

Grass Breeding Initiative Consultative Meeting 16/9/16 (65 in attendance)

Brian Wickham – Chair

Welcomes and thanks the audience for attending, all sectors of the grassland industry were represented; farmers, seed merchants, grass breeders, advisors and researchers.

Introduces the different presentations and speakers – following the agenda.

David Cummins – DAFM

Outlines why the DAFM evaluate varieties.

The criteria include that the varieties should be distinct, uniform and stable (DUS), in other words that the variety is not another variety on the market with a different name.

Explains a schematic diagram of how a variety becomes commercialised.

The Recommended List is published in February of each year. There were 4 new varieties added to the R. List in 2016; 'Alfonso', 'Kerry', 'Nifty', and 'Xenon'. Five old varieties were removed from the list; 'Abercraigs', 'Giant', 'Mezquita', 'Rodrigo' and 'Trend'.

There are a total of 38 varieties being tested currently with a 50:50 split between diploid and tetraploid.

David outlined the 'Heading Date' trial that the DAFM are running across four of their sites; Athenry, Backweston, Donegal and Moorepark. Plots are accessed in May and June. Quality samples are taken at harvest and tested at Teagasc Grange.

The DAFM have two protocols to follow when testing a new variety. 'Stimulated Grazing', the plot is cut 8 times in the year. The 'General Purpose' protocol currently has 6 cuts, with cuts 2 and 3 being 1st and 2nd cut silage, respectively. Cut 1 is spring growth, cut 4 'Late Summer' growth and cut 5 and 6 are Autumn growth. There is a close correlation between spring growth in both protocols. As a result the DAFM proposed introducing a new silage protocol. This protocol involves 4 cuts and with cuts 1, 2 and 3 being 1st, 2nd and 3rd cut silage respectively, but not finalised.

Recommended List 2017: it is envisaged to use the PPI model to select varieties for recommendation in 2017.

The RL file will have the PPI on it, in the main file, the likely format needs to be discussed and finalised in coming weeks.

Padraig Walshe – Farmer

Q. Are 'grazing trails' taken into account in the R. list – no not at the moment. The DAFM have worked with Teagasc on a small number of varieties. Didn't think three cut silage was useful, not reflective of current farm practise. Suggest – grazing, silage, silage, grazing as the protocol spread.

Tim O'Leary – Farmer

Three cut silage not the norm at farm level, this is a questionable move.

Q Are the yields of varieties on PBI taken into account? Questions the need to have a protocol for a 3 cut silage system. The yields used in the R List are coming from plots run by the DAFM. In the current data spring growth in the two current protocols are very similar.

Dave Barry – Goldcrop

Q The R List provides the farmer with a lot of extra information for example silage yields – will this information be lost if we go for only the PPI template? All data collected from plot trials will need to be introduced into the PPI model.

PPI is around for two years and there has been good uptake from farmers, however D Barry is concerned that one figure is dangerous when there is a whole collation of data behind it

There needs to be more measures to make the PPI more representative and more accurate.

George Ramsbottom – Teagasc

Q Do all varieties undergo both protocols, Stimulated Grazing and General Purpose?

Laurence Sexton – Farmer

Q What is the objective of the new protocol? To put different stresses on the plant to identify varieties that are more suited for silage production.

Pat Dillon – Teagasc

New protocol will determine whether a variety is suitable for silage quicker - however there are a number of problems with this method, reducing tiller density.

Sean McCarthy – Kerry Group

The PPI has got excellent traction will farmers locally – R. List is not suitable for farmers.

Gerry Hopee

Can't lose all information on R. List in PPI – need the breakdown of yields.

Tom McGuinness – Seed direct

Farmers are now cutting smaller yields of silage in his area because they are looking for quality – however leaving the grass grow from October to early May without a grazing is questionable.

Pat Cashman – Goldcrop

Suggested to survey a number of farmers.

Dermot Campion – Germinal Seeds

Suggested to divide the PPI into early, intermediate and late heading dates.

Michael Slattery

More silage now been taken from outside blocks on dairy farms, not coming from grazing blocks.

Dave Barry - GoldCrop

Information on agronomic data is needed in RL, present as well as PPI. Is the PPI fit for purpose, it is reflective of the value of the varieties.

Tom McGuinness – Seed Direct

Three cut silage used on farms in Meath region.

Dermot Grogan - DAFM

Target two cuts, no grazing in silage, SG for rest of year thereafter.

Conor Creedon – Farmer

Three cut system not useful. PPI - farmers will learn how to use it and will make the right decision when using the PPI.

Seamus Slattery – Agritech

PPI ranking, is the published difference reflective of the real difference between varieties

Chairman – Summary

Proposed Silage Protocol – doesn't match what is occurring on commercial farms – needs to be reconsidered by the DAFM.

Discussion with farmers and KT groups to establish what makes them choose one variety over another. Needs to be developed in coming year.

Envisaged to use the PPI to select varieties for recommendation in 2017 with all data available for those who want greater details.

Discussion needed on the presentation and layout of data in revised Recommended List.

Michael O'Donovan – Teagasc – Research Update – On Farm Data

Opening comments –

- The PPI is well established – third scientific publication accepted by Journal of Agricultural Science, Cambridge.
- Industry needs to make more use of sub-indexes, in order to fully understand varieties.

Why on farm evaluation – plots have minimal stress, need feedback from the industry.

On farm trials give the true performance of a variety, in a range of environments

Begin to establish a relationship between plot and paddock performance.

On farm trial started in 2011-12 with the control variety Tyrella. The control was changed to Abergain in 2015 as farmers were finding Tyrella difficult to graze out and it was moving down the PPI list. Abergain a late tetraploid, may be difficult on heavier soils.

Aim is to have the full R List on farm.

Currently 18 varieties across 104 farms (data presented is from 68 farms).

Goal is to have 10 farms per county eventually.

Analysis presented was from 2012 – 2015 on 68 farms.

Average DM production for all varieties – 12.8 tonne; however, 1.3 tonne between the top and bottom varieties.

There was also a difference between the number of grazings achieved on different varieties which occurred due to management. There was a difference of one full grazing between Aston Energy and Majestic.

Interesting seasonal difference.

150 kg DM/ha difference in spring, 1,500 kg DM/ha difference in summer and 1,000 kg DM/ha difference in autumn production between the different varieties.

Grass quality is also being tested on farm – 30 farms in total – samples taken every two weeks. Results are following similar trends to previous work.

Ground score is measured on all varieties on farm over the winter. Interesting the way some varieties, for example Glenveagh, start off with a high ground score but the ground score reduces over time.

Consistent performance in persistency and DM production are key indicators of a good variety.

Digestibility and ground score are two KPI which vary greatly when comparing plot to paddock trials. The effects of the grazing animal and the carryover of poorly grazed swards are not seen in plots.

Pat Cashman – Goldcrop

Q From the data presented the best varieties will vary within each year – should farmers be using mixtures?

There will always be a year effect, the aim is to see can varieties be consistent, Abergain and Twymax are consistent according to the data.

Michael Slatery - Drummonds

Q Will mixtures be sown on farms?

The priority now is to get the R. List out on all farms and then see where we go from there.

Nicky Byrne – Teagasc – Factors affecting the grazability and persistence of varieties under grass

Objective of the study is to identify and understand factors affecting the grazability and persistence of grass varieties in an intense grazing regime.

The level of utilisation is greatly linked to the grazability of the variety.

59 varieties, 3 species sown at Moorepark.

55 perennial ryegrass, 2 hybrid ryegrass and 2 festulolium – 3 replicates/variety.

Sowing rate of 31 and 41kg/ha for diploid and tetraploid varieties.

Measurement parameters include; pre and post grazing sward heights, quality analysis and persistency/wear tolerance, tiller mass, leaf area, extended tiller height, extended sheath height and free leaf lamina.

Results – pre-sward height – higher in the diploid varieties, post - grazing height lower in tetraploid varieties.

Water soluble carbohydrates and Dry matter digestibility higher in the tetraploid varieties.

Tillers/m² and ground score higher in diploid varieties.

Showed two correlations; between grass DMD and post grazing heights (0.59) and between post grazing sward height and tiller density (0.58).

David Cummins – DAFM – White Clover Variety Evaluation Trials

White Clover is sown at 4 DAFM sites every second year, and each variety is given two years to establish before harvest. Sown at a rate of 5 kg/ha.

A variety sown for the first time in 2016 will not have completed its four harvest years until 2021.

White Clover undergoes a 7 cut system and plots receive 50 kg N/ha in early March.

Two DAFM sites, Athenry and Donegal graze plots with sheep after cutting. The mean yield of clover from DAFM plots is 9.58 t DM/ha.

Clover separations are carried out to determine the proportion of clover versus grass in the plots.

Nine white clover varieties are listed in the R. List 2016; two large, six medium and one small leafed variety. Over the last 10 years there has been only 5 new varieties added to the list and Aran was removed from the R List after 30 years.

Michael Egan – Teagasc – White Clover on farm cultivar evaluation

Study started in April 2016 where five varieties were sown on eight farms; two in Cork, two in Limerick, two in Laois, one in Kilkenny and one in Galway across different soil types.

White clover was over sown into existing paddocks using an Einbock Pneumaticstar Seeder

Q. What value has white clover to Irish farms? – Research from both Moorepark and Clonakilty was discussed. Results from Clonakilty shows that an extra 58 kg milk solids per cow was produced and 1.9 tonne of extra DM/ha was grown on perennial ryegrass plus white clover swards. Moorepark; milk solids increase by up to 31 kg/cow on perennial ryegrass plus white clover swards. Annual grass production was similar in a grass-clover sward receiving 150 kg N/ha to that in a grass only sward receiving 250 kg N/ha.

What are the main barriers to white clovers use? Farmers are concerned about the slower growth in the spring time. Also ground conditions can be very challenging in paddocks where there is a high percentage of clover. Farmers believe that it is only suited to very dry, free draining soils. On farm trial should overcome this barrier.

Micheal O’Leary – Teagasc – Update on PastureBase Ireland

PastureBase Ireland and AgriNet Grass have merged to create one grassland management programme for Irish farmers.

The redevelopment of PastureBase Ireland is currently underway. Priorities for stage one are the grass wedge, spring rotation planner and the interface. Making it user friendly is the biggest objective. Thinking of the next 2,000 users who may not be familiar with grassland management is the key to the success. The first version of PastureBase Ireland will be released in January 2017. Version two will focus on milk data, feed budget and autumn rotation planner.

Screens are responsive so PastureBase Ireland can be used on all devices, ie smart phone, tablet and PC.

Results from PastureBase Ireland shows that it has been a difficult year to manage grass as in the spring growth rates were 40% lower compared to spring 2015. Also growth peaked at an average of 100 kg DM/ha/day in late May early June.

The average dairy farmer on the system has produced 10.5 tonne DM/ha up to the 1st of September, however these are preliminary results and these farmers are expected to produce 12.5 t DM/ha for the year

Paul Flanagan – DLF Seeds

Would like to see agenda and issues for discussion circulated in advance of meeting.

Overall Summary (Brian Wickham)

Plans to have a Workshop in 2017 discussing how can more genetic gain be achieved in grass breeding

- What is achievable – is 3 - 4% achievable
- What are the obstacles to progress (Slide 5 of Dave Cummins today – looks like the process is very slow)

Making progress with PPI – will be now used as the criteria for recommending varieties. Transition to PPI is progressing and progress is been made.

Attendees 16 September

Farmers	Industry	Research/Advisory/DAFM
Colm, Tim O'Leary, Cork Farmer	Tom McGuinness, McGuinness Seeds	Dermot Grogan, DAFM
Brian Nicolson, Tipperary	Patrick Cashman, Goldcrop	Mark Power, MPK Research
Tim Crowley, Cork	Ken Daly, Kerry	Nicky Bryne, MPK Research
Michael Gowen, Cork	Dave Barry, Goldcrop	Michael Egan, MPK research
Kevin Twomey, Cork	Phil Meaney, Glanbia	Frank Kelly, MPK research
Peter Hynes, Cork	Dermot Campion, Germinal	Gerard Hoppe, AFBI
Matthew Murphy, Galway	Tim O'Reagan, Drinagh	John Maher, Advisory
Denis Finnegan, Cork	Michael Slattery, Drummonds	Noel Byrne, MPK research
Barry Bateman, Cork	Pat Murphy, Acorn Group	Pat Conaghan, Breeder
Padraig, Pat Walshe, Laois	Oliver Vaughan, Germinal	Deirdre Hennessy, MPK Research
Donald, Lucy Bateman, Tipperary	Seamus Slattery, Agritech	Karen Dukelow, Advisory
Philip, John Tyndall, Wexford	Jim Gibbons, Germinal	David Cummins, DAFM
Shane Fitzgerald, Cork	Garrett Sinnott	Donal Coleman, DAFM
Eoin, Eugene Lawlor, Kildare	Tommy Breen, Breen Agri	Brian Wickham, Chairman Ind
Patrick, Danny Cremin, limerick	Kevin Cunningham, DLF	George Ramsbotton, Advisory
Nelius Irwin, Limerick	Paul Flanagan, DLF	Fergal Coughlan, Clonakility
Peter Cagney, Limerick	Tom Bulter, Bulter Agri	Clare Guy, MPK research
Laurence Sexton, Cork	Niall Mac Lochlainn	Brian McCarthy, MPK research
Robert O'Dea, limerick	Sean McCarthy, Kerry	Niamh Cantwell, MPK research
Brian Hynes, Galway		Brid McClearn, MPK research
Conor Creedon, Kerry		Pat Dillion, MPK research
		Ger Courtney, Advisory
		Michael O'Donovan, MPK Research
		Micheal O'Leary, MPK research