

BEEF

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Fodder supplies

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We are living in unprecedented times. On Thursday February 24 the unthinkable happened, Russia invaded Ukraine. Our thoughts and prayers are with the people of Ukraine. This invasion has sent shockwaves across the world, adding to the upward pressure on input prices, and drawing into question the availability of supply of key inputs. Our immediate concern is can we get fertiliser, but as we move later in the year, will there be a supply of cereals for concentrates, etc.?

We do not currently have a fodder crisis; however, if we do not act early enough and ensure we conserve enough fodder for next winter, we may well run into a problem. As 70-75% of grass is grown by the end of June, we need to act now.

Safeguard fodder for next winter

Firstly, complete a fodder budget. What silage do you require next winter? How much is left in pits?

How much do you have to grow?

Ensure you build in a three- to four-week buffer. There are several fodder budgets on [Teagasc.ie](https://teagasc.ie); use the link on page 3 or scan the QR code.



Plan for top-quality silage (72+ DMD) for younger stock and finishing cattle to reduce meal requirements. Fertilise early and cut before May 20. Suckler cow silage can be allowed to bulk up and cut by the end of June.

A total of 75% of fodder requirements for next winter should be in place by the end of June. Only grow what you need, and graze the rest to reduce fertiliser requirements.

Fertiliser for silage ground

In simple terms, a good first-cut silage requires 80 units of nitrogen (N) and potassium (K) per acre,

and 16 units of phosphorous (P) per acre. This is dependent on soil sample results (see **Table 1**). All the P and K can be supplied by 3,000 gallons of thick slurry (7% DM), then add a further 60 units of N per acre. If you do not have slurry, you will have

to apply compounds. Do not skimp on K, as this will provide the bulk in your crop.

Grass silage will take up on average two units N/day; therefore, apply N at least 50 days before cutting to ensure full crop N utilisation. Don't

Table 1: First-cut grass silage N, P and K requirements (St/ha DM) and suggested fertiliser programme.

Soil Index	N (units/ac)	P (units/ac)	K (units/ac)	Suggested fertiliser options ^{3,4}	
				No slurry (bags/ac) ¹ pro urea (38% N)	With cattle slurry 3,000 gals/ac ⁵
1 ¹	80	32	140	3.5 bags/ac 13-6-20 1 bag/ac pro urea plus S	1.4 bags/ac pro urea plus S
2 ¹	80	24	120	3.5 bags/ac 13-6-20 1 bag/ac pro urea plus S	1.4 bags/ac pro urea plus S
3	80	16	100	3.0 bags/ac 13-6-20 1.1 bags/ac pro urea plus S	1.4 bags/ac pro urea plus S
4 ²	80	0	0	2.1 bags/ac pro urea plus S	2.1 bags/ac pro urea plus S

1. On Index 1, 2 and 3 soils, apply P and K balance to build/maintain soil P and K levels to after grass; for example, apply as 18-6-12/0-7-30/cattle slurry, etc.

2. On Index 4 soils: omit P for two/three years and retest; and, omit K for one year and revert to Index 3 advice thereafter until next soil test. Don't apply cattle slurry on Index 4 soils.

3. For new/older swards with higher/lower yield potential, reduce N, P and K by 25kg N, 4kg P and 25kg K per tonne of grass dry matter (DM).

4. Pro urea plus sulphur (S) = protected urea (urea 38% N plus 7.5% S plus NBPT or 2-NPT or NPPT).

5. Cattle slurry (6.3% DM) assumed to be applied by low-emission slurry spreading (LESS) techniques – slurry N-P-K = 9-5-32. If a splash plate is used add nine units of N per acre in chemical N.

depend on surplus bales. If you reduce the amount of fertiliser you apply to your grazing fields to save costs, you won't get as many surplus bales.

What else can you do?

Put in paddocks to grow more grass. Cattle should not be in the same paddock for more than three days to protect regrowths and maximise growth rates. "Grow in three weeks and graze in three days". Reels and pigtails will be key. Check soil samples. Apply 1.5 bags of 18-6-12 per acre on low index P and K soils by the end of April to maximise growth rates. You may be able to skip P and K on Index 3 or 4 soils. Here are some further tips:

- apply lime where required to grazing ground – it will release P from the soil and a possible 64 units of N per acre – avoid putting lime on silage ground before harvest;
- cull all unproductive stock – cows not in calf, etc.;
- plan the year's fertiliser – can you afford it? If not, what are your choices?;
- do a cash flow budget;
- long term, look at the incorporation of clover; and,
- talk to your advisor – there are always options.

For further information check out the website: <https://bit.ly/FodderSecurity>.

Incorporating clover on beef farms

Incorporating clover in grassland swards has the potential to reduce costs, improve profitability and reduce greenhouse gas emissions.

Impact at farm level

On suckler farmers, research has shown that incorporating clover into grass swards increased profitability by 14% for the grass/clover system, when compared to a 'conventional' pasture system.

How it works to reduce emissions

Successful incorporation of clover means less chemical N spread and less greenhouse gases emitted. Nitrous oxide is one of the three main greenhouse gases and is given off primarily from slurry stored, slurry spread, and chemical N fertiliser spread. Incorporating clover into grassland reduces the demand for chemical N. Therefore, if there is less chemical N fertiliser spread, there is less nitrous oxide being emitted

into the air. Incorporating clover into grassland swards will help to reduce the carbon footprint of the farm, i.e., the carbon emissions per kg of beef produced, and more importantly, reduce total emissions on the farm (i.e., carbon footprint x number of hectares).

Actions farmers need to take

Over a five-year period, aim to have white clover in 100% of your paddocks (at a minimum average annual sward clover content of 20%). Select paddocks now that are suitable for reseeding or oversowing.

Paddocks suitable for a full reseed include paddocks that are performing poorly, old swards, paddocks with weed problems, and those with good soil fertility. For oversowing, choose paddocks that have good soil fertility (Index 3 or greater for P and K, soil pH 6.5), high perennial ryegrass content, open swards, and those with low weed content.

RESEARCH UPDATE



Quality check

AIDAN MOLONEY, MARK MCGEE and EDWARD O'RIORDAN of Teagasc Animal & Grassland Research and Innovation Centre, Grange, Co. Meath report on meat quality characteristics from grass-fed suckler bulls and steers.

Bulls are usually finished indoors on high-concentrate rations. Finishing bulls from pasture decreases production costs, but would the colour and eating quality of grass-fed bull beef be inferior to grass-fed steer beef? To address this question, late-maturing breed sired spring-born suckler bulls and steers were finished at 19 months of age at pasture, with or without concentrate supplementation. A total of 60 yearling bulls and steers were turned out to pasture in spring and rotationally grazed. After three months, half of the bulls and steers were supplemented with 3.2kg concentrate dry matter daily, and the remainder continued to receive grass-only until slaughter three months later in October. On average, supplementation increased carcass weight and carcass fat score, but had little effect on the colour or the eating quality of striploins when assessed by trained tasters. On average, bulls had a heavier carcass and a lower carcass fat score than steers, and were only 'adequately finished' (fat score – >6.0) when supplemented. Overall, bull beef was leaner (0.2 v 1.0% fat) than steer beef, and when



Is the quality of grass-fed bull beef inferior to grass-fed steer beef?

measured instrumentally was paler (41.8 v 40.9 units), and less red (12.6 v 13.5 units) but these small differences in colour would not be detected by the consumer. On a scale of one to eight, bull beef was rated lower for tenderness (3.9 v 4.5), texture (3.7 v 4.1), and overall acceptability (3.9 v 4.3) with no difference in flavour, compared to steers. Under the conditions of this study, the absolute differences in meat colour and eating quality between late-maturing breed suckler bulls and steers finished from pasture at 19 months of age are unlikely to be commercially important.