**All I want for Christmas is ... two pallets of nitrogen!**

Having nitrogen in the yard in December will ensure you can apply it as soon as the closed period has passed and conditions allow. Prompt application means you won’t miss out on precious early grass growth.

**Prohibited application periods for fertiliser**

<table>
<thead>
<tr>
<th>Fertiliser type</th>
<th>Start</th>
<th>Zone A</th>
<th>Zone B</th>
<th>Zone C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>15 Sep</td>
<td>12 Jan</td>
<td>15 Jan</td>
<td>31 Jan</td>
</tr>
<tr>
<td>Organic</td>
<td>15 Oct</td>
<td>12 Jan</td>
<td>15 Jan</td>
<td>31 Jan</td>
</tr>
<tr>
<td>Farmyard manure</td>
<td>1 Nov</td>
<td>12 Jan</td>
<td>15 Jan</td>
<td>31 Jan</td>
</tr>
</tbody>
</table>

A reasonable amount of organic soil nitrogen builds up in the soil over time and some of this can be mineralised over the summer and autumn. This trickle is used by the plant for growth. It is due to this lag that mid- to late January has to be the target date for first nitrogen application in the south and about two weeks later in the north - as allowed under the nitrates directive (Zone A – Jan 13th; Zone B – Jan 16th and Zone C – Feb 2nd).

Grass growth needs a temperature of over 6°C for significant growth, and growth increases rapidly as the temperature rises from 6°C up to 12°C and then more slowly from there on. As stated previously, there will only be a moderate response to this applied nitrogen; indeed, some will say they see only a very limited response to it, but it is vitally important in priming the plant for growth.

The average grass growth response to early nitrogen applications is 10kg DM/kg N applied, ie 280kg grass DM/ha for 28kg N/ha applied.

As there is only a modest growth response, application rates should be kept to approximately 28kg to 29kg/ha (23 units/acre or a half bag of protected urea).

The average grass growth response to early nitrogen applications is 10kg DM/kg N applied, including rainfall and temperature rises from 6°C up to 12°C and then more slowly from there on. As stated previously, there will only be a moderate response to this applied nitrogen; indeed, some will say they see only a very limited response to it, but it is vitally important in priming the plant for growth.

The biggest stumbling block to early application of nitrogen is lack of availability. How can this be?

There are co-op and merchant yards full of fertiliser in preparation for the peak delivery season in January.

Therein lies the problem, as fertiliser in a merchant or co-op yard is not in your yard. The logistics around delivery of these huge quantities creates problems for co-ops, merchants and transport companies, but, most of all, it will create a problem for those who don’t have fertiliser in the yard when the spreading season commences, while time is available to spread before the start of calving. You could be lucky or unlucky as to whether you have fertiliser available when the window of opportunity to spread comes.

A very obvious, simple, but extremely effective solution to this issue is to plan to have enough nitrogen in the yard just to complete the first application.

The average dairy farmer (80 cows) is now farming 40ha (100 acres). To give every acre of this farm a half bag of fertiliser is going to take 2.4 tonnes of fertiliser, equivalent of two pallets of urea or protected urea with a bit to spare.

Planning to have this in the yard for Christmas or shortly after will allow you the early nitrogen at the time that suits you, and in the most appropriate conditions, once the closed period has passed.

This is important on all farms, but even more so on heavier farms where opportunities to spread can be limited in the early season. Plan ahead and be prepared.

In the past, straight urea has been the product of choice for early application. However, from an environmental perspective, protected urea is preferable due to its significantly better environmental characteristics: reduced ammonia emissions and reduced nitrous oxide losses, both of which are significant issues for our industry in the context of our greenhouse gas emissions targets.

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