD)

Agri-Food and Biosciences Institute

AFBI's mission is to maintain and enhance its reputation as a world-class scientific institute, delivering proven value to Government and other customers.

AFBI provides research and development, analytical and diagnostic services, and scientific advice in agriculture, food, animal and plant health, marine and fresh water ecosystem management and the agri-environment.

AFBI's expertise includes:
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Technologies include:
Molecular technologies; light and electron microscopy; mass spectrometry; pathogenesis studies; biosensor technology; seabed mapping and minimal processing technologies.

If you have a problem in agri-food or biosciences, AFBI offers a high quality, cost-effective solution.

To find out what AFBI can do for your business, contact:
AFBI Innovations
AFBI Headquarters, Newforge Lane, Malone Upper,
Belfast BT9 5PX, Northern Ireland, UK.
Tel: +44 (0)28 90 255051
Fax: +44 (0)28 90 255035
Email: info@afbini.gov.uk

www.afbini.gov.uk

Key DARD Contacts: Farmers, growers and processors requiring guidance on variety selection and use should contact their local CAFRE Development Adviser on 0845 30 44 503.

New DARD telephone numbers:

Animal Health & Welfare and Veterinary Public Health	0845 30 44 500
Education and Training	0845 30 44 501
Environment	0845 30 44 502
Farming	0845 30 44 503
Fisheries	0845 30 44 504
Flood Defence and Drainage	0845 30 44 505
Food	0845 30 44 506
Forests	0845 30 44 507
Grants and Funding	0845 30 44 508
Rural Development	0845 30 44 509
DARD Corporate Services	0845 30 44 510
Textphone	0845 30 44 511
Calls from non-UK numbers or networks/ International Calls	+44(0)28 9037 8418

Farmers, growers and processors requiring more specialist information on crops should contact:

CAFRE Development Service, Greenmount College Tel: 028 9442 6770
Fax: 028 9442 6777

Department of
Agriculture and Rural Development
www.dardni.gov.uk

AN ROINN
Talmhaíochta agus Forbartha Tuaithe

MÄNNYSTRIE O
Fairms an Kintra Fordèrin

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