

Managing early N this spring

Edited by

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High fertiliser nitrogen (N) prices significantly increased cash costs on dairy farms in 2022 and will continue to do so this spring.

However, a lack of N supply in the soil limits spring grass growth, which will lead to higher feed costs later in spring.

It is important to maximise the efficiency of fertiliser used this spring. Research has shown a large range in grass response to early N (between 5kg and 18kg DM/kg N applied). Application of early N in correct conditions is beneficial, but incorrect application is wasteful, costly, pollutes water and increases greenhouse gas emissions.

The following Dos and Don'ts should guide your decisions around early N application.

Do:

1. Know the dates for the first permitted slurry and fertiliser applications in zones A, B and

C (slurry January 12, 15 and 31; fertiliser January 26 and 29, and February 14, respectively).

2. Check the weather forecast (www.met.ie) prior to making fertiliser N applications.
3. Check soil conditions and trafficability before spreading.
4. Only apply fertiliser N when soil temperature is greater than 5°C and rising.
5. Check grass growth predictions (Grass10 newsletter, PastureBase, and *Farming Weather* – Sunday on RTÉ 1).
6. Target fields that are most likely to respond to an early N application:
 - a. perennial ryegrass/recently reseeded fields;
 - b. fields with a grass cover of greater than 400kg DM/ha or 6cm grass; and,
 - c. fields with optimum soil fertility, i.e., good phosphorus (P) and potassium (K) status, pH >6.2.

7. Make the best use of slurry across the whole farm. That means:
 - a. getting more area covered at moderate rates in spring; and,
 - b. targeting the slurry to high-demand areas, e.g., silage fields, low P and K fields.
8. Apply cattle slurry instead of chemical N fertiliser on approximately 50-60% of the whole farm area in spring:
 - a. apply all slurry using low-emission slurry spreading (LESS) – this is a requirement for farms stocked >150kg N per ha from January 2023;
 - b. target slurry to fields with low P and K levels, and low grass covers (<1,000kg DM/ha);
 - c. 2,000 gals/ac by LESS application will supply ~20kg/ha (16 units/ac) of available N; and,
 - d. manage slurry application to ensure that no more than 2,500 gals/ac are applied in spring.
9. Where silage ground is unavailable for grazing, reserve enough slurry for silage ground in mid February.
10. Use protected urea (NBPT).
11. Calibrate your fertiliser spreader and maintain it in good condition.

Don't:

1. Don't apply slurry or fertiliser N before the end of the prohibited spreading period.
2. Never apply fertiliser or slurry to waterlogged or frozen soils.
3. Don't apply slurry or fertiliser if a yellow rainfall warning is in place or is forecast within the next 48 hours.
4. Never apply slurry or fertiliser into buffer margins. Know your buffer margins.
5. Don't apply fertiliser N on fields that receive slurry in the first round.
6. Don't apply more than 29kg N/ha (23 units N/ac) chemical N fertiliser in February.

Mastitis in early lactation

Early lactation mastitis, which occurs in the first week or so after calving, is a problem in many herds. Cows are especially at risk of acquiring mastitis in the two weeks either side of calving because at this time, the cow's immune system is at its lowest ebb. Recent research work on commercial farms also shows that up to 30% of first-calving heifers are calving down with infected quarters. Take steps to control the incidence and spread of mastitis around calving:

- clean dry cubicle beds are a must – clean and lime cubicle beds twice a day throughout the dry period;
- pay particular attention to the hygiene of

cubicles for heifers – clip tails and udders before cows enter the calving pen;

- contaminated straw beds are a prime source of environmental mastitis bacteria – ensure the beds of cows close to calving are 'freshened up' daily;
- ensure adequate minerals are fed to dry cows – this will boost the health of the herd; and,
- keep colostrum cows in a separate group and milk them last until ready for the tank. Perform a California mastitis test (CMT) on all cows and heifers before moving them to the main group.

Labour saving in spring 2023

The workload in spring makes up over one-third of the total hours needed to run a farm per year. Many farm owners are working in excess of 80 hours per week in spring and overcoming this workload can be a challenge on many farms. The main spring labour efficient practices highlighted from a recent labour efficiency study are summarised as follows.

Calf care practices

- Fresh milk piped directly or transported mechanically to the calf house;
- train calves on group feeders from days one to four;
- feed calves on automatic feeders or *ad lib* once grouped and trained;
- bed calf pens at least every second day and clean regularly – bedding should be easily accessible; and,
- put a plan in place to sell bull calves promptly, preferably in batches directly from the farm.

Cow care practices

- Ensure cows are in the correct body condition score (BCS, i.e., 3.0-3.25) and receive correct minerals to reduce problems at calving;
- implement once-a-day milking for the first two to three weeks of the calving season;
- train heifers to enter the milking parlour from one month pre calving;
- house dry cows in groups according to calving date to make sorting easier;
- provide a group pen for calving, with easy access to an individual pen for handling from this area; and,



Take the time to see what you can do to manage the heavy workload this spring.

- have all your cow and calf supplies purchased and in stock before the first cows calve.

Grassland practices

- Have a farm map and clear instructions in terms of the fields and amounts;
- repair any fencing/water troughs before turnout;
- have reels/posts ready to go; and,
- have a plan in place for the first rotation order of paddocks.

Getting help

- Book the contractor in advance for fertiliser and slurry applications;
- consider options for weekend and part-time work – highly skilled employees are hard to find but it is often possible to get help for certain tasks;
- have defined roles and operating procedures in place for each task;
- start milking by 4.00pm at the latest in the afternoon to control the length of your working day; and,
- night calving cover is becoming more popular. Consider options for February and March.

Check your fodder stocks

Following on from the Teagasc fodder survey in autumn 2022, there is a continuing risk of fodder shortages on dairy farms in the south east, midlands east and southern regions in particular. A seemingly small deficit (10-15%) at the start of the winter could become a big problem in March/April if weather and grazing conditions are poor. Take these actions:

- measure your silage stocks – pit length x breadth x height and multiply by 0.17 to estimate silage DM tonnes (at 24% DM) – round bales contain 220-250kg DM;
- complete a fodder budget in PastureBase – speak to your advisor;
- complete an opening grass cover on the grazing block – opening covers of >800kg per ha indicate a good grass supply;
- source feed such as hay/straw to stretch silage supplies;
- consider selling non-productive stock like carryover cows, cull bulls, etc.; and,
- plan to get young stock out to grass early.

HEALTH & SAFETY

Start the new year safely

Let's all make 2023 a safe and healthier year for everyone working and living on farms. Improving safety and health requires intention in advance of action. Review and update your risk assessment document and then take actions. A total of 12 fatal farm workplace accidents were recorded in 2022 (provisional data). This is almost 50% of all workplace fatalities (26). Major causes associated with farm workplace fatalities were: farm vehicles and machinery 59% (7); falls from heights and falling objects 33% (4); and, slurry drowning 8% (1). Of the fatal farm workplace accidents in 2022, 59% (7) were persons aged 65 or older, 33% (4) were persons aged 55 to 64 years, and 8% (1) were in the 45 to 54 years old category.

In 2023, particular attention needs to be paid to the safety of 'senior' farmers. Family members can greatly assist such persons by discussing practical risk assessment. Also, moving vehicles such as tractors, teleporters and ATVs pose a high risk to drivers and persons in close vicinity to them.



Update your risk assessment.

