



Ms. Tracey O'Connor
Water Quality Section
Department of the Environment,
Heritage and Local Government
Newtown Road
Wexford

Mr. Richard Gregg
Environment Section
Department of Agriculture, Fisheries and Food
Johnstown Castle
Wexford

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RE: Submission from The Fertilizer Association of Ireland regarding the Review of the Nitrates Action Programme 2010

To Whom It May Concern,

The Fertilizer Association of Ireland is a representative body that promotes the efficient use of fertilizer to produce quality food in an economical and environmentally sustainable manner. Our members are drawn from the entire agricultural industry, and include farmers, agribusiness, fertilizer industry, government officials, advisors, researchers and university academics.

As an association, we acknowledge and support the spirit of these regulations in promoting benefits of responsible and efficient nutrient management, both from the perspective of agronomic efficiency of inputs, and of environmental protection. Unfortunately, the usage of fertilizers in agricultural systems has, in the past, been incorrectly seen as synonymous with pollution and negative environmental impact. There has also been an overall consensus within agri-environmental policy instruments that 'less is good' when it comes to nutrient use in agriculture.

However, we contend that the efficient use of fertilizers should be the driving force of policy rather than just reduced application rates *per se*. Within the regulations, allowances must be made to ensure that productive soils and crops are allowed to achieve their full production potential, including the provision of adequate nutrient inputs for soil and crop nutrition. The dramatic reductions in the usage of fertilizer nutrients on grassland and arable crops recently reported by Teagasc highlights the need to re-think the approach to nutrient usage in order to ensure that soil fertility and production potential is not compromised in the future.

We would like to highlight the following specific issues with regard to the draft revision of the regulations:

1.) P rates for pasture establishment

Reseeding pasture is well accepted to be a good practice within grassland farming. However, there is no provision for pasture establishment in the current draft regulations. Reseeding pasture has a higher P requirement than grazed pasture (Teagasc advice). This high P requirement is due to the high demand for P associated with cell division and root growth at the time of germination, seedling and root development, and sward establishment. This difference between P requirements for reseeded and grazed swards is not accommodated in the regulations. Also, unlike grazed swards, the P requirement for reseeded pasture is not dependant on the grassland stocking rate of the farm.

Teagasc advises rates of P application for reseeded pastures (60, 40, and 30 kg/ha of P for soils in Index 1, 2 and 3 respectively) that are higher than the requirements of grazed or cut swards. However, the maximum P application rates for grassland do not take this into account. The impact of this issue is escalated on farms where no chemical fertilizer P is permitted due to high

concentrate feed usage. Where reseeded pastures do not receive adequate P application, the establishment of the new sward is jeopardised.

In order to resolve the issue, we suggest that pasture establishment should be included as a separate crop to grassland in table 17 of the SI. This would provide for adequate P rates on reseeded areas where soil tests predict a P requirement. This allowance for P for reseeded pasture would need to be additional to the P requirement for grazing or silage cuts on that area for the rest of the year.

2.) P deductions to account for concentrate feed usage

The principle of inclusion of the contribution of concentrate feeds used to the farm P balance is supported. However, we wish to highlight two issues with regard to this.

Firstly, regarding the methodology with which the P from concentrate feeds is currently being calculated: At present, the total P from concentrate feeds is deducted from the entire P allowance of the whole farm. This is a crude calculation, and assumes that all the P from concentrate feeds can be directed to areas of the farm that have a P requirement. In reality, the distribution of concentrate P around the farm will be indiscriminate, especially when fed to animals at pasture. Therefore, some concentrate feed P can reach soils with no P requirement (usually Index 4) while other areas with larger P requirements then suffer. A solution to this issue is to apply the correction for concentrate feed P directly to the P application rates per hectare rather than to the whole farm. In this way, the average P contribution per hectare from feeds would be taken from all soil indices equally, and areas with a P requirement would no longer be assumed to be receiving the P that is being deposited on areas with no P requirement.

Secondly, the assumption within the regulations is that all concentrate feeds contain equal concentrations of P, being 5 kg per tonne of fresh feed: In reality, the P concentration varies substantially around this average. On farms where a lot of straight feedstuffs (i.e. not formulated into a compound ration) are used, the actual P import onto the farm in concentrate feeds can be substantially different from that assumed in the regulations. This has an impact on the fertilizer P that the farmer can use. We suggest that where a farmer can prove that the P concentration of the feed used are different to the assumed average, then this alternative value should be used. This will provide more realistic deductions to be made when calculating fertilizer P application rates. The default of 5 kg/t should also remain in place for farmers who are unable to prove otherwise.

3.) Planning – allow flexibility in year end to allow for genuine fluctuations in SR or concentrate feed usage

Within the current system, many farmers find themselves in trouble at the end of the year because of unexpected stocking rate changes and/or concentrate feed usage changes within the year. Small changes in these two variables, particularly stocking rate, can have a large effect on fertilizer N and P allowances. Where stocking rate or concentrate feed usage changes late in the year, fertilizer may have been already applied that was in accordance to a plan made at the beginning of the year, but may be in breach of the regulations based on year end data.

This has been particularly problematic in 2008 and 2009 where wet summers caused higher than expected usage of concentrate feeds on many farms. A solution to this issue is to allow provision to use historic stocking rate and concentrate feed usage when preparing fertilizer plans and checking for compliance.

4.) Soil test area

The current requirement that no soil test be greater than 5ha on derogation holdings is onerous, and should be made more flexible to account for real farm situations regarding field size and field boundaries. While we accept that precise and intensive soil sampling is essential, the regulation should also be practical with regard to farm and field management. In order to allow more flexibility in planning, we suggest that the requirement should be changed so that the

average soil sample for derogation holdings might be 5 ha per sample, rather than the current maximum of 5 ha on each sample.

5.) Calendar Farming

While calendar farming is a greater issue for organic fertilizer management than for chemical fertilizers, the association acknowledges the frustration and difficulties that are imposed on farmers by a calendar based system of restrictions. The recent temporary changes to both chemical and organic fertilizer spreading dates in the last two years have proved testimony to the need for a more flexible system to be operational that is weather and soil based rather than calendar based. The provision of recent temporary arrangements whereby decisions could be made to overwrite the regulations is welcome and should be continued and formalised.

Regarding chemical fertilizers, there is a specific issue in relation to calendar farming and the use of chemical fertilizer P. The restriction in the usage of P fertilizer in the prohibited period is based on a higher run-off risk associated with seasonal average rainfall levels and surface applied P fertilizer. However, where P fertilizer is incorporated into a seedbed, the run-off risk will be reduced as the P will not be at the surface and therefore not susceptible to run-off losses. The cultivation and sowing of many crops can take place after the 15 Sept closing date for chemical P application. Therefore, on these crops, the P application must occur in the spring, and therefore must be surface applied. This surface applied P in spring would pose a higher run-off risk than would P that is soil-incorporated during the closed period. We therefore suggest that the closed period for chemical fertilizer application should not be applied to chemical P fertilizers where they are applied and incorporated into the seedbed of a crop being established.

6.) N rates for cereal crops

Optimum nitrogen is the key driver of grain yield potential and profitability in cereal production. Yield potential of modern cereal varieties grown under Irish growing conditions are among the highest grain yields in Europe. Very high yields are achievable under Irish growing conditions due to its prolonged warm, damp summer weather and productive soils. Current N rates on the main cereal crops (spring barley and winter wheat) as outlined in the regulations are insufficient to satisfy current crop yield potential, and need to be adjusted to take account of modern cereal varieties.

Cereal crop yields are increasing at an annual rate of 2% per year due to improvements from cereal breeding programmes (new varieties) and improvements in crop husbandry techniques. When N rates as in SI 101 of 2009 are compared to N rates in the corresponding regulations in the UK (SI 2349 of 2008) there are large differences in permitted N levels and crop reference yields. For example, the reference yield for spring barley under SI 101 of 2009 is 7.5t/ha with an N allowance of 135kgN/ha. However, in the UK spring barley, with a lower reference yield of 5.5t/ha, has an N allowance of 150kgN/ha (see table below for comparisons).

The following table shows N rates and crop reference yields in the UK compared with Ireland:

Crop	UK		Ireland	
	Crop N *	Ref Yields (t/ha)	Crop N	Ref Yields (t/ha)
Winter Wheat	220	8.0	190	9.0
Spring Wheat	180	7.0	140	7.5
Winter Barley	180	6.5	160	8.5
Spring barley	150	5.5	135	7.5
Winter OSR	250 ¹	3.5	225	No ref Yield

*Additional 80kgN/ha where straw or paper sludge is applied

¹OSR can receive 30kgN/ha during autumn period. Spring N increased by 30kgN/ha for every 0.5t/ha increases in yield.

This issue has been exacerbated in Ireland in recent years with current concerns mounting over the potential of our spring barley to deliver sufficient grain protein content to fulfil the required standards for malting barley.

To realise the full yield potential of high yielding modern cereal varieties under Irish growing conditions, we propose that the level of N on spring barley should be increased to 150kgN/ha for a reference yield of 7.5t/ha. Permitted fertilizer N rates on winter wheat should also be increased to 210kgN/ha for a crop reference yield of 9t/ha.

7.) *P rates for cereals*

Recent advice from Teagasc has highlighted the current P rates permitted on cereal crops are below the removal rates for these crops. The current allowance of 25 kg/ha for all cereal crops in Index 3 is below what would be required to replace the P offtakes from all these crops. The P rates should also be different for each tillage crop, as per the latest advice by Teagasc.

8.) *Force Majeure*

While there is allowance made within the Cross Compliance regulations to account for *Force Majeure*, there is currently no provision for same in the Nitrates regulations. With variable and undependable weather patterns in recent years, particularly in 2008 and 2009, it is essential that allowance be made for this within the regulations on aspects such as concentrate feed usage and P allowances, cover crop establishment and the potential impact of animal disease restrictions on stocking rate.

We hope that your Department will give due consideration to the points made above in relation to the draft regulations. We would be delighted to discuss any aspect of the issues raised, including the possible solutions suggested, with you at any stage.

Respectfully yours,

Jeremiah Murphy
Environment Sub-committee Chairman
On behalf of The Fertilizer Association of Ireland