

Animal &  
Grassland  
Research and  
Innovation  
Programme



## Teagasc Green Acres Calf to Beef Programme




A Teagasc Joint Programme supported by:



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**“ These farms will host open days, and will act as a focus for discussion groups. Technical information from them will appear in the Irish Farming Independent and Todays Farm ”**

# Foreword



It gives me great pleasure to launch the Teagasc Green Acres Calf to Beef Programme. I would like to thank the 10 beef farmers and their families that have agreed to be demonstration farms as part of this programme and to wish them every success over the coming three years. I would also like to thank our industry partners, Drummonds Ltd., Liffey Mills, Volac Ireland, Grassland Agro, and MSD Animal Health, who are funding this exciting and innovative initiative, and our media partner, the Farming Independent. We look forward to working with all of you over the coming years.

With the increasing supply of beef calves coming from our national dairy herd and a renewed interest among beef farmers in rearing and finishing these calves, Teagasc has committed significant resources in recent years to researching the systems of beef production that produce what the market requires while at the same time returning a high margin per hectare for the farmer. The key variables involved in maximising margins have been identified in our research centres in both Johnstown Castle and Grange, and as Teagasc works with the farmers in this programme to show these components in practice on commercial farms, their full benefits will be demonstrated. In particular the importance of calf rearing skills, soil fertility, grassland management, animal health, financial management and overall farm planning will be the key to the success of these enterprises.

While the 10 demonstration farms in this programme will be working very closely with the programme adviser assigned to this project, they will also continue to work with their own local Teagasc Business and Technology beef adviser. This is essential as it is through these advisers that the important lessons to be learned on these farms will be passed onto the wider audience of beef farmers, both locally and regionally, through our network of clients and discussion groups.

The industry partners who are funding this programme are showing their commitment to the beef sector by supporting a programme where the primary objective is to demonstrate sustainable beef systems that will return worthwhile margins to beef farmers. Farmers, industry and Teagasc have benefitted significantly over the years by working together on a large number of industry funded projects and I fully expect this programme to be no different.

I would like to thank my Teagasc colleagues for producing this comprehensive booklet and for organising the launch to mark the beginning of the Teagasc Green Acres Calf to Beef Programme. I look forward to working with all the partners and participants over the coming years.

A handwritten signature in blue ink that reads "G. E. Boyle".

**Professor Gerry Boyle**  
**Teagasc Director**

# Teagasc Green Acres Calf to Beef Programme – Demonstrating Best Practice

Food Harvest 2020 outlines a target of increasing the value of beef output by 20%. The expansion of the national dairy herd in the coming years due to the abolition of milk quotas in 2015 and the application of sexed semen technology on a proportion of dairy farms will drive an increase in production of dairy bred calves. The result is an increasing supply of dairy bred calves that will be finished as beef. Significant component research information has been generated on dairy beef finishing at Teagasc Grange and Johnstown Castle. However, there is limited data on whole farm dairy calf to beef systems, demonstrating best practice at farm level. This programme will demonstrate profitable dairy calf to beef systems on a whole farm basis through a network of ten demonstration farms. The primary aim of this project is to demonstrate that, where a high level of technical efficiency is achieved on beef farms, it is possible to attain a net margin per hectare (excluding premia) in excess of €500 per hectare.

Gordon Peppard, the dedicated programme adviser will deliver the new Teagasc Green Acres Calf to Beef Programme supported by Drummonds Ltd., Liffey Mills, Volac Ireland, Grassland Agro and MSD Animal Health on a full time basis for three years.

## **The Objectives of the Programme will be:**

- To advise and demonstrate best practice at farm level on the rearing, growing and finishing of purchased dairy bred calves through to beef (steers/heifers/bulls) on a whole farm basis on 10 demonstration farms and to demonstrate the associated economic benefits.
- To provide technical support and targeted training to the technical staff of the contributing stakeholders to the programme.
- To disseminate physical and financial progress / results from the programme through a wide range of communication strategies including monthly coverage in the Farming Independent, farm walks and other channels of communication.



**Pearse Kelly**  
*Head of KT Drystock, Teagasc*



**James Keane**  
*Beef Specialist, Teagasc*



**Gordon Peppard**  
*Programme Adviser, Teagasc*



# Improving Technical Efficiency



# Farmer Profiles



A Teagasc Joint Programme supported by:



# David Drum

**Athboy, Co. Meath.**

**Teagasc Adviser: Ned Heffernan.**



David currently has a cattle and tillage enterprise on his farm. He runs a herd of 70 suckler cows and brings all the progeny to beef. There are presently 90ha in grassland.

David previously bought continental weanlings in autumn and finished them as bulls at 20-22 months of age. Buying weanlings for this system meant tying up a lot of money in stock and like most farmers slaughtering bulls in spring 2014 he was hit hard with the low beef prices.

Last year he decided to buy Friesian calves and rear them. This reduced the purchasing costs of stock on the farm. He has years of experience of calf rearing as his family are originally dairy farmers. He reared 100 calves in spring 2014 and also bought more Friesian weanlings in autumn as opposed to buying continental weanlings. He also purchased some Hereford bull calves to see how they will compare to the Friesian bulls.

David's plan in the Teagasc Green Acres Calf to Beef Programme will be to slaughter bulls at 18 months as there will be no facilities to house bulls for a second winter. Grassland management will be the key management tool for David in this programme. He has got very good housing facilities for weanlings and calf rearing and all his land is reseeded due to crop rotations. Yearlings will go to grass for 100-120 days and then be finished in the sheds for 100 days. David has also some experience of Zero-grazing bulls and has not ruled out using this system on his own farm in the future. He also grows all his own grain and maize for use on the farm which will reduce feed costs over the winter.

# Eamonn Kirk

**Dundalk, Co. Louth.**

***Teagasc Adviser: Hugh Rooney.***



Eamonn is farming 25ha of grassland and also has tillage on the farm. He previously finished his continental bulls at 24 months of age. He decided to move away from this system in 2014 and now plans to slaughter steers at 24-26 months of age. He has reared Angus calves in the past and last year he slaughtered bullocks off grass in June at 26 months of age. Eamonn intends to rear more calves in 2015 so he will not have to purchase any weanlings or stores in autumn 2015.

One option for Eamonn in the Teagasc Green Acres Calf to Beef Programme is to slaughter all steers at 24-26 months in April-June at a higher beef price. This system allows more weight to be put on at grass at a lower cost to the farmer. This will reduce stocking rates due to some animals going to grass for a third grazing season. Another option is to finish his Angus steers at lighter carcass weights off grass at the end of the second grazing season. This would allow for an increase in stocking rate on the farm. All these options will be discussed between Eamonn and the Teagasc management team. Eamonn has a high stocking rate at present and last year he directly stitched Italian ryegrass into stubble ground in September. This worked very well and allowed him to graze bullocks outside until mid-December at a very low cost. The Teagasc Green Acres Calf to Beef Programme will help Eamonn increase grass utilisation, reduce costs and increase output on his farm.



# Conor Greene

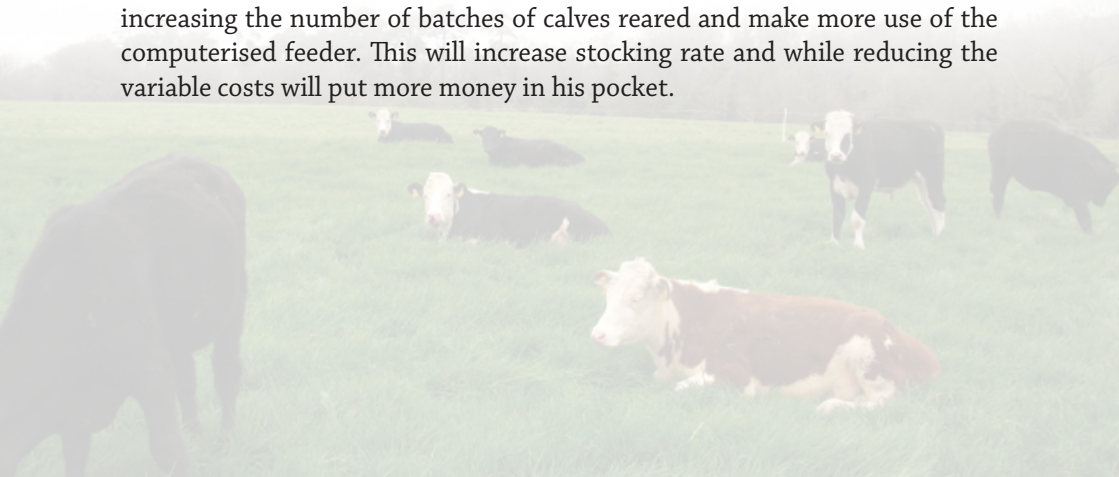
**Mullingar, Co. Westmeath.**

***Teagasc Adviser: David Webster.***



Conor is farming 70ha of good quality land in Rathowen, Co. Westmeath. He buys Friesian calves and slaughters them at 30 months off grass with a small amount of concentrate. He reared 80 calves in 2014 and has vast experience of calf rearing. He comes from a dairying family and knows all the pitfalls associated with it. Conor has always slaughtered all his steers at 30 months. Through targeting more forward stock and getting them out to grass earlier Conor may get some bullocks away to the factory at 26 months in June at a higher beef price.

Grassland management is high on his priority list as well as continuing the reseeding programme. Conor returned from Australia two years ago to continue the calf to beef system and is already increasing stock numbers, putting in paddocks and water troughs. He has a computerised calf feeder which can feed 60 calves in a group. He will increase output on the farm by increasing the number of batches of calves reared and make more use of the computerised feeder. This will increase stocking rate and while reducing the variable costs will put more money in his pocket.



# Michael Ryan

**Mullingar, Co. Westmeath.**

***Teagasc Adviser: Paul Gibney.***



Michael is currently farming 40ha of good quality land. He began rearing calves on his farm 5 years ago after a bad outbreak of TB and last year he bucket fed 91 Angus and Hereford heifers. He works full time and needs a system in place that is straight forward and profitable. Our plan for Michael in the Teagasc Green Acres Calf to Beef Programme is that all the heifers will be slaughtered off grass at 19-20 months in the autumn. This means they will not go back into the shed for a second winter thus reducing costs. Up to now these stock have been rehoused for that second winter. This will be a challenge but through reseeding old grassland, increased utilisation of grass and putting in a new paddock system this will be achieved. These heifers have to be gone before the second winter as Michael has only enough shed space to carry his 100 weanlings.

There may be an option in later years to build a shed. This will depend if grants are available and the overall cost of the shed is justifiable. When the new paddocks are in place and reseeding is complete Michael hopes to increase stocking rate which will increase output. Michael is very enthusiastic about measuring grass on the farm and this will pay dividends for him in the future. He works off farm and getting a simple system in place that works for him is crucial to give him time with his family.

# Michael Flynn

**Nenagh, Co. Tipperary.**

***Teagasc Adviser: Michael Daly.***



Michael was previously running 55 autumn calving suckler cows on his farm outside of Nenagh but cut this back to 27 cows in 2014, in order to expand his calf to beef enterprise. He slaughters his autumn born bulls at 16-17 months old and heifers at 18-20 months. Michael and his wife Kathleen first reared 20 Hereford calves a few years ago and got on very well when they slaughtered them. This gave them great confidence that they could make this work on their farm. As a result of this they reared 80 calves last year. These will be slaughtered at 20 months of age at the end of the second grazing season. Their previous experience of this has been very successful with them reaching good carcass weights for bullocks at 20 months. The weight for age is excellent and proves that Michael is a very good grassland manager. He has a great dry farm, like so many other farmers, but is utilising it very well by reseeding, and has paddocks in place.

The plan for Michael in the Teagasc Green Acres Calf to Beef Programme is to keep cows numbers the same and increase stocking rate through rearing more calves. This is only possible because Michael is such a good grassland manager. Like most farms, the more simplified the system, the easier it is to implement. We may also look at more animal housing for rearing calves and housing weanlings, if numbers are to increase. Michael's wife Kathleen and their sons have also a great enthusiasm for farming and with their help this new programme will drive on their output, stocking rate and profitability on the farm.



# Christy Dowd

**Castlerea, Co. Roscommon.**

***Teagasc Adviser: Ger Cregg***



Christy is farming 43ha and is carrying 43 cows on a suckling to weanling enterprise using all AI bulls. He is an ex-dairy farmer and this can be clearly seen in his attitude to grassland management. He has been measuring the home block of 28ha on Pasture Base over the last year and has grown over 14t DM/ha on some paddocks. This grass budgeting gives him the confidence to make informed decisions on spreading fertiliser or taking out paddocks for silage. It also shows him which paddocks are performing well and which are a priority for reseeding and the aim is now to put paddocks on the whole farm.

Christy has adequate housing for his suckler cows and 60 dairy bred weanlings. His dairy experience and calf rearing in the past has given him the confidence to try and diversify his farming enterprise. He has decided to rear 60 calves in spring 2015. He is probably going to buy Friesian calves and slaughter them at 24 months. He may choose Friesians this year because early maturing Angus and Hereford calves have been so expensive to date. The 18-20 month steer or heifer system would suit Christy ideally because he is a top grassland manager and could put a lot of weight on cheaply at grass. The Teagasc Green Acres Calf to Beef Programme will help Christy get up and running with his new calf rearing enterprise. He is diversifying to increase output on his farm and this should be of great interest to many other suckler farmers who wish to continue suckling but may also wish to rear some calves for the first time.



# Joe Farrell

**Castledermot, Co. Kildare.**

***Teagasc Adviser: Christy Watson***



Joe is farming 30ha of grassland and also has a tillage enterprise on the farm. He rears 100 Angus heifers each year and slaughters them out of the shed at 20-22 months. Calves are bought from the marts in the South. Joe has great passion and enthusiasm for farming and this can be clearly seen in his yard and sheds. His yard is kept very clean at all times and this attention to detail can be seen in his attitude to the type of cattle he produces. His heifers go to grass in early spring so they can gain as much weight from grass as possible. Joe has also a tillage enterprise on the farm and he grows his own grain and maize for finishing.

The plan for Joe in the Teagasc Green Acres Calf to Beef Programme is to measure grass, increase grass utilisation, increase stocking rate, therefore improving output on the farm. He intends to increase output but keep the variable costs static so as to put more money in his pocket. Joe is highly stocked and wants to drive on grassland production. He is an ideal candidate for the calf to beef programme and with the help of the programme adviser will hit all the targets set out for him.



# John Lalor

**Ballyfin, Co. Laois.**

***Teagasc Adviser: Paul Gilligan***



John and his sons Matthew and John Clyde are farming 41ha of grass and 48ha of tillage at present. This is a very dry farm of land running heifers only and finishing out of the shed at 22 months of age. John was in suckling but decided a few years ago to get out of cows and concentrate solely on a calf to beef enterprise. He slaughters 100 Angus or Hereford heifers each year. He has become very professional at rearing calves as he bought 100 calves last spring and has 99 weanlings for grass. He has a very cheap system of wintering his weanling calves. They are fed silage and meal in a straw bedded shed but have access at all times to stubble ground outside. These cattle are very fit and healthy and will be ready to put on weight as soon as they start grazing grass.

John has reseeded the farm over the last few years as a result of rotating tillage ground and now he needs to put a paddock system in place. He is highly stocked and if he had a paddock system in place, he could push this on further. John Jnr. is also very interested in driving output on the farm and they both have agreed that they would reduce tillage ground if necessary and rear more calves if the figures stack up. The Teagasc Green Acres Calf to Beef Programme will give John and his family advice on grassland management, herd health, stocking rate and this will help increase profit on this farm.

# Pat Bowden

**Ballyragget, Co. Kilkenny.**

***Teagasc Adviser: Terry Carroll***



Pat is a young farmer who has recently taken over the home farm. He farms 107ha of grass, where the land type is heavy for this part of the country. He is running 40 suckler cows and sells some of these as stores at 18 months and slaughters more of them as bullocks and heifers at 24 months. There has always been a tradition of rearing calves on this farm and last year he reared 70 Friesian bullocks.

Pat has been reclaiming, fencing and reseeding land over the last few years and as result of this he is not highly stocked. Pat will gain invaluable advice about herd health, reseeding, grassland management and utilisation from the Teagasc Green Acres Calf to Beef Programme. There are many options available to Pat, from finishing bullocks out of shed at 24 months to finishing off grass at 26-30 months. The key tools for Pat going forward will be reseeding and using a paddock system. There is huge scope for Pat to increase output and profit on this farm and he is very interested and driven by the new programme. He was working off farm but is now at home full-time. Pat has a great asset and now needs to drive output from it, he is young, enthusiastic and willing to work hard which is a great start.

# Ben Sweeney

**Enfield, Co. Meath.**

***Teagasc Adviser: Gordon Peppard***



Ben is farming 110ha of grassland and also grows maize and barley on his farm. He currently rears approximately 140 calves each year. He buys Friesians bull calves and Angus heifers and everything is brought to slaughter. The bulls are finished between 18 to 20 months and the heifers are finished at 20 months. Ben has also purchased some autumn born calves to rear as this reduces the workload in the spring. He has a Volac computerised calf feeder on the farm and will make more efficient use of it by rearing calves in the autumn time. The feeder will feed around 60 calves in a group, so each year he will rear 120 spring born calves with the feeder and 20 on the bucket system.

Ben has 20 sucklers on the farm running with a bull and these progeny are also brought to finish on the farm. There are a lot of different groups of stock on this farm and to his credit the farm is highly stocked. One of Ben's main objectives in the Teagasc Green Acres Calf to Beef Programme will be to put on as many kilos of live weight as possible from grass. This will reduce feed costs in the different systems and will happen through grass measurement, better utilisation and also by putting in place a paddock system. Ben grows maize and barley on the farm to feed to finishing stock. All these enterprises will be analysed when completing the farm plan to see how to simplify all the systems and to make the farm more profitable.



# Partner Profiles

## Irish Independent

First with the farming news. Every Tuesday.

The Farming Independent is the Irish Independent's dedicated supplement for the agriculture industry. Carried in the Irish Independent each Tuesday, it is read by 244,000 adults nationwide and has a rural audience of over 183,000.

The supplement carries a mix of news, market information and technical articles targeted at the farming sector. The publication prides itself on being independent not only in name but in approach and content.

The Farming Independent is delighted to be involved in the Teagasc Green Acres Calf to Beef Programme. The supplement has a strong track record of working with Teagasc and we look forward to engaging with all the stakeholders in this exciting initiative.

The abolition of milk quotas will bring profound changes to – and opportunities for – the Irish livestock sector. One of the market openings is likely to be the finishing of excess dairy stock for beef. Developing a profitable template for such enterprises will be vital and this is the challenge that lies ahead for all involved.

**Declan O'Brien**  
**Editor**

# Partner Profiles



Drummonds, headquartered in Clonee, Co. Meath, is the leading feed, seeds and grain merchant in north-east Leinster with a network of 10 branches/depots. Drummonds promotes the full-range of quality farm inputs/requisites needed on both livestock and tillage farms.

Drummonds manufactures in Navan a range of ruminant coarse feeds (calf, beef, dairy, sheep), containing only the premier league of wholesome, nutritious ingredients, judiciously formulated to deliver top animal performance. Drummonds' feed specialists provide an on-farm feeding and nutritional advice service.

Drummonds' agronomists provide an unparalleled crop walking service which is supported by our own local research and trials programme close to Drogheda. Drummonds blends a premium range of grass seeds, under the Green Acres brand, which are available through Drummonds and Liffey Mills branches as well as via a growing number of leading co-ops and agri-merchants across the country (both north and south).

Drummonds are extremely proud to be joint sponsors of the Teagasc Green Acres Calf to Beef Programme. Hugely valuable whole farm data will emerge from the dairy calf to beef systems which exist on the participating farms; best farm practices will be identified and a blueprint for farmers rearing and finishing dairy bred calves to beef will be developed. We look forward to working with Teagasc, the participating farmers and the other industry partners over the next 3 years to demonstrate best farm practices to Drummonds' valued beef customers.

**Michael Slattery**  
**General Manager**

# Partner Profiles



Liffey Mills is a leading grain and agricultural merchant. With over 70 years experience our business is closely integrated with the farming community across Ireland. With a team of agronomists, nutritionists and feed specialists with years of both academic and practical experience our aim is to deliver superior quality products that maximise profit for our customers.

Liffey Mills is also a major retailer of fertiliser, seeds, agrochemicals and hardware. We operate from five locations, including three animal feed mills, a toasting and flaking plant and have grain handling and drying facilities on four of our sites.

Liffey Mills relish the opportunity to become involved in this programme as we see the removal of milk quotas as being a watershed in Irish agriculture.

We see growth in the beef industry being driven by calves which are as a result of the increased cow numbers and we want to be involved in the creation of a sustainable road map of profitable beef production in calf to beef systems.

**Pat Ryan**  
**Managing Director**

# Partner Profiles



Grassland Agro is a leading fertiliser company with three industrial fertiliser plants in Limerick, Cork and Slane and Head Office in Dublin. Grassland Agro sources, produces and sell the complete range of conventional commodity fertilisers as well as a comprehensive range of speciality fertiliser and soil conditioning products. Grassland Agro also supplies a full range of animal mineral blocks as well as crop and soil biostimulants.

The company was formed on the 1st February 2013 by the coming together of Freshgrass Group's Grassland Fertilisers business and Groupe Roullier's Timac Agro Ireland business. Grassland Agro has full access to the continuous research and development work of Groupe Roullier's dedicated 350 professional Engineers and Researchers and the Universities and Independent Agricultural Research Institutions with whom they collaborate.

All Grassland Agro products are directly distributed by the Agri Merchants and Co-ops across Ireland. Grassland Agro also has a national network of Agronomy Sales Specialists working with farmers, advising on soil fertility and nutrient management.

We are delighted to be collaborating with Teagasc and our Industry partners to support the work of this programme, and are confident of the benefits it will bring to the Beef and wider Agri Sectors in Ireland. Improving soil and nutrient management on livestock farms is a fundamental step to allow Irish farmers exploit their competitive advantage from efficient grass and livestock production systems.

**Liam Woulfe**  
**Managing Director**



# Partner Profiles



Volac Ireland is delighted to be collaborating with Teagasc and industry partners in this innovative calf to beef initiative.

Volac has a proud history of innovation in calf husbandry and nutrition. Starting with the production of the first acidified calf milk replacers in Killeshandra, Co Cavan 40 years ago, our company has been at the forefront of developments in colostrum substitutes, electrolyte therapy, premium milk replacers and computerised calf feeders.

We are proud of the role our products, technologies and expertise have made in supporting farmers to develop efficient, high-performing calf rearing systems.

Research and farm practice have demonstrated that performance from birth to three months has a critical influence on lifetime performance of beef and dairy animals. Ensuring that the best technologies are used to maximise early life performance is a key priority of this initiative.

We look forward to working with host farmers, Teagasc and industry partners in demonstrating and disseminating nutrition and management practices that will lift overall industry profitability.

**Pat Cahill,**  
**Commercial Director**

# Partner Profiles



**MSD**

Animal Health

The Science of Healthier Animals™

MSD Animal Health offers animal health professionals, farmers and pet owners the widest range of veterinary pharmaceuticals, vaccines and services. MSD Animal Health is dedicated to preserving and improving the health, well-being and performance of animals.

Based in Dublin, our local activities include marketing and sales, technical support and research and development. Calf health and productivity have a direct effect on growth rates which largely determine whether a calf rearing enterprise is profitable. With Food Harvest 2020 aiming to significantly increase farming outputs it is obvious that, in order to achieve this goal, efficiency has to be the key. Outbreaks of pneumonia and scour continue to be the cause of significant economic losses and hardship for cattle farmers. The fact is, many contributing agents can produce similar clinical signs. Good animal husbandry and farm management practices, including a comprehensive herd vaccination scheme, remain the best strategy. Pneumonia and scour are the most common causes of death in calves up to four weeks of age. Mortality costs and treatment expenses are only the tip of the iceberg when it comes to adding up the overall financial losses associated with a pneumonia and scour outbreaks. Studies have shown 12 month old dairy replacement heifers to be ~20kg live weight lighter than potential due to subclinical respiratory disease. Severely sick beef cattle take over 59 days longer to finish than healthy animals.

MSD Animal Health are delighted to be involved as joint sponsors in the Teagasc Green Acres Calf to Beef Programme as it is an opportunity to give back some evidence based, practical results to Irish farmers. We will be supporting the programme with funding and best practice veterinary advice. MSD Animal Health wishes the participating farmers our best wishes and we will be with them every step of the way in making their enterprise more efficient and profitable in the coming three years.

**Seamus Maguire**  
**General Manager**

A Teagasc Joint Programme supported by:





**Contact Details: Teagasc, Loreto Ferguson.**  
**Tel: 049 433 8300. Email: [loreto.ferguson@teagasc.ie](mailto:loreto.ferguson@teagasc.ie)**  
**[www.teagasc.ie](http://www.teagasc.ie)**

