

Irish National List / Recommended List Perennial Ryegrass Variety Evaluation Trials

Industry Information Meeting
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An Roinn
**Talmhaíochta,
Bia agus Mara**

Topics to be Discussed

- * Background to why varieties are evaluated
- * Look at RL 2016
- * Heading date trial 2016
- * 2016 Sowings of Grass varieties
- * Harvest Year to date
- * The GP protocol
- * RL 2017
- * Summary

Why do we evaluate varieties?

- * **What is the legal basis for evaluating varieties?**
- * European Council Directive 2002/53/EC of 13 June 2002 on the common catalogue of varieties of agricultural plant species outlines the legislative basis for the marketing of seed.
- * This says that a ‘Common Catalogue’ of varieties needs to be compiled in the European Union. This catalogue can be compiled only on the basis of national catalogues. All Member States should therefore compile one or more national catalogues of the varieties accepted for certification and marketing in their territory.

Why do we evaluate varieties?

- * In order for a new variety to be accepted onto a National List/National Catalogue it has to fulfil a number of criteria.
- * The criteria include that the variety should be **distinct**, **uniform** and **stable** (DUS), in other words that the variety is not another variety on the market with a different name.
- * It must also have a positive **value for cultivation and use** (VCU) in the territory where it is grown.
- * DAFM grass and white clover trials are combined NL/RL trials.

STEPS IN THE COMMERCIALISATION OF A NEW VARIETY

Breeder selects a **New Variety**



Examined for **DUS** by an Accredited Agency



Breeder takes out **Plant Variety Rights**

Via

Irish Office of the Controller of PBR's



Official Journal of National PVR's

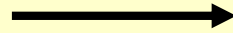


(CPVO)

OR

Ensure that the maintainer, maintains the variety according to specified procedures

UPOV
(International framework for PVR's facilitating trade)



Variety evaluation in **NL** trials for **VCU** (Value, Cultivation, Use)



RL published

Positive **VCU** varieties eligible for entry by breeder in **National Catalogue of Agricultural Plant Varieties**



EU Common Catalogue



OECD list of varieties eligible for certification

Servicing EU meetings on above activities & related matters



Seed Certification – generational multiplication and production to specified standards



COMMERCIALISATION

Recommended List 2016

Grass and White Clover Varieties



Irish Recommended List 2016
CROPS EVALUATION AND CERTIFICATION DIVISION



www.agriculture.gov.ie

- * Published in February 2016

<http://www.agriculture.gov.ie/media/migration/publications/2016/GrassWhiteCloverRecom2016080216.pdf>

- * Includes data from Harvest 2015.
- * General Purpose – 2 Cut Silage System
- * Simulated Grazing (Inter & Late)
- * Teagasc PPI



RL 2016 - Changes

Grass varieties added

Name	Maturity / Ploidy	Breeder
Alfonso	Late Tet.	DSV AG
Kerry	Late Dip.	Teagasc
Nifty	Late Tet.	DLF A/S
Xenon	Late Tet.	DLF A/S

Grass varieties removed

Name	Maturity / Ploidy	Breeder
Abercraigs	Late Tet.	IBERS
Giant	Inter Tet.	Teagasc
Mezquita	Late Dip.	DSV AG
Rodrigo	Inter Dip.	DSV AG
Trend	Inter Tet.	NPZ

2016 RL – Breakdown of Maturity groupings for grass varieties

	Italian	Hybrid	Early	Inter	Late	Total
Diploid	1	1	2	5	10	19
Tetraploid	2	2	0	4	11	19
Total	3	3	2	9	21	38

Recommended Intermediate Diploid & Tetraploid Perennial Ryegrass Varieties 2016

Variety Name	Heading Date	General Purpose (2-Cut Silage)						Simulated Grazing					*DMD %	*WSC %
		Total Rel. Yield GP	Ground Cover 1-9	Spring Growth	1st Cut Silage	2nd Cut Silage	Autumn Growth	Total Rel. Yield SG	Ground Cover 1-9	Spring Growth	Summer Growth	Autumn Growth		
<i>Control Mean (t DM/ha)</i>		14.7	6.4	1.1	4.7	3.9	3.2	10.7	6.2	1.3	7.1	2.3	83.3	21.8
Solomon	21-May	99	6.6	116	104	94	93	97	6.8	106	97	92	98.4	90
Boyne	22-May	103	6.9	112	110	100	97	97	6.8	99	97	93	97.6	90
Rosetta	24-May	100	6.7	114	103	90	99	99	6.8	116	96	97	99.1	93
Nifty	27-May	99	6.7	97	104	92	101	105	6.8	110	105	103	99.3	100
Abermagic	31-May	100	6.8	88	97	100	106	105	6.6	96	105	109	100.7	112
Magician (T)	22-May	99	6.0	107	105	98	94	97	5.9	99	98	94	99.5	92
Carraig (T)	24-May	101	6.6	113	107	96	96	98	6.3	95	100	93	99.1	93
Seagoe (T)	28-May	(102)	6.1	101	109	100	95	(99)	(6.2)	(90)	(102)	(95)	100.1	98
Dunluce (T)	30-May	101	5.9	91	95	112	101	100	5.8	89	102	101	100.6	102

Data based on the mean of Diploid & Tetraploid Control varieties.

*DMD and WSC controls data is shown as g/100g on this Table and have been taken from both the GP and SG Trials.

Ground Cover values for Simulated Grazing are derived from Year 2 values in Appendix 3.

Intermediate Diploid and Tetraploid PRG variety descriptions can be found on page 18.

Recommended Late Diploid Perennial Ryegrass Varieties 2016

Variety Name	Heading Date	General Purpose (2-Cut Silage)						Simulated Grazing					*DMD %	*WSC %
		Total Rel. Yield GP	Ground Cover 1-9	Spring Growth	1st Cut Silage	2nd Cut Silage	Autumn Growth	Total Rel. Yield SG	Ground Cover 1-9	Spring Growth	Summer Growth	Autumn Growth		
<i>Control Mean (t DM/ha)</i>		14.0	6.6	1.0	4.5	3.9	3.0	10.2	6.5	1.1	7.0	2.1	82.9	21.4
Kerry	01-Jun	104	6.4	123	95	107	105	103	6.4	106	103	104	99.6	106
Glenveagh	02-Jun	99	7.4	88	100	99	99	101	7.5	102	101	99	99.2	95
Majestic	02-Jun	99	7.2	104	97	96	101	(102)	(7.3)	(108)	(100)	(105)	98.9	94
Stefani	02-Jun	98	7.0	107	101	98	94	(98)	(7.0)	(98)	(98)	(97)	99.5	94
Piccadilly	03-Jun	100	7.1	103	107	94	97	(99)	(7.2)	(101)	(99)	(96)	98.7	90
Tyrella	04-Jun	97	6.7	114	100	91	93	96	6.7	109	94	94	99.7	101
Glenroyal	05-Jun	100	7.2	95	95	106	101	103	7.3	103	103	104	99.7	98
Clanrye	06-Jun	100	7.1	97	96	112	95	(102)	(7.6)	(106)	(103)	(95)	99.3	93
Drumbo	07-Jun	98	6.7	102	91	102	94	100	6.7	101	99	101	100.9	107
Aberchoice	09-Jun	102	6.6	95	93	111	105	105	6.5	100	106	106	101.6	119

Data based on the mean of Diploid & Tetraploid Control varieties.

*DMD and WSC controls data is shown as g/100g on this Table and have been taken from both the GP and SG Trials.

Ground Cover values for Simulated Grazing are derived from Year 2 values in Appendix 3.

Late Diploid PRG variety descriptions can be found on page 19.

Recommended Late Tetraploid Perennial Ryegrass Varieties 2016

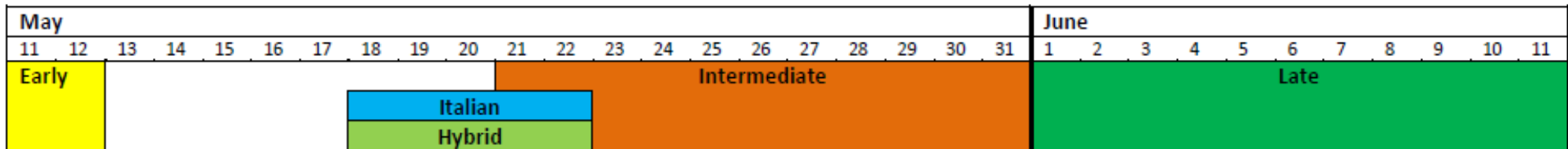
Variety Name	Heading Date	General Purpose (2-Cut Silage)					Simulated Grazing					*DMD %	*WSC %	
		Total Rel. Yield GP	Ground Cover 1-9	Spring Growth	1st Cut Silage	2nd Cut Silage	Autumn Growth	Total Rel. Yield SG	Ground Cover 1-9	Spring Growth	Summer Growth			Autumn Growth
<i>Control Mean (t DM/ha)</i>		14.0	6.6	1.0	4.5	3.9	3.0	10.2	6.5	1.1	7.0	2.1	82.9	21.4
Astonenergy (T)	02-Jun	101	5.6	91	102	98	102	101	5.7	91	101	104	102.0	114
Delphin (T)	02-Jun	103	5.9	107	105	102	101	101	5.5	97	103	99	100.3	100
Alfonso (T)	04-Jun	98	6.2	101	100	95	98	101	6.3	94	102	103	101.4	111
Abergain (T)	05-Jun	107	6.2	121	105	106	106	105	6.1	108	104	104	102.0	115
Aspect (T)	06-Jun	(102)	(6.7)	(103)	(96)	(107)	(102)	(102)	(6.7)	(101)	(103)	(98)	101.2	105
Navan (T)	06-Jun	102	6.2	91	95	108	107	102	6.2	93	102	108	100.7	105
Kintyre (T)	07-Jun	104	6.1	102	96	110	108	103	6.4	102	101	111	100.9	106
Twymax (T)	07-Jun	101	6.4	95	98	110	98	(99)	(6.1)	(81)	(104)	(94)	100.8	103
Aberplentiful (T)	09-Jun	104	6.3	98	97	110	108	108	6.1	111	107	107	100.9	104
Solas (T)	10-Jun	105	6.4	100	94	114	108	(106)	(6.4)	(106)	(104)	(113)	101.1	104
Xenon (T)	11-Jun	102	6.8	93	92	118	100	102	6.8	99	102	102	101.1	108

Data based on the mean of Diploid & Tetraploid Control varieties.

*DMD and WSC controls data is shown as g/100g on this Table and have been taken from both the GP and SG Trials.

Ground Cover values for Simulated Grazing are derived from Year 2 values in Appendix 3. Late Tetraploid PRG variety descriptions can be found on page 20.

Heading date range on RL 2016



- * Important to keep heading date in mind when choosing a variety for sowing...

Heading date trial

- * There are 4 heading date trial sites;
 - * Athenry, Backweston – Intermediate varieties (2015/2016)
 - * Donegal & Moorepark – Late varieties (2015/2016)
- * Sown in September/October of each year.
- * 3 reps of 16 single plants x number of varieties.
- * Assessed in May/June of the following year.
- * Benchmark varieties used in each trial.
- * Candidate varieties; Year 1 and Year 2.
- * Also included are RL varieties.

Heading date trial – Single Plants



2016 Sowings



- * 5 Trial Sites were sown in May 2016.
- * All varieties were sown at all sites.
- * 3 Sites Simulated Grazing Trials – Backweston, Moorepark & Donegal.
- * 2 Sites General Purpose / 2-Cut Silage System – Athenry & Kildalton.
- * As is normal, there will be two sowings of all varieties, with each sowing having two harvest years, giving a total (or minimum) of 4 harvest years for each variety.

2016 Sowings – No. of Grass Varieties

2016 Intermediate Trial

No.	Status
4	Control Varieties
5	Rec. List Varieties
5	Year 2 Varieties
10	Year 1 Varieties
24	Total

2016 Late Trial

No.	Status
4	Control Varieties
9	Rec. List Varieties
9	Year 2 Varieties
8	Year 1 Varieties
30	Total

Harvest 2016



Grass Harvest 2016

- * Harvest 2016 – still continuing for 2014 and 2015 sown plots.
- * 9 different grass trials being harvested in 2016.
- * 2016 sown plots are not harvested until next Spring (2017).
- * 3 replicates of each plot in randomized blocks are harvested.
- * Cut 8 of Simulated Grazing Trials completed.
- * Cut 5 of General Purpose Trails completed.
- * Weather permitting, all cuts should be completed by mid October.

Grass Harvest 2016

- * Quality analysis carried out on Simulated Grazing plots in Backweston by Teagasc Grange (April – Sept.)
- * Ground Cover scores due to be carried out at the end of the year on Harvest Year 1 and Harvest Year 2 plots.

General Purpose Protocol

- * The GP protocol currently has 6 cuts, with cuts 2 & 3 being 1st & 2nd cut silage respectively.
- * Cut1 is Spring growth, cut 4 'Late Summer' growth and cut 5 & 6 is Autumn growth.
- * The Spring growth, silage cuts and Autumn growth are presented in the RL tables along with total annual DM yield and GC score.
- * There is a close correlation between Spring growth in both protocols.
- * May look at the possibility of having a 3-Cut Silage System, with cuts 1, 2 & 3 being 1st, 2nd & 3rd cut silage respectively and have a cut 4 (final cut) in October.

Trial Protocols

SG

Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Cut 6	Cut 7	Cut 8	Cut 9
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GP

Cut 1	Cut 2 1 st Cut Silage	Cut 3 2 nd Cut Silage	Cut 4	Cut 5	Cut 6
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**Proposed
New
Silage
Protocol**

Cut 1 1 st Cut Silage	Cut 2 2 nd Cut Silage	Cut 3 3 rd Cut Silage	Cut 4
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Recommended List 2017

- * The current RL has three different sets of data presented for Intermediate and Late PRG varieties;
 - * General Purpose (2-Cut Silage)
 - * Simulated Grazing (also known as Frequent Cutting)
 - * Pasture Profit Index (PPI)
- * All this data comes from DAFM NL/RL trials.
- * Need to simplify the Recommended List and use one means of recommending varieties...

Recommended List 2017

- * It is envisaged to use the PPI model to select varieties for recommendation in 2017.
- * For breeders/agents this should mean a more simplified 'merit' file.
- * DAFM will continue to issue this data to breeders/agents.
- * Harvest reports for the current harvest year will continue to be issued in their current format.
- * One main table of Inter and Late varieties?
- * Detail to be agreed in coming months...

Summary

- * Varieties are evaluated for both NL and RL purposes.
- * Harvest 2016 hoped to be completed by end of October (weather permitting).
- * Looking at reviewing the GP protocol to 3-cut silage system.
- * RL 2017 likely to be published in Spring of next year.
- * Varieties likely to be recommended on PPI model.
- * Details to be agreed...
- * Please use RL varieties.



Thanks for your attention
Go raibh míle maith agaibh