



Irish National List / Recommended List White Clover Variety Evaluation Trials

Industry Information Meeting
16th September 2016

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Department of
**Agriculture,
Food and the Marine**

An Roinn
**Talmhaíochta,
Bia agus Mara**

Topics to be Discussed



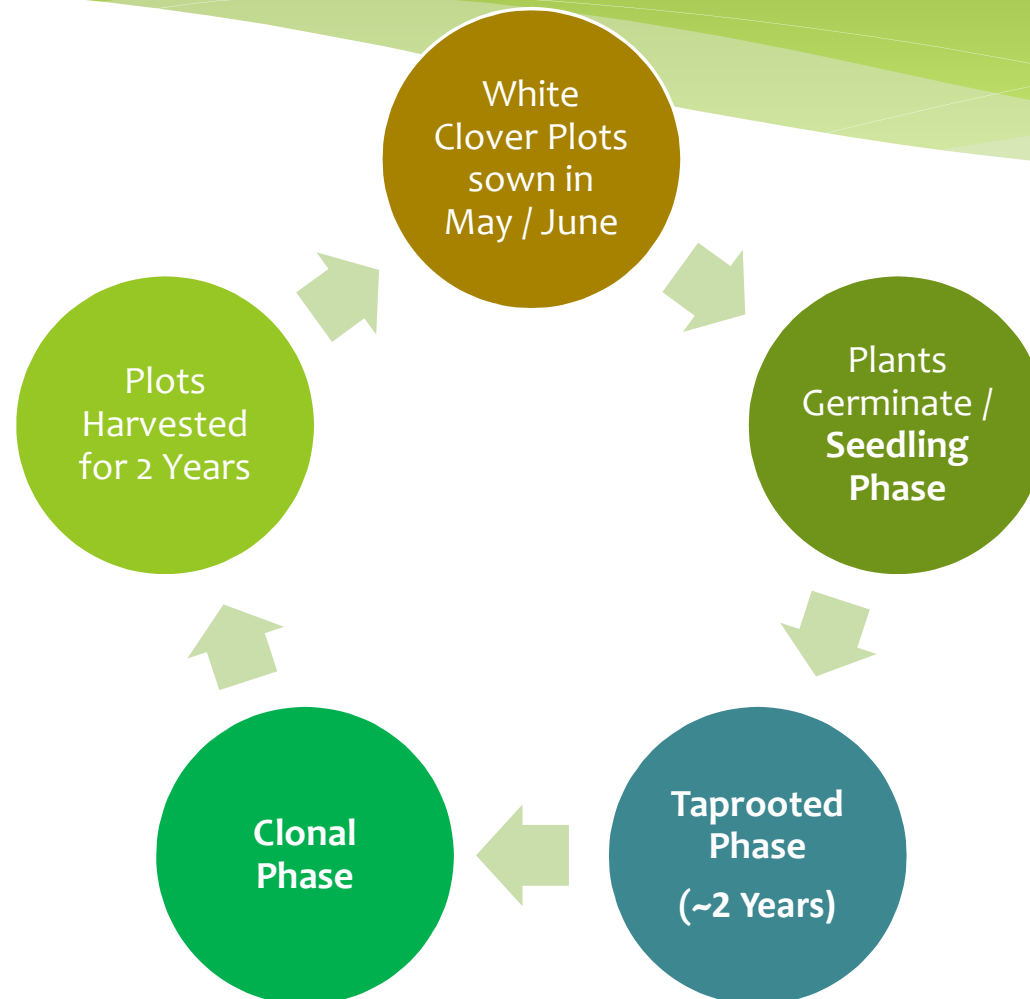
- * DAFM White Clover Variety Evaluation System
- * 2016 Sowings of White Clover
- * Harvesting and DM Yields of White Clover
- * 2016 Recommended List White Clover Varieties
- * Summary

White Clover Variety Evaluation



- * DAFM evaluates White Clover at 4 different trial sites around the country; Backweston, Kildalton, Athenry and Donegal.
- * As with PRG, there are two sowing years and two harvest years.
- * Unlike PRG, White Clover varieties are sown every two years and not every year.
- * White Clover varieties are given a period of almost two years to establish, before harvesting – Why?

White Clover Variety Evaluation



White Clover Variety Evaluation



A variety sown for the first time in 2016 will not have completed it's 4 Harvest Years until 2021

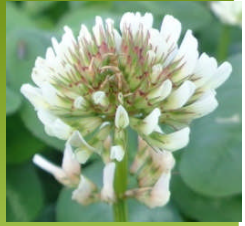


White Clover Variety Evaluation



- * Plots are 7m long x 1.63m wide (to plot centres) and are laid out in a randomized block design, with three replicates of each plot sown.
- * Clover is sown at a rate equivalent to 5 Kg/ha and is sown with a companion grass (Late diploid).
- * A grass buffer strip approx. 30cm wide is sown between plots to prevent varieties encroaching on each other.

White Clover Variety Evaluation



- * There are 4 control varieties in each sowing;
 - * Barblanca & Alice (large leaf)
 - * Chieftain & Crusader (medium leaf)

2016 Sowings



2016 White Clover Varieties

No.	Status
4	Control Varieties
3	Rec. List Varieties
4	Year 2 Varieties
10	Year 1 Varieties
21	Total

Harvesting of White Clover



- * Plots are harvested on a 7-Cut system.
- * Plots receive 50 kg N/ha in early March.
- * All plots are harvested with a Haldrup Grass Harvesting Machine and plot weights recorded for each plot.
- * Subsamples of clover are taken and dried in industrial ovens to determine the Dry Matter of each plot.
- * Two sites, Athenry and Donegal are grazed with sheep for approximately 24 hours following harvesting.



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Trial Protocol



Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Cut 6	Cut 7

BW & KK



Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Cut 6	Cut 7

AY & DL

Harvesting of White Clover

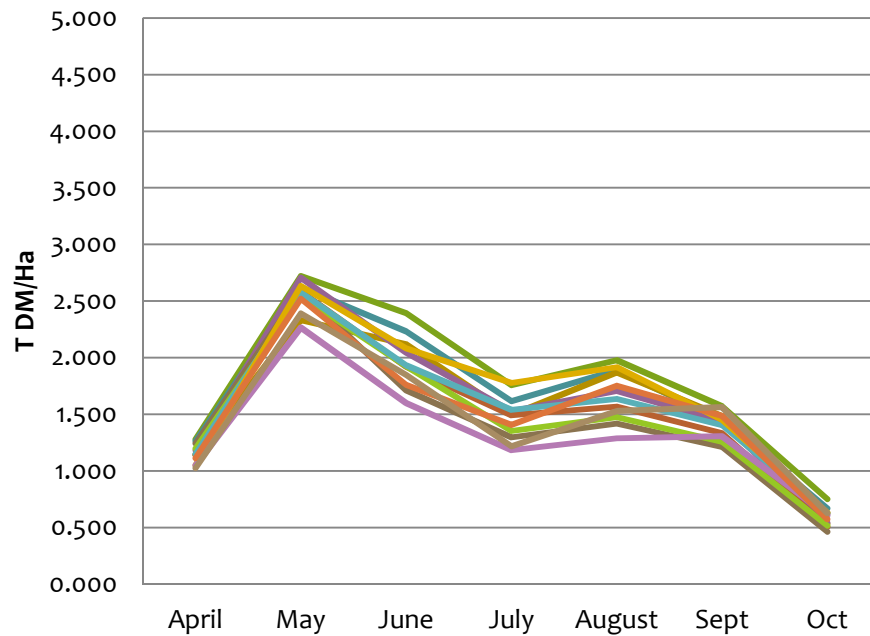


- * Clover separations are carried out to determine the proportion of clover versus grass in the plots.
- * This data is included in the RL tables as ‘Clover %’.

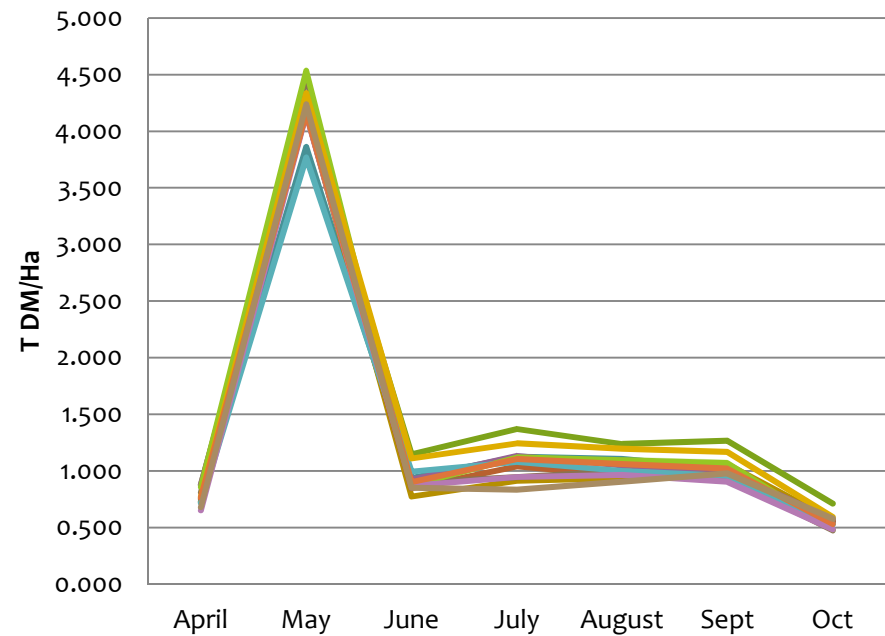
DM Yield of Clover across the season



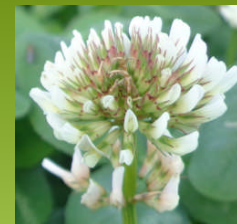
12 WC Year 1



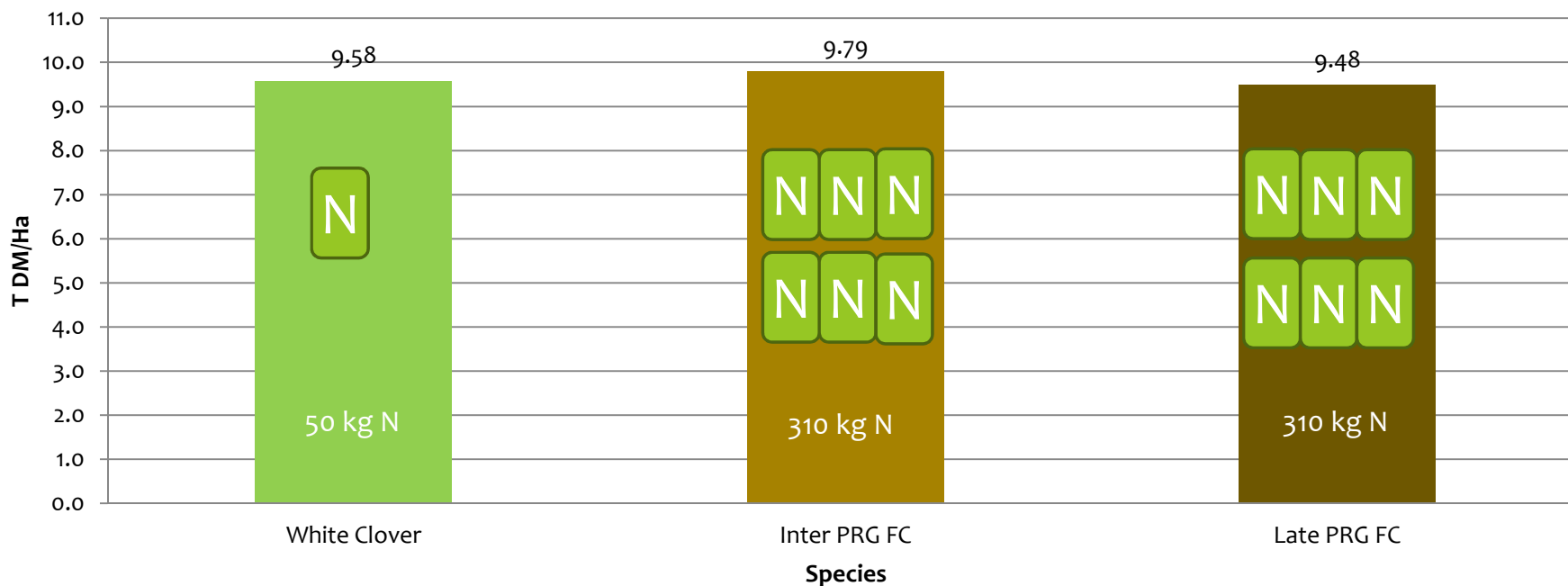
12 WC Year 2



Mean Annual DM Yield of White Clover Plots vs FC PRG Plots in 2015



Total Annual DM Production of White Clover, Inter PRG and Late PRG in 2015 (Year 2 Harvest data)
NL/RL Trials*



*Mean of all varieties in their respective trial. 1 Year Harvest data.



RL 2016 - White Clover



Grass and White Clover Varieties



Irish Recommended List 2016
CROPS EVALUATION AND CERTIFICATION DIVISION



www.agriculture.gov.ie

- * 9 White Clover Varieties listed
- * Varieties listed in order of leaf size (from largest to smallest)

Recommended White Clover Varieties 2016

Variety Name	Total Yield	Leaf Size*	Clover %	Year 1 st Listed	Breeder	Origin
<i>Control Mean: (t DM/ha)</i>	9.8					
Barblanca	105	Large (0.78)	50	2009	Barenbrug	NL
Alice	99	Large (0.76)	50	1995	IBERS	UK
Chieftain	98	Medium (0.68)	47	2005	Teagasc	IRL
Buddy	100	Medium (0.63)	45	2015	Teagasc	IRL
Avoca	103	Medium (0.61)	47	1995	Teagasc	IRL
Iona	94	Medium (0.59)	44	2014	Teagasc	IRL
Aberherald	98	Medium (0.55)	45	2003	IBERS	UK
Crusader	95	Medium (0.54)	42	2009	Barenbrug	NL
Aberace	99	Small (0.38)	33	2016	IBERS	UK

In the table above varieties are listed in order of decreasing leaf size.

*Values in brackets indicate leaf size compared to the variety Aran (i.e. Aran = 1.00), based on data from UK D.U.S. tests.

Changes to the WC RL in the last 10 Years



Varieties added

Name	Leaf size	Year
Aberace	Small	2016
Buddy	Medium	2015
Iona	Medium	2014
Barblanca	Large	2009
Crusader	Medium	2009

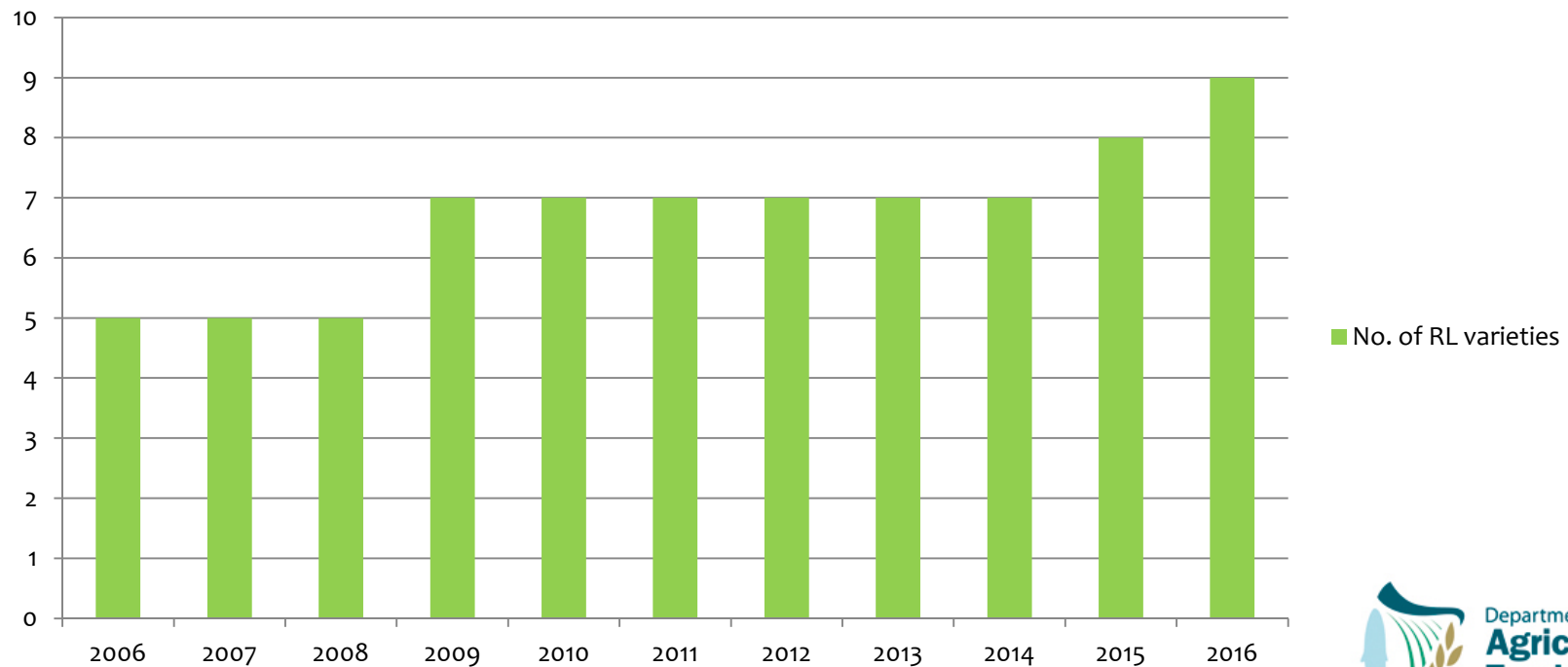
Varieties removed

Name	Leaf Size	Year
Aran	V. Large	2014

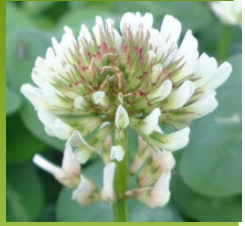
No. of varieties recommended in the last 10 Years



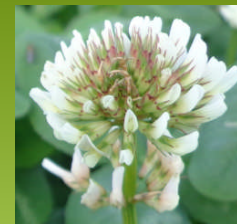
No. of WC RL varieties 2006 - 2016



Summary



- * Evaluation of new varieties of White Clover can take a significant amount of time.
- * Good DM yields from relatively low levels of fertilizer.
- * Medium leaved varieties tend to be favoured by breeders.
- * Please use RL varieties.



Thanks for your attention
Go raibh míle maith agaibh