



Teagasc/Irish Farmers Journal

BETTER FARM BEEF CHALLENGE

SPRING FARM WALKS 2019



Maurice Hearne
Leperstown, Co Waterford

Farm walk date and time:
4 April 2pm-4pm

Ricky Milligan
Robertstown, Co Kildare

Farm walk date and time:
11 April 1pm-3pm

IRISH
**FARMERS
JOURNAL**

 **teagasc**
AN tScoil na nOideann agus na nOideann
www.teagasc.ie

 **abp**

 **DAWN MEATS**

 **FBD**
INSURANCE

KEPAK



Teagasc/Irish Farmers Journal

BETTER FARM BEEF CHALLENGE

04

Maurice Hearne



4 Welcome note

5 Farm plan

6-7 Grass and mixed grazing

8 Herd health



10

Ricky Milligan

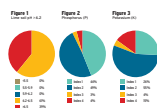


10 Welcome note

11 Farm plan

12 Soil health

14 Slaughter performance



Teagasc/Irish Farmers Journal BETTER Farm management team: Pearse Kelly, Paul Maher, Alan Dillon, Tommy Cox, John Greaney (Teagasc); Matthew Halpin, Darren Carty, Adam Woods (IFJ)

A Teagasc/Irish Farmers Journal initiative, supported by industry sponsors



Edited by: Adam Woods. Copy: Matthew Halpin, Tommy Cox and John Greaney.
Production/artwork: Brian Murphy. Printer: Johnswood Press (info@johnswoodpress.ie)



Adam Woods

Beef editor,
Irish Farmers
Journal

On behalf of the stakeholders of the Teagasc/*Irish Farmers Journal* BETTER Farm beef, challenge I would like to welcome you to this spring series of events. We hope you will find the farm walks informative and that you can take home some key messages to improve the profitability of your own farm. While increasing output has been a central theme to all farms, achieving this higher output via the cheapest possible method is equally important. All of the programme farms have placed a huge emphasis on grass and growing and utilising as much of it as possible in a bid to reduce costs. The farm walks will look at strategies employed by the farmers in relation to early turnout and grassland management. Maintaining the quality in the swards through optimum management means animals will perform to their maximum ability at grass. 2018 was an extremely tough year for many of our programme farms, with storms hitting in spring followed by drought conditions in June and July. This increased costs on many of the farms and this, coupled with difficult market conditions, has meant profits have taken a big hit in 2018. There have been some valuable lessons learned around having a buffer of silage for difficult weather conditions and important messages around dairy-calf-to-beef systems. Many of these issues will be discussed at the farm walks and the farmers should be given credit for talking about these issues in an open and transparent manner. Finally, I would like to acknowledge the continued support of the programme sponsors FBD, ABP, Dawn Meats and Kepak.



Alan Dillon

Teagasc/*Irish Farmers Journal*
BETTER
farm beef
programme
manager,
Teagasc

On behalf of the Teagasc/*Irish Farmers Journal* BETTER Farm Beef Challenge management team, I would like to welcome you all to the farms of Maurice Hearne and Ricky Milligan. Both farmers have been kind enough to open their gates to the public to help demonstrate some of the practices that they have engaged in since joining the programme. I want to thank them and their families and also their local B&T advisers Graham Waters and Austin Flavin for helping. Last year will go down as one of the hardest in living memory. If anything, 2018 demonstrated the value of grazed grass in the diet of livestock with regards to cheap weight gain. Our programme farmers have managed to increase production levels and, while profitability levels didn't improve last year due to adverse weather, they have set themselves up to reap the rewards of increased productivity when more normal weather patterns resume. The strength of the BETTER Farm Beef Challenge is that all the data comes from commercial farms with the same struggles and issues to deal with as any other farm. I hope everyone who attends these open days can take at least one message or new idea home with them.

Ricky Milligan

Unlocking potential of grass key for Kildare farmer

On behalf of myself and my family, I would like to welcome everyone to Robertstown to our family farm. We hope you have an enjoyable visit and that you find the day both informative and worthwhile.

Since joining the Teagasc/*Irish Farmers Journal* BETTER Farm beef challenge programme in 2017, the farm has encountered many difficulties, none more so than the extreme weather events of 2018, which had a severe impact on the development of the farm.

However, farming always throws obstacles in the way and, in spite of these, the farm is constantly making changes to continuously improve and progress towards more efficient and sustainable farming.

The completion of a farm plan in year one provided me with a clear focus on the stocking rate and output required in order to achieve the desired level of profitability on the farm for myself and my family.

The key areas I needed to focus on improving were grassland management, soil fertility and stocking rate.

Over the last two years, I have witnessed first-hand how having good-quality grass in front of stock at all times is key to maximising animal performance.

Along with that, I have started to build P and K levels from soils which had been depleted due to continuous growing of



Ricky hopes to meet his target stock numbers next year.

tillage crops.

My stocking rate is continuously on the rise and I hope to reach my target stock numbers next year and hopefully output will start to increase then.

Finally, we would like to thank our Teagasc BETTER farm adviser Tommy Cox and local B&T adviser Graham Waters.

Furthermore, we would like to thank both Teagasc and the *Irish Farmers Journal* for giving us the opportunity to participate in this programme and we would like to acknowledge the industry stakeholders for their continued support of the programme.

Table 1: Five-year farm plan

Measure	Base year 2016	Target 2021
System	Suckler to steer finish Dairy calf to beef	Suckler to beef Dairy calf to beef
Stocking rate (LU/ha)	1.9	2.6
Land base (adj.ha)	46	49.2
Gross output/ha (kg)	723	1075
Gross output/ha (€)	1,432	2,200
Variable costs	56%	53%
Gross margin €/ha	632	1,035

Steering towards profit with sucklers and calf-to-beef

Ricky Milligan is Kildare's representative in the Teagasc/*Irish Farmers Journal* BETTER farm beef challenge which commenced in 2017.

Ricky, with the aid of his father Henry and family, operates a suckler to steer-beef and dairy-calf-to-beef system on the outskirts of Robertstown, Co Kildare.

The farm comprises of 63.9ha in total, 20.2ha of which is tillage and the remaining 49.2ha in grassland.

The land itself can be described as being top-quality free-draining soil, which has the potential for an extended grazing season.

The grassland area is split in two blocks; the main block of over 25ha is situated around the yard, with the remaining 24.2ha outfarm situated approximately 4km away in Newtowndonore.

Forty spring-calving suckler cows with a genetic base of Hereford crossed with Simmental and Limousin and a 40-calf dairy-calf-to-beef system make up the beef enterprise.

All stock on the farm is taken to beef. Males are slaughtered as steers at 20 to 24 months of age and heifers slightly

younger at 20 to 22 months of age.

While designing the farm plan, the preferred option by Ricky and the BETTER Farm management team to boost output and profitability was to increase the dairy-calf-to-beef operation to approximately 60 to 70 calves and to slightly increase suckler numbers to 45.

The increase in dairy-calf-to-beef would complement the sucklers already in place on the farm, while suitable infrastructure was already in place on the farm to cater for them.

The farm was making steady progress until last year, when extreme weather events during the spring and summer took their toll on the farm. The extended dry spell over the summer severely reduced grass growth on the farm. That, coupled with the late spring, meant a lot of extra meal and forage was purchased, resulting in a significant extra cost to the farm.

While 2018 was one to forget, Ricky is enthusiastic to push on with the farm into the future. The primary focus will be building fodder stocks next year and continue to push to maximise the potential of the farm.

Ricky Milligan

Feeding the soil to produce the feed

Approximately 90% of the soils sampled in Ireland are sub-optimal in one of the three major nutrients – pH, phosphorus (P) and potassium (K). As part of the Teagasc/*Irish Farmers Journal* BETTER Farm beef challenge, the soil health challenge aims to improve soil fertility on participating farms.

The targets for farmers participating in the challenge is to have a pH average of 6.1 on mineral soils and an average pH of 5.7 for peaty soils.

Along with looking to improve pH levels, farmers are also looking to improve P and K levels, with the aim to have at least 70% of the farm in index 3 for both P and K by the end of the programme.

On each farm at the commencement of the programme, one soil sample was taken on every four hectares to determine the P, K and lime status.

Using these results, a nutrient management plan was prepared for the farm to try to rectify any nutrient imbalances.

A soil pH of between 6.3 and 6.5 is ideal to allow for maximum nutrient uptake by roots of the grass. Correcting the pH is the first requirement in optimising grass growth.

ROBERTSTOWN RESULTS

Figure 1 show that all of Ricky's soil samples are pH 6.2 or higher, so Ricky just needs to monitor and maintain these levels.

Recent studies have shown that grassland soils maintained at pH 6.3 to 6.5 have the potential release approximately

Table 1: Nutrient value of organic manure (units/1,000 gallons)

Manure type	N	P	K
Cattle slurry (-7% DM)	6	5	30
Cattle slurry (3% DM)	5	3	15
Pig slurry (5% DM)	19	7	20

60kg to 80kg/ha more nitrogen (N) than soils with pH 5.0, thus representing a significant cost-saving opportunity on Irish farms. Looking at Figures 2 and 3, there was major soil fertility issues to be addressed on the farm with regards to P and K. The results show that almost the entire farm is low in phosphorus, with 44% of the soils at index 1 and 49% at index 2. Just 7% of the farm was in the optimum index of 3 or greater.

Phosphorus is very important for crop establishment and root development; it also plays an important role in the nutrition of livestock. Soils at P index 1 will produce approximately 1.5t/ha less of grass dry matter compared with soils at index 3; therefore, an improvement was essential for extra grass growth.

Potassium levels are also an issue, with less than 20% of the farm in index 3. Potassium increases stem strength, improves drought resistance, cold tolerance and, most importantly, increases yield.

Since the programme started, lower-index paddocks are being targeted with cattle slurry, farmyard manure and compound fertiliser containing high levels of P and K, as opposed to spreading straight nitrogen which was often applied in the past.



All of the farm's soil samples are at pH 6.2 or higher.

Figure 1

Lime soil pH > 6.2

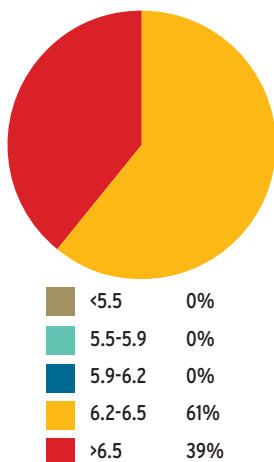


Figure 2

Phosphorus (P)

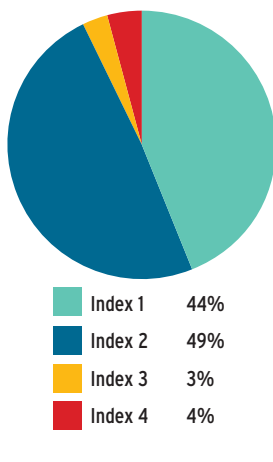
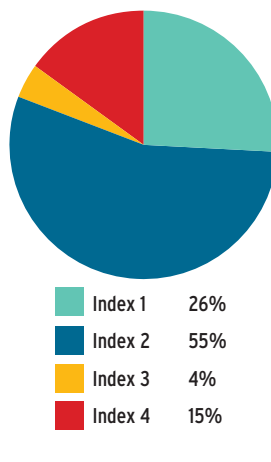


Figure 3

Potassium (K)



Ricky Milligan

Hitting the specs with Hereford beef

Meet the markets challenge is tailored towards farmers who are finishing stock within the programme. All farmers participating in the challenge must be Bord Bia quality assured and must aspire to finish stock which meet all the required specifications.

Liveweight must also be measured three times annually to ensure performance targets are being achieved and to ensure cattle stay in-spec.

Beef farmers are ultimately price-takers, so obtaining a superior price per kilo is a must.

In order to get better prices, farmers must be finishing stock with good conformation scores and correct fat covers to achieve above and beyond the base price.

HAPPY WITH HEREFORDS IN KILDARE

Hereford is the predominant breed on Ricky Milligan's farm, with a Hereford stock bull used and the majority of dairy-cross calves coming from Hereford sires.

This traditional early-maturing beef breed has, in recent decades, declined in popularity, with suckler farms turning to

continental breeds instead. However, this is not the case here, as Ricky believes that Herefords are the best breed for his system, as housing is scarce and Herefords, being an early-maturing breed, have an edge with their potential to be finished off grass prior to the second winter.

To add further value to the product, the farm is a member of the Irish Hereford Prime where price bonuses of €0.10 to €0.25/kg can be secured based on the time of the year and the specifications of the cattle.

Generally, carcasses must grade minimum O=, not exceed a fat score of 4= and weigh between 220kg and 380kg. Only animals less than 30 months of age qualify for the bonus payment.

All males are castrated at six months of age and slaughtered as steers at 20 to 24 months of age, while his female progeny, along with dairy-cross heifers, are also brought to beef at the slightly younger age of 20 months.

Typically, concentrates are not be introduced to finishing stock until September at the earliest, as cheaper liveweight gain can be obtained from grass.

Table 1: Average slaughter performance in 2017 and 2018

Name	2017			2018		
	Age at slaughter (months)	Carcase grade	Carcase weight (kg)	Age at slaughter (months)	Carcase grade	Carcase weight (kg)
Own steers	21	R-3+	345	20	O=3-	341
Dairy-cross steers	21	O=2+	307	21	O-3+	303
Own heifers	21	R=4-	298	18	R-4-	290
Dairy-cross heifers	22	O+3+	288	18	O-3-	241

Guide to AI this spring

The benefits of AI are undeniable. It offers access to a range of proven genetically-superior bulls of different breeds.

Using these sires can then significantly improve the quality and performance of all types of stock on your farm, including weanling performance, slaughter performance and replacement heifer quality.

HEAT DETECTION

Heat detection is the cornerstone of AI. About 10% of the reasons for failure to detect heats are attributable to cow problems and 90% to management problems.

The majority of heat detection aids require one key thing: frequent monitoring. There is no limit to the amount of times that females should be checked, but the minimum is definitely twice per day. The best times are often early in the morning and late in the evening. Simple things like keeping breeding females in a field near the yard or house all help with monitoring.

The most basic heat detection aids are tail paint or scratch cards. Rubbing paint or applying cards to the tail head of all breeding females will act as reasonably good indicators of activity.

Moving up the scale of effectiveness is the vasectomised bull and chin-ball. Monitoring the vasectomised bull regularly will be an obvious indicator in itself, but the chin-ball will provide greater security if monitoring is less frequent.

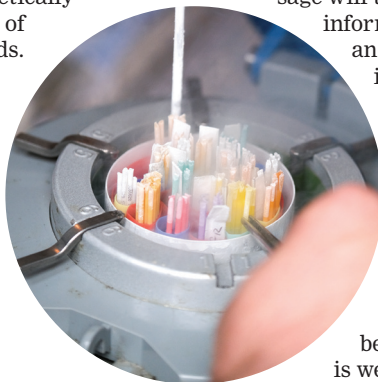
While it is undoubtedly an expensive method of heat detection, one product

that has made a big breakthrough in heat detection is Mocoall Heat. A text message will then be sent to the farmer informing him/her which animal is ready for AI. It

is particularly useful for part-time operators.

While not a method of heat detection as such, synchronisation and the use of fixed-time AI can eliminate the need for heat detection. That said, synchronisation programmes can be expensive per animal. It

is well worth consulting your vet and an AI breeding adviser about synchronisation and the correct programme to implement.



INFRASTRUCTURE

Getting animals in for AI is probably the second-most off-putting aspect of AI behind heat detection. Roadways are the Rolls Royce of AI infrastructure, but incur a significant cost. If you are considering AI, maybe just erect temporary fences (plastic stakes and polywire) this year before you go laying metres of gravel for roadways.

Also, give cattle a reason to come in. Giving 0.5kg to 1kg/head in the yard each day will entice animals in. But, remember, bring animals in every day, not just on the days where there is something in heat.

You need good handling facilities for AI too. Speed and ease of work will be improved thanks to good facilities, but, without doubt, the most important thing is safety.

Remember, in most cases, it's not just yourself, but also an AI person that will have to work in your facilities.



A to Z of FARM SAFETY



A

Always consider **SAFETY** on the farm.

B

BULLS: Beware of aggressive animals on your farm. Be sure to cull cross bulls, cows, rams, stags from your farm.

C

CHILDREN: Always supervise children on the farm, especially during machinery operations.

D

DRAWBARS: Never let anyone ride on the drawbar of your tractor or any other machinery. Do not allow anyone ride in an open trailer.

E

ELECTRICITY can kill. Beware of overhead power lines and buried cables.

F

FORESTRY and tree felling: Take care not to be caught under falling trees and logs. Attend a chainsaw and tree felling course.

G

GAS: Slurry gases can kill. Remove all stock from slatted sheds before agitating. Never enter a shed when slurry is being agitated. Close agitation point after each use.

H

HORSES: Some horses can be dangerous. Always wear safety equipment e.g. helmet when handling or riding horses. Be wary of being kicked by horses.

I

INSPECT: Check safety equipment on your farm regularly, e.g. machinery safety covers, PTO guards, fire extinguishers and First Aid kits.

J

JAWS: Keep away from blades of shear grabs, mowers, revolving knives and chainsaws.

K

KEEP CLEAR of machinery such as tractors, HiMacs, bulldozers when they are working. Stay in their line of vision and wear a high visibility jacket or vest.

L

LIVESTOCK: Be wary of being kicked or crushed while working in pens, yards or fields with livestock.

M

MACHINERY: Ensure safety covers and PTO guards are in place and working on all farm machinery. Avoid wearing loose clothing near machinery.

N

NEVER start a tractor when you are standing on the ground alongside it.

O

OVERTURN: Remember tractors have a high centre of gravity and can overturn easily. Drive slowly over uneven ground.

P

PESTICIDES and other toxic chemicals: Keep them out of the reach of children. Read the label and follow the manufacturer's advice on proper use, storage and disposal.

Q

QUAD bikes: Always wear a safety helmet when using a quad bike. Avoid letting children on them. Drive slowly over rough ground.

R

ROOFS: Use a roofing ladder when working on farm sheds. Stay clear of skylights.

S

SAFETY: Complete and update your Risk Assessment Document. This can be completed online at www.farmsafely.com. Take action on risks highlighted.

T

TRAINING: Attend a Farm Safety training course **NOW** at your local Teagasc centre.

U

UNTIDY: Poorly maintained farmyards/farm can lead to accidents. Keep your farmyard/farm neat, tidy and well maintained.

V

VISION: Your eyesight is vital – protect it. Wear safety goggles where your eyes are in danger.

W

WARNING SIGNS should be erected to warn the public of dangers or hazards such as "Tractors Crossing", "Beware of Bull".

X

XTRA: Be extra careful when there are children or elderly people on the family farm. Restrict access to dangerous ponds, tanks, unstable heights etc.

Y

YOU and YOUR FAMILY: Take every precaution to remain safe and healthy. Assess every farm task carefully for potential dangers or risks. Organise and complete tasks with safety in mind.

Z

ZOONOTIC DISEASES and infections which can be transmitted from animals to humans. E.g. TB, Toxoplasmosis, Weil's Disease, E.Coli ... Wear gloves when handling livestock. Always wash your hands after being in contact with animals.