

Grass and Clover



Recommended Varieties
for Northern Ireland
2011/12



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



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/reclists

The recommendations are reviewed and published annually.

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Cover photograph

Haldrup plot harvester measuring perennial ryegrass yields at AFBI-Crossnacreevy

GRASS AND CLOVER VARIETIES FOR 2011-12

T J GILLILAND BSc BAgr PhD and E J MEEHAN BSc MSc PhD

Agri-Food and Biosciences Institute, Plant Testing Station, Crossnacreevy
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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 2011/12 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:

<u>Indicator</u>	<u>Stipulation</u>
'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 OUTCLASSSED

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 2011/12

Perennial Ryegrass				
Early Diploid		Intermediate Diploid		Late Diploid
(S) Donard January Genesis Moyola Kilrea Kimber		Spelga (S) Betty		Denver Tyrella
		Bree (S) AberDart		(S) AberZest Portstewart
		AberStar Gerrison		AberAvon (S) AberChoice
		Gandalf (P) Bahima 1		Foxtrot (S) Twytop
		AberMagic (P) Copeland		Pastour (P) Glenveagh
		Solomon (P) AberGreen		Drumbo
		Boyne (O) Cashel		Mateon1
Early Tetraploid		Intermediate Tetraploid		Late Tetraploid
AberTorch		Malone Glenstal		Glencar Astonprincess
		Niagara (P) Seagoe		Delphin Kintyre
	(S) AberGlyn			AberCraigs Fornido
	Trintella			Navan Tivoli
	Magician			AberBite Millennium
	Eurostar			Twymax (P) Dundrum
	Dunluce			Dunloy (P) Diasa
	Astonenergy			Elgon (O) Loporello
Italian Ryegrass	Hybrid Ryegrass		Timothy	
Meribel Meryl Dorike (T) Hunter (T) Barmultra II (T) Fox Litonio (T) (O) Ligrande	AberEcho (HT)	Drumlin (HT)	Early	Intermediate
	Ligunda (HD)	AberExcel (HT)	Presto Comer Dolina Promesse Erecta Comtal	Motim
	Pirol (HD)	Hymmer (HT)		Narnia
		AberEve (HT)		
		Foyle (HT)		Late
		Barsilo (HD)		(S) Aber S48
		(P) Scapino (HT)		
White Clover				
Small Leaved		Medium Leaved	Large & Very Large Leaved	
AberAce Glds. Demand		Crusader AberHerald	Alice	
		Avoca Glds. Huia	Barblanca	
		Glds. Bounty AberVantage	Triffid	
		AberDai	Aran	
		Chieftain		

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

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'.

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.

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 and hybrid ryegrasses, all 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).

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, Donard, 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 Spelga and AberMagic (9 days), than between AberMagic and the 'late' variety Denver (3 days). 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 2011/12:

Two early varieties had their recommended list status changed. Genesis and Moyola were upgraded from 'Plain Type' to 'Bold Type'.

Nine intermediate varieties had their recommended list status changed. In the diploids, one new provisional recommendation, AberGreen, was added to the list. Boyne and Gerrison were moved up from provisional to 'Plain Type' and AberMagic was moved up to 'Bold Type' whereas Cashel was downgraded to 'outclassed'. In the tetraploids, AberGlyn, a 'Bold Type' variety was given 'S' status and a new provisional variety, Seagoe, was added to the list. Garibaldi and Greengold, having been outclassed, were removed from the list.

Seven late varieties had their recommended status changed. Two diploid varieties, Mateon 1 and Drumbo were upgraded from 'Plain Type' to 'Bold Type' and one new provisional recommendation, Glenveagh was added. In the tetraploids, AberBite was upgraded to 'Bold Type' status, whereas Millennium was downgraded from 'Bold Type' to 'Plain Type' status. Diasa was added as a new provisional and Loporello was downgraded to outclassed.

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	Total Yield	Silage 2-Cut Yield		Total Yield	Grazing Grass Quality	Sward Density
			15.6*	Total 10.1*	Digest Yield 7.4*	11.9*	D-Value	
			%	%	%	%	%D	(0-9)
(S)	Donard	8 May	101	95	95	103	72.2	6.2
	January	8 May	102	98	95	97	72.6	6.0
	Genesis	10 May	109	104	99	108	72.4	6.3
	Moyola	11 May	106	100	99	108	72.1	6.0
	Kilrea	13 May	97	90	94	99	72.7	6.6
	Kimber	15 May	96	92	94	97	73.3	6.4
	Spelga	18 May	102	105	100	98	69.9	6.3
	Bree	24 May	98	99	98	99	72.9	6.7
	AberStar	24 May	99	98	103	103	75.7	6.4
	Gandalf	25 May	99	100	98	97	73.0	6.8
(S)	AberMagic	27 May	108	105	102	108	73.2	6.3
	Denver	30 May	101	106	104	97	71.7	6.7
	AberZest	30 May	105	109	99	103	75.1	5.9
	AberAvon	1 Jun	100	103	106	102	74.9	6.1
	Foxtrot	3 Jun	98	101	103	103	74.3	6.3
	Pastour	3 Jun	101	105	110	102	73.2	6.1
	Drumbo	4 Jun	99	101	107	100	74.8	6.3
	Mateon 1	4 Jun	103	107	106	97	74.9	6.6
	Solomon	17 May	104	106	107	102	72.7	6.3
	Boyne	19 May	109	111	107	105	72.5	6.5
(S)	Betty	22 May	99	97	99	92	70.0	6.5
(S)	AberDart	23 May	96	95	98	97	76.1	6.7
	Gerrison	23 May	101	104	102	103	72.6	6.2
	Tyrella	2 Jun	104	111	101	99	73.4	6.4
	Portstewart	3 Jun	99	102	102	99	72.0	6.1
(S)	AberChoice	9 Jun	101	101	107	107	74.4	5.9
(S)	Twyttop	14 Jun	96	98	103	103	72.6	6.2
(P)	Bahima 1	24 May	107	110	106	103	70.5	5.9
(P)	Copeland	28 May	101	100	96	102	72.4	6.6
(P)	AberGreen	28 May	99	97	115	111	74.2	6.4
(P)	Glenveagh	1 Jun	101	104	106	97	73.9	6.6
(O)	Cashel	18 May	97	98	97	96	72.1	6.7

* = 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 3 to 4 week spread in most years, which is retained to the end of the third cut, resulting in different periods of 'Aftermath'.

Seasonal Silage Yields				Seasonal Grazing Yields				Maturity Class
1 st Cut 6.7*	2 nd Cut 3.4*	3 rd Cut 3.3*	Aftermath Grazing 2.2*	Spring 2.4*	Early Summer 4.6*	Late Summer 3.2*	Autumn 1.7*	
%	%	%	%	%	%	%	%	
96	93	105	123	123	93	99	105	Early
102	90	106	114	114	90	97	96	Early
105	102	118	120	130	98	105	105	Early
102	96	111	123	128	96	112	110	Early
83	102	107	119	116	92	98	99	Early
88	101	96	112	111	90	96	97	Early
107	102	102	86	104	91	101	101	Inter
96	103	103	93	97	99	101	99	Inter
94	104	98	108	95	104	103	111	Inter
98	102	100	94	94	99	98	94	Inter
100	114	114	112	99	107	113	115	Inter
110	98	96	85	80	106	99	94	Late
111	104	101	97	93	101	106	111	Late
106	97	92	102	87	104	104	108	Late
103	97	98	87	85	108	106	105	Late
106	103	99	86	89	106	104	102	Late
97	107	100	87	85	105	101	103	Late
104	112	99	90	76	102	101	98	Late
106	105	105	94	113	96	101	99	Inter
112	109	108	104	113	100	107	104	Inter
88	114	112	97	86	96	93	86	Inter
91	102	95	102	94	95	98	99	Inter
103	104	103	89	109	97	105	99	Inter
119	97	94	88	95	98	102	99	Late
100	105	102	84	85	103	103	96	Late
92	120	101	99	88	114	109	109	Late
82	129	92	92	75	113	109	105	Late
114	101	101	104	110	96	107	101	Inter
97	104	108	100	108	94	106	105	Inter
84	118	104	110	111	105	116	114	Inter
105	101	102	87	86	102	101	94	Late
96	101	103	90	90	96	97	95	Inter

* = 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 15.6*	2-Cut Yield Total 10.1* Digest Yield 7.4*	Total Yield 11.9*	Grass Quality D-Value	Sward Density
			%	%	%	%D	(0-9)
	AberTorch(T)	6 May	101	97	101	74.8	5.7
	Malone(T)	17 May	111	111	116	75.3	5.3
	Niagara(T)	17 May	104	104	109	76.9	6.3
(S)	AberGlyn(T)	18 May	104	110	107	73.4	5.6
	Trintella(T)	18 May	105	108	114	74.3	5.4
	Magician(T)	18 May	108	114	117	75.0	5.5
	Eurostar(T)	24 May	106	107	106	74.7	6.1
	Dunluce(T)	28 May	108	105	114	75.7	5.7
	Astonenergy(T)	30 May	104	101	109	77.6	5.4
	Glencar(T)	30 May	109	117	112	73.7	5.8
	Delphin(T)	31 May	111	119	116	74.6	5.2
	AberCraigs(T)	2 Jun	108	116	111	77.3	5.7
	Navan(T)	2 Jun	106	108	109	76.3	5.4
	AberBite(T)	4 Jun	110	113	112	77.6	5.6
	Twymax(T)	4 Jun	107	112	113	74.0	6.0
	Dunloy(T)	7 Jun	104	107	111	76.0	6.0
	Glenstal(T)	19 May	108	112	108	72.6	5.7
	Elgon(T)	1 Jun	101	105	106	76.2	5.7
	Astonprincess(T)	5 Jun	103	108	114	75.9	6.0
	Kintyre(T)	5 Jun	106	110	112	75.3	5.7
	Fornido(T)	6 Jun	106	109	108	75.6	6.2
	Tivoli(T)	8 Jun	106	108	111	76.2	5.6
	Millennium(T)	9 Jun	103	105	102	75.3	5.9
(P)	Seagoe(T)	20 May	104	106	116	74.1	5.4
(P)	Dundrum(T)	2 Jun	106	113	111	76.4	5.5
(P)	Diasa(T)	2 Jun	107	117	115	77.2	5.8
(O)	Loporello(T)	2 Jun	101	106	103	73.4	6.4

* = 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				Maturity Class
1 st Cut 6.7*	2 nd Cut 3.4*	3 rd Cut 3.3*	Aftermath Grazing 2.2*	Spring 2.4*	Early Summer 4.6*	Late Summer 3.2*	Autumn 1.7*	
%	%	%	%	%	%	%	%	
100	90	102	115	126	92	99	98	Early
111	111	117	101	120	96	103	101	Inter
102	107	109	100	108	96	102	102	Inter
114	103	98	89	117	93	96	92	Inter
108	107	105	95	110	94	101	96	Inter
113	114	100	98	113	98	106	100	Inter
107	107	108	94	110	100	100	99	Inter
94	128	115	107	107	106	109	109	Inter
91	121	109	107	98	105	110	108	Inter
121	110	100	85	96	102	102	96	Late
123	110	99	91	102	105	107	103	Late
115	116	99	87	96	104	105	99	Late
106	111	113	90	93	103	114	108	Late
111	118	109	99	89	110	110	114	Late
113	110	104	88	91	110	102	98	Late
102	114	106	93	88	108	102	102	Late
111	114	105	93	113	99	105	102	Inter
108	98	105	83	102	100	102	99	Late
109	106	98	89	93	108	100	95	Late
106	117	104	95	88	105	105	111	Late
106	114	108	88	83	105	104	96	Late
104	118	111	86	87	106	99	99	Late
101	112	104	95	93	107	105	105	Late
102	111	100	108	113	99	115	109	Inter
111	115	99	89	85	109	102	101	Late
116	120	89	85	82	106	107	100	Late
106	107	96	85	82	102	95	92	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 2011/12:

One new provisional recommendation, Scapino (HT) has been added to the list this year.

VARIETY	Heading Date	Silage Yields			Sward Density
		1 st Year 19.7*	2 nd Year 17.9*	3 rd Year 17.0*	
		%	%	%	(0-9)
AberEcho(HT)	14 May	99	98	98	5.0
Ligunda(HD)	18 May	101	101	101	4.7
Pirol(HD)	19 May	99	100	102	5.3
Drumlin(HT)	18 May	90	88	91	5.0
AberExcel(HT)	18 May	89	89	91	5.0
Hymmer(HT)	19 May	92	94	93	4.7
AberEve(HT)	20 May	94	93	92	5.0
Foyle(HT)	20 May	90	90	89	5.0
Barsilo(HD)	23 May	96	96	95	4.5
(P) Scapino(HT)	22 May	94	95	95	4.9

* = 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*	1 st Cut Silage 5.6*	2 nd Cut Silage 4.0*	Aftermath Grazing 6.4*
	%	%	%	%
AberEcho(HT)	99	107	90	97
Ligunda(HD)	103	96	103	103
Pirol(HD)	98	97	107	100
Drumlin(HT)	62	110	75	90
AberExcel(HT)	80	102	81	89
Hymmer(HT)	87	106	82	91
AberEve(HT)	75	104	86	95
Foyle(HT)	57	108	76	93
Barsilo(HD)	87	90	97	101
Scapino(HT)	89	110	80	92

* = 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 2011/12:

Six Italian ryegrass varieties had their recommended list status changed this year. Three tetraploid varieties: Dorike, Hunter and Barmultra II have been moved up from provisionally recommended to plain type this year: Ligrande has moved down from plain and is now outclassed. AberEpic and AberMario have been removed from the list because commercialisation and seed supply for Northern Ireland have ceased.

VARIETY	Heading Date	Silage Yields		Early Spring Growth	Sward Density
		1 st Year 20.3*	2 nd Year 20.3*		
		%	%	(t/ha DM)	(0-9)
Meribel	18 May	99	91	2.1	4.9
Meryl	21 May	100	92	2.3	4.8
Dorike(T)	15 May	99	89	2.2	4.4
Hunter(T)	16 May	98	90	2.3	4.5
Barmultra II(T)	17 May	99	89	2.3	4.3
Fox	18 May	98	89	2.3	4.7
Litonio(T)	19 May	99	87	2.2	4.6
(O) Ligrande	19 May	96	87	2.1	4.7

* = 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 2.3*	Seasonal Yields		Aftermath Grazing 7.2*
		1 st Cut Silage 5.5*	2 nd Cut Silage 4.4*	
	%	%	%	%
Meribel	90	100	102	100
Meryl	99	101	101	100
Dorike(T)	97	107	97	93
Hunter(T)	99	102	102	94
Barmultra II(T)	97	108	97	93
Fox	97	103	96	95
Litonio(T)	95	101	97	95
Ligrande	93	104	96	91

* = 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 2011/12:

All varieties remained with the same recommended list status and Narnia was confirmed as an intermediate maturing variety.

VARIETY	Heading Date	Silage		Grazing		Maturity Class
		Total Yield 14.1*	2-Cut Silage 9.0*	Total Yield 11.7*	Sward Density	
	%	%	%	%	(0-9)	
Presto	8 Jun	101	99	102	5.5	Early
Comer	9 Jun	105	105	104	5.4	Early
Dolina	9 Jun	102	100	105	5.5	Early
Motim	17 Jun	97	99	99	6.0	Inter
(S) Aber S48	23 Jun	95	98	90	7.0	Late
Promesse	10 Jun	91	88	97	5.8	Early
Erecta	10 Jun	94	91	99	5.4	Early
Comtal	10 Jun	93	90	101	5.2	Early
Narnia	16 Jun	101	103	98	7.0	Inter

* = 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			
	1 st Cut	2 nd Cut	3 rd Cut	Autumn Grazing	Spring	Early Summer	Late Summer	Autumn
	5.3*	3.7*	2.9*	2.1*	2.7*	4.3*	3.5*	1.3*
	%	%	%	%	%	%	%	%
Presto	112	80	111	97	113	96	102	99
Comer	114	91	109	98	119	93	105	106
Dolina	108	88	114	97	115	98	106	103
Motim	97	102	92	95	99	101	99	98
(S) Aber S48	69	140	74	112	54	112	88	94
Promesse	100	71	95	95	99	99	97	91
Erecta	101	76	104	95	104	96	101	97
Comtal	102	73	98	99	104	98	101	102
Narnia	90	122	97	101	89	100	101	106

* = 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 2011/12:

One White Clover variety, Triffid has been reinstated as it is commercially available again. All other varieties remained in either the highest 'Bold Type' or intermediary 'Plain Type' categories.

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	89	61	103	6.5	4.6
Glds. Demand	79	98	85	104	6.4	5.1
Crusader	88	100	97	101	5.8	4.9
Avoca	95	103	102	103	6.0	5.0
Glds. Bounty	96	101	98	102	5.8	4.6
AberDai	101	101	108	97	5.5	4.6
Chieftain	108	103	118	96	5.4	4.5
Alice	124	103	115	97	5.2	4.2
Barblanca	131	103	116	97	5.6	4.5
AberHerald	93	100	104	98	5.0	4.5
Glds. Huia	100	98	87	103	5.8	4.6
AberVantage	104	102	104	101	5.3	3.7
Triffid	131	102	104	100	5.2	4.0
Aran	164	102	121	92	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	47	80	72	45	Small
Glds. Demand	29	81	86	87	78	Small
Crusader	32	127	92	91	115	Medium
Avoca	33	91	103	101	109	Medium
Glds. Bounty	32	109	91	97	101	Medium
AberDai	36	107	114	110	100	Medium
Chieftain	38	117	116	121	120	Medium
Alice	37	111	114	119	107	Large
Barblanca	37	110	104	102	126	Large
AberHerald	35	92	104	111	100	Medium
Glds. Huia	29	78	86	93	79	Medium
AberVantage	34	110	103	107	102	Medium
Triffid	34	125	108	105	107	V. Large
Aran	40	112	111	126	136	V. Large

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

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 (P) This new provisional recommendation 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 (P)** This provisional recommendation 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 (S)** 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 hence it is specifically recommended for use in silage swards.
- 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.
- Cashel (O)** Performs similarly under grazing or silage use, provides high second and third cut silage yields from dense swards but is now outclassed by most other recommended varieties.
- Copeland (P)** A 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.
- 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. Its total grazing yields are even higher, as it delivers very high production 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.

Denver Produces excellent 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 new 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.

Mateon 1 Produces high total silage yields that are at their greatest during the first two 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 Forms erect silage swards, produces a high 2-cut digestible yield, provides good total annual grazing yields distributed mostly in the main summer period with less production in spring and autumn.

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. Total annual silage yields are also good partly due to a very high third cut potential and has an 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 the highest total grazing yield on the list, has one of the highest 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 (P) This new provisional recommendation 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.

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 One of the highest yielding late tetraploid varieties for silage in all categories plus a high grazing performance. It gives its strongest grazing performances in mid-season and forms tall erect open tetraploid swards.

Diasa (P) This new provisionally recommended variety produces impressively high 2-cut DM and 2-cut digestible yields. For grazing use it has a good sward density very high herbage quality and strong productivity in the main summer period.

Dundrum (P) This provisionally recommended 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 a 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 notably 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 excellent autumn productivity for extending the grazing season.

Loporello (O) This variety has exceptionally dense swards for a tetraploid and achieves its highest performance under silage during the first two

cuts. While its best grazing performance occurs in early summer, it has become outclassed.

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 from within 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 excellently 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.

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 outperforms all other fully recommended varieties for first cut silage.

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 the most dense growing hybrid variety on the list. Seasonal performance comprises of high spring vigour and strongest silage performance delivered in the second cut.

Scapino (HT) (P) This new provisionally recommended 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 cut 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.

Ligrande (O) This diploid variety has a very high first cut performance and creates a similar sward structure to most other recommended varieties, but its below average annual yield performances in both harvest years now means it is becoming outclassed.

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.

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 Produces 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 so 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

Guidance on Alternative Forage Legumes

Trial Results for Red Clover Varieties: Red Clover is grown mainly for conservation and divides into early and late varieties. Early varieties have high spring growth, a large first cut and smaller subsequent cuts. Late varieties are two weeks later flowering, are slower in spring, give their main yield at the first cut and are more persistent and suited to medium-term use. Red clover will perform best on well-drained, fertile soils with a pH of 6.0–6.5. The table below shows the average yields and persistency of a selection of varieties currently undergoing assessment at Crossnacreevy. As the work is not yet complete, no variety recommendations have been made and the results are for information only. There may also be other varieties in commerce that have yet to be assessed in these local trials.

VARIETY (alphabetical order)	Harvest Year 1		Harvest Year 2		Harvest Year 3		Three Year Average	
	Control Yields (t/Ha)	DM Yield 18.4	Rel. Pers.	DM Yield 17.9	Rel. Pers.	DM Yield 15.2	Rel. Pers.	DM Yield 17.2
	%	(0-9)	%	(0-9)	%	(0-9)	%	(0-9)
AberChianti	94	6.1	103	5.5	109	4.6	102	5.4
AberClaret	104	4.3	107	4.9	105	3.9	105	4.4
AberRuby	99	5.3	82	2.4	80	1.6	88	3.1
Amos	99	4.8	103	3.8	105	3.3	102	4.0
Atlantis	98	5.2	104	4.2	114	3.6	105	4.3
Avisto	106	4.9	104	4.4	99	4.0	103	4.4
Britta	90	4.8	89	4.2	85	4.0	88	4.4
Glds. Sensation	98	4.0	105	3.9	104	4.2	102	4.0
Lemmon	104	5.1	105	4.5	105	4.0	105	4.5
Maro	104	3.7	100	3.5	103	3.6	102	3.6
Mercury	100	4.4	102	4.1	96	3.8	99	4.1
Merviot	104	4.8	105	4.2	104	3.7	104	4.2
Rotra	100	4.2	100	3.4	105	3.4	102	3.7
Sara	94	3.7	88	3.5	88	3.2	90	3.5

Note - varieties listed in alphabetical order. Rel. Pers. = Relative Persistence (0-9 high)

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. Furthermore, in experimental studies at Crossnacreevy, red clover/Italian ryegrass mixtures yielded 75% of the yield of pure Italian ryegrass swards receiving over 300 kg/ha nitrogen.

Notes on Alternative Forage Legumes: In addition to white and red clover there are several other pasture legumes that may be of value in exceptional circumstances or in some organic systems. **Lucerne** (alfalfa) is best cut for conservation on approximately a 40 day rotation, giving 3-4 cuts per year. (There are no UK registered varieties but **Capri**, **Daisy**, **Diane**, **Europe**, **Euver**, **Marshal**, **Mercedes**, **Pondus** and **Vela** may be available). **Alsike clover** is an alternative to red clover but is much lower yielding. **Sainfoin** is a much lower yielding alternative to Lucerne and is for specialist use particularly on chalk or limestone soils. Examples of EU varieties include **Albion**, **Ambra**, **Reina**, **Tetim**, **Vala** and **Zeus**.

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	Variety	Breeder (country)	UK Agent
ITALIAN RYEGRASS			HYBRID RYEGRASS		
Barmultra II (T)	Barenbrug BV (NL)	Bar	AberEcho (HT)	IBERS (UK)	BSH
Dorike (T)	Euro Grass (NL)	BSH	AberEve (HT)	IBERS (UK)	BSH
Fox	Limagrain (FR)	DLF	AberExcel (HT)	IBERS (UK)	BSH
Hunter (T)	Euro Grass (D)	DLF	Barsilo (HD)	Barenbrug BV (NL)	Bar
Ligrande (O)	Euro Grass (D)	EG	Drumlin (HT)	DARD (UK)	Bar
Litonio (T)	Euro Grass (D)	EG	Foyle (HT)	DARD (UK)	Bar
Meribel	D.v.P. (B)	DLF	Hymer (HT)	D.v.P. (B)	DLF
Meryl	D.v.P. (B)	EG	Ligunda (HD)	BfAL (A)	DLF
			Pirol (HD)	Saatzucht Steinach (D)	BSH
			Scapino (HT) (P)	DLF Trifolium (DK)	DLF
WHITE CLOVER VARIETIES			TIMOTHY VARIETIES		
AberAce	IBERS (UK)	BSH	Aber S48 (S)	IBERS (UK)	BSH
AberDai	IBERS (UK)	BSH	Comer	D.v.P. (B)	DLF
AberHerald	IBERS (UK)	BSH	Comtal	Advanta Seeds BV (NL)	DLF
AberVantage	IBERS (UK)	BSH	Dolina	D.v.P. (B)	DLF
Alice	IBERS (UK)	Bar	Erecta	D.v.P. (B)	DLF
Aran	Teagasc (Rol)	BSH	Motim	Advanta Seeds BV (NL)	DLF
Avoca	Teagasc (Rol)	DLF	Narnia	DLF Trifolium (DK)	DLF
Barblanca	AgResearch (NZ)	Bar	Presto	Euro Grass (NL)	BSH
Chieftain	Teagasc (Rol)	DLF	Promesse	Cebeco Seeds BV (NL)	DLF
Crusader	AgResearch (NZ)	Bar			
Glds. Bounty	Wrightson (NZ)	DLF			
Glds. Demand	AgResearch (NZ)	DLF			
Glds. Huia	AgResearch (NZ)	DLF			
Triffid	AgResearch (NZ)	Bar			

Variety	Breeder (country)	UK Agent	Variety	Breeder (country)	UK Agent
DIPLOID PERENNIAL RYEGRASS			TETRAPLOID PERENNIAL RYEGRASS		
AberAvon	IBERS (UK)	BSH	AberBite	IBERS (UK)	BSH
AberChoice (S)	IBERS (UK)	BSH	AberCraigs	IBERS (UK)	BSH
AberDart (S)	IBERS (UK)	BSH	AberGlyn (S)	IBERS (UK)	BSH
AberGreen (P)	IBERS (UK)	BSH	AberTorch	IBERS (UK)	BSH
AberMagic	IBERS (UK)	BSH	Astonenergy	Euro Grass (UK)	EG
AberStar	IBERS (UK)	BSH	Astonprincess	Euro Grass (UK)	EG
AberZest (S)	IBERS (UK)	BSH	Delphin	NPZ Lembke (D)	DLF
Bahima 1 (P)	Cebeco Seeds BV (NL)	DLF	Diasa (P)	DLF Trifolium (DK)	DLF
Betty (S)	Euro Grass (D)	EG	Dundrum (P)	DARD (UK)	Bar
Boyne	DLF Trifolium (DK)	DLF	Dunloy	DARD (UK)	Bar
Bree	Cebeco Seeds BV (NL)	DLF	Dunluce	DARD (UK)	Bar
Cashel (O)	Teagasc (Rol)	DLF	Elgon	Advanta Seeds BV (NL)	DLF
Copeland (P)	DARD (UK)	Bar	Eurostar	Advanta Seeds BV (NL)	DLF
Denver	Advanta Seeds BV (NL)	DLF	Fornido	Euro Grass (NL)	EG
Donard	DARD (UK)	DLF	Glencar	Teagasc (Rol)	DLF
Drumbo	DARD (UK)	Bar	Glenstal	Teagasc (Rol)	DLF
Foxtrot	Limagrain Genetics (NL)	DLF	Kintyre	Teagasc (Rol)	DLF
Gandalf	Advanta Seeds BV (NL)	DLF	Loporello (O)	DLF Trifolium (DK)	DLF
Genesis	Teagasc (Rol)	DLF	Magician	Teagasc (Rol)	DLF
Gerrison	DLF Trifolium (DK)	DLF	Malone	DARD (UK)	Bar
Glenveagh (P)	Teagasc (Rol)	DLF	Millennium	Teagasc (Rol)	DLF
January (S)	Teagasc (Rol)	DLF	Navan	DARD (UK)	Bar
Kilrea	DARD (UK)	Bar	Niagara	Advanta Seeds BV (NL)	DLF
Kimber	Advanta Seeds BV (NL)	DLF	Seagoe (P)	DARD (UK)	Bar
Mateon 1	Cebeco Seeds BV (NL)	DLF	Tivoli	DLF Trifolium (DK)	DLF
Moyola	DARD (UK)	Bar	Trintella	DLF Trifolium (DK)	DLF
Pastour	Limagrain Genetics (NL)	DLF	Twymax	Advanta Seeds BV (NL)	DLF
Portstewart	DARD (UK)	Bar			
Solomon	Teagasc (Rol)	DLF			
Spelga	DARD (UK)	Bar			
Twyttop (S)	Advanta Seeds BV (NL)	DLF			
Tyrella	DARD (UK)	Bar			
Country Codes					

A – Austria B – Belgium; D – Germany; DK – Denmark; NL – Netherlands;
 NZ - New Zealand; Rol- Ireland; UK – United Kingdom

Addresses of UK Agents/maintainers:

- **Bar** Barenbrug UK Ltd 33 Perkins Road, Rougham industrial Estate, Rougham, Bury St Edmunds, Suffolk IP30 9NW
- **EG** Eurograss Unit 1 Apple Tree Business Park, Appletree, Nr. Daventree, Northants, NN11 6UG
- **BSH** British Seed Houses Ltd, Portview Road, Avonmouth, Bristol BS11 9JH
- **DLF** DLF Trifolium UK & N. Ireland Ltd, 9-14 Bellevue Mansions, Bellevue Road, Clevedon, N. Somerset BS21 7NU

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)
M. McHenry (Senior Beef and Sheep Technologist, CAFRE, DARD)
M. Mulholland (Senior Dairying Technologist, CAFRE, DARD)



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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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