

BETTERfarm Beef Programme

BUSINESS, ENVIRONMENT, TECHNOLOGY through TRAINING EXTENSION RESEARCH

Using soil analysis for optimum slurry use



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With soil testing drawing to a conclusion on the BETTER farms, the information will be used to produce a targeted fertilizer plan for 2014. In some areas (zone 1 and

zone 2) of the country, the restrictions placed on farms spreading slurry, farmyard manure and bagged fertilizer have now ended.

The late housing of cattle in 2013, due to excellent grazing conditions in October and November, has had a further positive benefit in that slurry storage is not under the same pressure as in previous years.

With the heavy rainfall of last week and more rain-fall this week, most land is unsuitable for spreading of slurry on farms with heavier soils.

Even on the drier farms that have the ability to carry machinery at this time of year, the initial indications are that the programme farmers are not in any rush to get out onto the land to start spreading.

Instead, the situation will be closely monitored. Slurry and farmyard manure will be applied once soil temperatures start to increase.

Once soil temperatures fall below 5°C, grass tends to go into a state of hibernation with very little growth likely to occur. Once soil temperatures increase above the

critical threshold, the rate of grass growth is also significantly increased.

With farmers becoming more aware of the value of slurry, the tendency on the programme farms is to apply slurry to grass once the plant is actively growing.

With little pressure on storage capacity, the farmers can afford to wait for a few weeks until ground conditions and temperatures start to improve.

Profit Monitor

Profit monitors are still being collected across the pro-

gramme farms and are due to be completed within the coming week. Once complete, the BETTER farm participants will meet as a group to discuss and analyse the difference in the costs of producing beef in the various farm systems. The results will then be published later in spring.

A number of farms are busy with calving getting underway in the spring herd. Heifers were served to calve ahead of cows, with the main cow herds due to calve around two to three weeks later. To date, there are few

issues being reported as cows are in ideal body condition.

Cows that were housed with excess body condition have been brought back into a condition score range of 2.5 to 3.0 through feeding of restricted forage.

Dry cow minerals are also being offered to cows and heifers from four weeks prior to the start of calving.

With tighter calving spreads on the farms, cows can be easily grouped together according to their calving date and body condition. This has made it much easier to manage feeding cows.



ON THE GROUND

ADRIAN KELLY

“Feed cost for outwintered heifers is 47c/day compared to €1/day for housed cattle”

Feeding cattle throughout the winter period can be expensive, especially in the areas of the country where land type is naturally heavy. Having dry land can reduce the winter feeding period as cattle are normally housed late in the year and can be returned to grass early in the spring.

On heavier farms, there are still some opportunities to reduce the cost of winter feeding, albeit limited to smaller numbers of cattle and usually light weanlings or calves.

Growing forage brassicas such as kale and rape are usually associated with outwintering on drier, free-draining soils, but Adrian Kelly has been growing forage rape in peat soils on his Co Offaly farm over the past six years.

For Adrian, it has been a trial-and-error approach on how to grow and graze forage rape without causing per-

Table 1: Cost of crop establishment

	€/acre
Ploughing	35
Harrowing (three runs)	45
Roll	10
Seed (4kg/acre)	13.50
Broadcast	10
18-6-12 (3 bags/acre@ €450/t)	67.50
Total	181

manent damage to the soil structure, as well as managing his cattle so that there is no negative impact on performance or health, as they remain outdoors throughout the entire winter period.

But he has met all of the challenges presented and has managed to persevere, despite working on a more challenging land base.

Farm background

The farm consists of 103 acres which is broken into five land blocks but they are located in a one mile radius of the farmyard.

The land is stocked with 30 late January to April spring-calving cows and a smaller September/October-calving herd of 12 cows.

Cows are mainly a mix of Limousin and Simmental which are served through a combination of AI and a Limousin stock bull.

As part of the farm plan developed by Adrian and his former programme adviser Adam Woods, the autumn herd is being gradually moved back in calving date and joining the spring herd.

With guidance from his new adviser, Alan Dillon, the



A group of 22 heifers has been grazing three acres of forage rape since 23 November on Adrian Kelly's farm.

farm is planning to calve all cows in a 12-week window from late January 2015.

As Adrian has a full-time job working off-farm in a partnership in a steel fabrication business, autumn is a period when he has limited spare time to attend to cows that are calving or to monitor cows coming back into heat.

Finishing enterprise

All progeny produced are normally taken through to slaughter, with only a few heifers selected as replacements.

Replacements are predominantly bought in annually as yearlings. Depending on purchase price and housing

space, additional store cattle are purchased for finishing.

Male cattle were traditionally finished as bulls at 20 to 22 months of age in Kepak, Kilbeggan, but in recent years the bulls have been slaughtered at 17 to 18 months of age.

Carcass weights usually range from 410kg to 450kg for bulls. Heifers on the farm are killed off grass in the second season or housed and finished at carcass weights of 320kg to 340kg.

With the depressed market for bulls resulting in low prices, Adrian is rightfully concerned on how economically viable his bull enterprise will remain.

Cattle are weighed regularly on-farm and bulls currently weigh from 560kg to 690kg. Liveweight gain has averaged 2kg/day since early December. Heifers weigh 350kg to 480kg.

One option being considered by Adrian is to purchase a Charolais stock bull and move towards producing stores if the processors continue to penalise bull beef finishers.

Outwintering

Adrian has been growing forage rape for five of the last six years on his farm, with 2012 being the exception as land was just too wet to even plant the crop.



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WEEK IN REVIEW

- ➔ Fertilizer plans will be produced from the results of soil analysis.
- ➔ The restrictions on spreading fertilizer have now ended on most farms.
- ➔ With little pressure on storage capacity, the farms are in no rush to spread slurry.
- ➔ Slurry will be spread in the coming weeks, once ground conditions and temperatures improve.
- ➔ Spring calving is getting under way with heifers calving ahead of cows.

➔ Slurry should only be spread on grass with low covers that will not be grazed until late in the first rotation. Bagged fertilizer should be applied to medium covers that are actively growing. Heavy grass covers should be grazed off before receiving any kind of fertilizer.

TOP TIP



Good management has prevented soil from becoming damaged after grazing of forage rape on Adrian Kelly's farm.

FARMER FOCUS

David Walsh
Co Tipperary

My cows were housed on 11 December and are due to start calving in two weeks' time. I have moved the start of calving back a few weeks closer to the start of the grazing season. I am lucky enough that my ground will carry stock in February if the weather is favourable. Calving a little later will ease management, save feed and reduce the level of disease building up in sheds.

This spring, I am due to calve down 38 cows and 13 heifers. The cows are in-calf to my two new Limousin bulls, as are most of the heifers. The bulls are bred by Sympa. A few heifers are in-calf to an Angus bull through AI.

The cows are in great condition and therefore I am restricting the silage and mixing it with straw also. The silage is 69 DMD and I am using 20 bales per week at the minute on the farm. I started feeding pre-calving minerals on 28 December. The weanlings

are eating ad-lib silage and 1.5kg/day of a 16% ration made up of barley, citrus and distillers. The ration cost €270/tonne delivered.

My replacements are purchased as calves from a neighbouring dairy herd and the yearling heifers are eating 2kg/day of the ration. They will be served in May. I weighed all weanlings on 4 December and they averaged 388kg liveweight. There were plenty of calves in excess of 400kg with the heaviest calves up at 440kg. Cattle really performed well on good grass and due to the good weather last year.

My weanlings are on average 40kg heavier at the start of December when compared to the calves the previous year. The plan is to try and get them back to grass again in early to mid-February. I took faecal samples from cattle late in the autumn and dosed with Zanil. I will re-test them again shortly. I am looking forward to getting my soil analysis back to see how soil fertility is improving on the farm.



Pat O'Reilly
Co Clare

I am currently finishing 45 cattle consisting of a mix of bulls, heifers and cull cows. They are eating 8kg of ration and 20kg of beet along with good quality silage. I hope to finish them in the next few weeks.

I killed some cows back in December and they showed up with liver fluke. Since then, I have treated stock with Trodax to try to kill any liver fluke that may be present. I had not treated cows for a few years for fluke and was surprised when the cull cows had liver fluke present as my land is very dry.

Slurry will be spread in the next week, once the weather clears up. I will spread slurry at a rate of 2,500 gallons per acre on all land.

If the ground conditions do not allow me travel on the land with the tanker, then I will use an umbilical pumping system to get slurry out. I have been taking soil samples recently and I am awaiting the results. Once they come

back, I will plan my fertilizer applications accordingly and will use as much P and K as I am allowed.

I have 25 autumn calves grazing around the shed on my outfarm. They have access to suckle cows as they like. I find that these calves are healthier outside and it also provides more room in the sheds for other stock. I have 70 cows calved between my autumn and spring herds.

I aim to turn out lighter stock to grass from around 20 February onwards, if ground and weather conditions allow. I completed my profit monitor recently and, unfortunately, I am down on my gross margin from 2012.

This is as a result of a huge increase in production costs from winter 2012 and spring 2013, along with a big drop in prices for both finished and live cattle that were sold.



Table 2: Daily feed cost comparison between indoor and outdoor wintering on Adrian Kelly's farm

	Outwintering	Indoor
Silage	€30/t fresh (€120/t DM)	€30/t fresh (€120/t DM)
Forage rape	€45/t DM	
Concentrates		€275/t
DMI (kg/day)	5.6	5.6
Daily feed cost (50:50 silage & rape)	€0.47	
Daily feed cost (15kg silage + 2kg conc)		€1
Cost saving over 90 day period (per animal)	€47.70	



He decided to initially try rape in a field where he had been spreading peat used for cattle bedding. As the land had to be ploughed after spreading, he decided upon a trial crop of rape.

The decision to sow rape meant that the field could be used in late autumn rather than being out of commission until the following spring if it had have been reseeded with grass.

After some degree of success, the exercise was repeated. Once the rape was grazed, the field was reseeded by growing a crop of arable silage.

Grazing rape on peat requires good management and

Adrian is certainly capable of meeting the crop and cattle requirements while operating inside of all cross-compliance regulations.

The farm is relatively flat and very exposed to wind which works in Adrian's favour as it helps to dry out soils, keeping them firmer.

Cattle are provided with a hardcore laneway and run-back area which greatly relieves ground pressure. Silage is provided on the hardcore area and bales are normally left in the field in autumn before cattle are allowed to graze.

This eliminates the need for driving in and out of the field during the wettest periods of winter to provide silage for cattle.

Sowing

Three acres of Stego forage rape were planted on 1 August 2013. The field was ploughed, harrowed three times and rolled.

Seed was broadcast at a rate of 4kg/acre and received three bags per acre of 18-6-12. Farmyard manure was applied with 50 tonnes spread in total. All work was carried out by Adrian and the costs are outlined in Table 1.

A nominal cost has been applied to the cultivation process which is comparable

with typical contractor costs.

No cost has been included for the farmyard manure as it was a resource on the farm that had to be disposed of regardless of growing rape and would therefore have been a farm expense in 2013 at some point.

At an establishment cost of €181 per acre and an estimated yield of four tonnes/acre of dry matter due to the excellent growing conditions in the autumn, the crop has a cost of around €45/t of dry matter.

Cost comparison

A group of 32 spring-born weanling heifers started grazing the crop on 23 November with an average liveweight of 350kg, with housed spring heifers at a similar weight. All the heifers were bolused to cover trace minerals. Mineral lick buckets were also provided.

On 4 December, 10 heifers were removed from the group to ease ground pressure, leaving 22 heifers. Adrian plans to have these heifers remain on the rape until mid-February, which will be approximately 90 days of grazing.

They will be weighed at this point and a comparison made between the outwintered heifers and those that were housed. Table 2 outlines

the comparative feeding costs between the heifers on the forage rape and those that were housed over the winter.

The heifers on the rape are eating one round bale of silage every three days which Adrian values at €24 per bale (€30/t). Bales are 69 DMD and made on 30 May.

Assuming that a 350kg to 400kg heifer is consuming 5.6kg of dry matter and has a 50:50 intake of silage and rape, the daily feed cost for the outwintered heifers is 13c/day for rape and 34c/day for silage, or 47c/day in total.

The heifers indoors are eating 15kg of silage daily along with 2kg of concentrates, costing €275/tonne. The daily feed cost for these animals is €1/day, which is a margin of €0.53 between the two wintering systems, or a saving of €47 per animal on the forage rape.

Once the rape is finished, the 22 heifers will go straight to spring grazing. An added advantage of the outwintering is that the animals will respond quicker to spring grass as they do not require the same adjustment period compared with housed cattle.

Adrian hopes that this improved spring performance will help to get as many heifers killed off grass as possible next autumn.