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## **Important Note**

The information contained in this booklet is being provided as a guide to farmers and should not be regarded as a legal interpretation of the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006, S.I. No. 378 of 2006.

## Introduction



### What Is This Handbook And Who Is It For?

Ireland's National Action Programme under the Nitrates Directive was drawn up in 2005. New Regulations, called the *Good Agricultural Practice for Protection of Waters Regulations 2006*<sup>1</sup>, have now put the Action Programme into law. In this Handbook, we call them the **Regulations**.

This Handbook is meant to explain the new **Regulations** directly to farmers in a clear and straightforward way. However it is not enough just to read this Handbook on its own. We have sent you a copy of the **Regulations** with it, and you should read those as well.

Remember that if you are in the **Single Payment Scheme**, the Regulations are also part of cross-compliance. Not only will you be breaking the law if you do not follow them, you will also be putting your Single Payment at risk. That is why it is so important to understand the **Regulations** and know exactly how they apply to you and to what you do on your own holding.

Starting on page 6 of this Handbook, there is detailed information explaining how you can follow the Regulations on your own holding. For some farmers this will be fairly simple, but others may need to consult their adviser/consultant if they are **not sure of something**.

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<sup>1</sup> Statutory Instrument S.I. No. 378 of 2006

## Why were these new Regulations needed?

Good farming practice means two main things for farmers using fertilisers. First of all, farmers may spread only as much fertiliser as their crops need. Secondly, fertilisers must not be spread at times of the year when the crops are not able to use them, and especially at times when they might find their way into water instead. All livestock manures and other organic fertilisers contain nitrogen and phosphorus. If too much of these get into water, it is bad for water quality. Even in areas where water quality is still good, EU law means that surplus nitrogen and phosphorus must not be allowed to get into it. The Regulations include rules for using chemical fertiliser as well as livestock manure and other organic fertilisers, and they cover phosphorus as well as nitrogen.

## When do the Regulations come into effect?

Most of the Regulations are in force already. This means that:

- You must not spread livestock manure and slurry containing more than 170 kgs of nitrogen per hectare in a year.
- There are times of the year when you must not spread any fertiliser at all on your land, either organic or chemical. These are called the **prohibited spreading periods**. If you already have adequate storage for the livestock manure produced on your holding, the prohibited spreading periods apply to you already. Even if you do not have adequate storage, you must not spread any of this manure during November and December.
- Chemical fertiliser and organic fertiliser that you bring onto your holding must not be spread during the prohibited spreading periods.
- You must not spread more fertiliser on your land than your crops need.
- You must follow the new rules about ploughing and applying non-selective herbicides.
- You must keep various records, including records of the fertilisers you bring onto your holding or send out of it. You have to keep records for each calendar year, which means 1 January to 31 December, and you must have them ready by **31 March** of the following year. For 2006, you are required to have records available by 31 March, 2007 on area farmed, cropping regime, types of livestock and numbers, storage facilities on farm.

You will already have most of this information on your Single Payment application, stock registers and CMMS profiles. You must keep full records (including fertiliser/manure details) as set down in Section 3 of the Handbook for future years from 1 January, 2007.

These are the other parts of the Regulations and the dates when they come into force:

Rule	Comes into force on
Holdings with pigs must have 26 weeks' storage, or reduced storage if they are eligible for it (see page 8).	1 January 2007
Article 16 <sup>2</sup> of the <b>Regulations</b> , which deals with matching fertiliser inputs to crop requirements. (Until 1 January 2011 there will be a temporary exemption for phosphorus from pig and poultry manure or spent mushroom compost. However the 170kg limit for nitrogen will apply).	
You must minimise the quantity of soiled water. You must make sure that clean water is diverted away from soiled areas and storage facilities to a clean water outfall.	
Holdings with cattle must have the required minimum storage capacity for manure depending on the zone they are in (see page 4).	1 January 2009
You must have adequate storage capacity for organic fertilisers, soiled water and silage effluent produced on your holding, and also for any organic fertilisers you might bring onto your holding for spreading later.	
Holdings with poultry must have 26 weeks' storage, or reduced storage if they are eligible for it (see page 8).	

## The different Zones

The Regulations divide the country into three zones. In each zone, there are different rules about the storage capacity that farmers need for organic fertiliser, and about the times of the year when organic and chemical fertilisers must not be spread on land.

The map on the next page shows how the country is divided into zones. Underneath the map, you will find the rules for each zone about storage capacity and the prohibited spreading periods (the times when you are not allowed to spread organic and chemical fertilisers). Zone C (the North-West) is divided into two parts and they have different storage requirements, but they have the same rules about the times when fertilisers must not be spread.

## The Zones



## The storage capacity you must have, and the Prohibited Periods for spreading fertiliser

ZONES	STORAGE CAPACITY REQUIRED	PROHIBITED APPLICATION PERIODS		
		CHEMICAL FERTILISERS	ORGANIC FERTILISERS	FARMYARD MANURE
A	16 WEEKS	15 SEPT–12 JAN	15 OCT–12 JAN	1 NOV–12 JAN
B	18 WEEKS	15 SEPT–15 JAN	15 OCT–15 JAN	1 NOV–15 JAN
C (Donegal and Leitrim)	20 WEEKS	15 SEPT–31 JAN	15 OCT–31 JAN	1 NOV–31 JAN
C* (Cavan and Monaghan)	22 WEEKS	15 SEPT–31 JAN	15 OCT–31 JAN	1 NOV–31 JAN



## What does this Handbook cover?

This Handbook is divided into six main sections:

- Managing the farmyard
- Managing fertilisers and nutrients
- Keeping records
- Controls
- Helpsheets
- The Cross-Compliance checklist

## The Helpsheets

There are three sets of **Helpsheets**, starting on page 22. They show you the steps that the Department of Agriculture and Food will be using to check that you are complying with the **Regulations**. Other agencies, like your local authority, will use similar checks. You can use the **Helpsheets** to check for yourself what you need to do. You may need to do very little that you are not doing already but it is very important to make sure. Some farmers will need to change nothing at all and REPS farmers will generally fall into this category.

## Tables 1–21

When this Handbook mentions Tables, it means the Tables in the **Regulations** themselves.

The **Regulations** deal with three main aspects of farmyard management:

- Keeping soiled water to a minimum
- Collecting effluents, organic fertilisers etc
- Storing effluents, organic fertilisers etc properly

### Keeping soiled water to a minimum

You must:

- Divert all clean water to a clean water outfall
- Prevent clean water from becoming soiled
- Keep the amount of soiled water that is produced on your holding to a minimum
- If soiled water is stored together with slurry, or if it becomes mixed with slurry, then as far as the **Regulations** are concerned it is slurry and is subject to the same rules as slurry

### Collecting organic fertilisers

Organic fertiliser means slurry, farmyard manure, sewage sludge, industrial sludges etc. Until you are ready to apply them to land, you must collect all organic fertilisers, effluents and soiled waters in a way that will prevent runoff or seepage, directly or indirectly, into groundwaters or surface water.

### Storing organic fertilisers properly

You must have enough storage capacity to make certain that you will not be spreading organic fertilisers on the land during the **prohibited spreading periods** when spreading is forbidden. But spreading is also forbidden, even at other times of the year, if weather or ground conditions are unsuitable and there is a risk that the nutrients in the fertilisers might run off into surface water or groundwater. Therefore you must also make sure that you have enough spare capacity to allow for bad weather.

All storage facilities for organic fertiliser, effluents and soiled water must be kept leak-proof and structurally sound. All new storage facilities must meet the construction specifications of the Department of Agriculture and Food. (You can get more information about these specifications from your adviser/consultant, from your local Department office or on the Department's website [www.agriculture.gov.ie](http://www.agriculture.gov.ie)).

If you have not got enough storage capacity, one way of dealing with the problem is by having straw bedding or other absorbent bedding material. (For example you could have straw bedded housing for cattle, or wood shavings or chopped straw for broilers).

If your holding is in more than one zone, you must follow the rules that apply to the zone where greater storage capacity is required.

## How do you know how much storage you require for your livestock?

The storage capacity required for the main types of livestock is shown in **Tables 1, 2 and 3** of the **Regulations**.

You must have 200mm freeboard in all covered tanks. In all uncovered tanks, you will need 300mm freeboard. When you are working out the storage capacity of an uncovered tank, you must make an allowance for the average net rainfall for your county. You must also allow for any soiled water coming from yards that can get into tanks. There is information in **Table 4** of the **Regulations** to help you to do this.

**Helpsheet 1** of this Handbook, starting on page 22, will show you how to work out whether you have enough storage capacity. Your adviser can help you with this if you are not sure about it.

### Cattle manure

Look again at the table under the map, on page 4 of this Handbook. The storage capacity you require for cattle manure is shown in that table. As you can see, the amount of storage you require depends on which zone your holding is in.

### Deer, goat and sheep manure

You must have six weeks' storage capacity for deer, goat and sheep manure.

### Reduced storage capacity for cattle (except dairy cows), sheep, deer or goats

If your livestock are outwintered at any time during the **prohibited spreading periods** (the periods when you are not allowed to spread organic fertiliser), you may need less storage capacity. This rule applies to you if your **sheep, deer or goats** are outwintered at a grassland stocking rate of not more than 130 kgs of nitrogen to the hectare (this is the equivalent to 10 lowland ewes to the hectare). This rule also applies to you if you have other livestock (excluding dairy cows, deer, goats and sheep) outwintered at a grassland stocking rate not exceeding 85kgs.

If sheep, deer or goats are outwintered with cattle, then the rate that applies is the rate for cattle (85 kgs of nitrogen to the hectare).

You can use **Helpsheet 3** of this Handbook (beginning on page 29) to work out your grassland stocking rate. You will also need to know your net grassland area in hectares, which for most holdings is on your application form for the Single Payment Scheme.

If you want to use this rule to have less storage capacity for cattle, sheep, deer, or goats, you must also meet these extra conditions:

- The total amount of livestock manure produced on your holding must not be more than 140 kgs nitrogen per hectare per year, and
- All the lands used for outwintering must be part of your holding, and
- The outwintered stock must have free access at all times to the required land, and
- There must be no severe poaching, and

- The reduction in storage capacity must match the actual number of livestock that you have outwintered.

**You cannot use this rule to have less storage capacity for dairy cows.**

## Pig manure

The general rule is that you must have 26 weeks' storage capacity for pig manure. However the storage capacity in the table on page 4 will be enough if:

- There are no more than 100 pigs on your holding at any time, and
- Your own holding is large enough to take all the livestock manure produced, without exceeding the nitrogen or phosphorus limits in the **Regulations**.

## Poultry manure

The general rule is that you must have 26 weeks' storage capacity for poultry manure. However the storage capacity in the table on page 4 will be enough if:

- There are no more than 2,000 poultry places on your holding, and
- Your own holding is large enough to take all the livestock manure produced, without exceeding the nitrogen or phosphorus limits in the **Regulations**.

## Another way of reducing the storage capacity you need

Another way that you may need less storage capacity on your holding is if you have one of these contracts:

- A contract giving you, and no-one else, access to enough storage somewhere else, outside your holding
- A contract with a treatment facility for processing livestock manure, or
- A contract with an authorised person or body who undertakes the collection, recovery or disposal of waste

## Soiled water

You must have enough storage to be able to store soiled water for at least 10 days at any time of the year.

## Effluents produced by ensiled forage

You must have enough storage for silage effluent or effluent from other crops as shown in **Table 5** of the **Regulations**.

## SECTION 2:

## Managing Fertilisers and Nutrients

This Section deals with managing fertilisers and nutrients on your holding. For the purposes of the Regulations, a **fertiliser** is any substance containing nitrogen or phosphorus used on land to help to grow crops (including grass).

The two main points about managing fertilisers and nutrients are:

- The total amount of livestock manure applied to your land in a calendar year must not contain more than 170 kgs of nitrogen to the hectare. However most holdings are under this figure
- The total quantity of fertilisers (organic and chemical combined) that you apply to your land must not be more than the crops need (this includes grass)

### The 170 kg/ha/year nitrogen limit – what does it mean? How will you know that you are not exceeding the limit?

The amount of livestock manure applied in any year to land on a holding, added to what your livestock deposit directly, must not contain more than 170 kg of nitrogen to the hectare. (This is what two dairy cows would produce on a hectare of land.) Livestock other than dairy cows produce less nitrogen, and the amounts are shown in **Table 6** of the **Regulations**.

The vast majority of holdings will be under the 170kg limit. All REPS farmers must comply with the 170kg limit, so if you are a participant you should have no difficulty with this requirement. With the experience of managing all types of nutrients to specific requirements, REPS farmers will find it easy to comply with all Good Agricultural Practice requirements. It is only the more intensively stocked holdings or holdings importing livestock manure that may be at risk of going over the limit.

### The Department will send you a Nitrogen & Phosphorus Statement every year

To help you to comply with the Regulations, the Department of Agriculture and Food will send you an **Annual Nitrogen & Phosphorus Statement** every year. We will do this with the information we have about your holding for the previous year.

This is what will be in the Statement:

- The total amounts of nitrogen and phosphorus produced by cattle on your holding (we will calculate this from our cattle database, the CMMS)
- The total area of your holding in hectares
- The net area of your holding in hectares
- The net area of grassland of your holding in hectares
- The net area, in hectares, that is not in grass

(We will use your Single Payment application to get the information about the total area of your holding, the net area and the area in grassland. If you do not submit a Single Payment Scheme application form you will have to get the information from other sources).

There will be space on the Statement for you to add in information about the other livestock on your holding, if you have any.

There will also be space for you to calculate the following:

- the stocking rate on your holding
- your grassland stocking rate
- how much livestock manure you may need to send out of your holding
- how much livestock manure you could bring onto your holding
- Please look at **Helpsheet 2** in this Handbook (starting on page 26). It will show you how to do this

## How will you know how much nitrogen and phosphorus you are allowed?

When you get the Annual Nitrogen & Phosphorus Statement and put in the information about any other livestock that you may have, you will be able to work out how much nitrogen and phosphorus you are allowed to spread on your holding. **Helpsheet 3** of this Handbook (beginning on page 29) will help you.

If you are not planning to farm in the same way as you did the previous year, you should change the figures in the Statement to match what you are planning to do instead.

## Are you stocked at more than 170 kg nitrogen to the hectare?

About 90% of the holdings in Ireland are stocked at less than 170 kgs of nitrogen to the hectare per year. If you want to farm above this limit you may need to apply for a derogation. The Department is still negotiating with the European Commission about the arrangements. We will tell you about them as soon as they are agreed.



## Managing nitrogen and phosphorus

Every farmer must keep within the overall maximum fertilisation rates for nitrogen and phosphorus — that is, organic and chemical fertilisers combined. The basic rule is that you can only apply as much nitrogen and phosphorus as your crops need (including grass). You must never go above the maximum fertilisation rates, which you can find in **Tables 12-21** of the **Regulations**.

Over the next few years, the “available” rates for nitrogen will change. You can see these changes in **Table 9** of the **Regulations**. You must make sure that you are using the right figure for the year you are planning for.

### Some other important points about managing Fertilisers and Nutrients

- When you are working out how much nitrogen and phosphorus your crops need, you must count in the nitrogen and phosphorus that would be produced by grazing livestock on your holding during the required **storage periods**. You must do this whether or not the livestock are housed during this period.<sup>3</sup>
- The **Regulations** specify that there are certain amounts of nitrogen and phosphorus in organic fertilisers. **Tables 7 and 8** of the **Regulations** show what these amounts are. If you wish, you can use different figures for any pig and poultry manure produced on your holding but you must have these figures certified by the Environmental Protection Agency or by the Department of Agriculture and Food.
- If you are using 5% or more of your holding to grow crops other than grass and your grassland stocking rate is greater than 170 kg, you can use the higher fertilisation rates in **Tables 12 and 13** of the **Regulations**.
- When you are working out how much phosphorus you can spread on your holding, you must count in the phosphorus coming from concentrates that you bring in or concentrates you produce yourself for feeding to your grazing livestock, such as cereals. The **Regulations** specify that every 100 kg of concentrated feedstuff fed to your grazing livestock is equal to 0.5 kg phosphorus spread on a hectare of land.
- You can get a soil test done to show the phosphorus index of your soil. You must have the soil test done in the way that is specified in Schedule 1 of the **Regulations**. A soil test is valid for six years. But if you do not get a soil test done, you must assume that your soil is phosphorus Index 3.
- The phosphorus fertilisation rates for soils that have more than 20% organic matter (peat soils) cannot be higher than the amounts allowed for Index 3 soils. These are known as **maintenance amounts**, which means the amounts that are needed to replace whatever the crop takes up.
- Once you have spread enough manure from grazing livestock on your holding to meet the phosphorus requirements of all the crops that you are growing on Index 1, 2 & 3 soils, you can spread the rest on any Index 4 soil you have as long as you stay within the nitrogen limit of 170kg.
- If you are growing cereals with a higher than average yield, **Table 16** of the **Regulations** allows for higher nitrogen fertilisation rates. But if you want to use these higher fertilisation rates, you will need documents like sales receipts or a milling contract to show that you got the higher yields or that you were growing the wheat for milling purposes.
- You can apply chemical fertilisers during the **prohibited spreading period** to meet the crop requirements of autumn-planted cabbage or of crops grown under permanent cover.

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3 Correction to published version

- You can apply organic fertilisers in autumn for autumn sown crops.

**Helpsheet 2** of this Handbook (starting on page 26) shows you how to work out whether you are below the limit of 170 kgs of nitrogen to the hectare. **Helpsheet 3** (starting on page 29) shows you how to work out the maximum nitrogen and phosphorus allowed for your holding.

## Temporary rules for pig manure, poultry manure and spent mushroom compost

There is a temporary rule to help holdings producing pig manure, poultry manure or spent mushroom compost, and also for holdings using them. Up to 1 January 2011 you can put more phosphorus on your land than your crops require, as long as it comes from manure produced by pigs or poultry or from spent mushroom compost and you do not exceed the 170 kg nitrogen limit. But this rule applies only if the pig, poultry or mushroom production units that it comes from do not get bigger during the period from 1 August 2006 to 1 January 2011.

Until 30 October 2007, organic fertilisers coming from activities licensed by the EPA can be applied as allowed by these licenses – subject to the 170 kg nitrogen limit.

## Temporary rules for REPS farmers

If you are in REPS on or before 1 December 2006, you can still follow the nutrient management part of your REPS plan even if it is different from what the **Regulations** say.

## Rules applying to movement of livestock (cattle and sheep) for grazing on a temporary basis

The Regulations have implications for farmers moving their animals to another holding for grazing on a temporary basis. Where cattle are involved and no sale or purchase has taken place, farmers can obtain credit for the organic fertiliser produced by these cattle only if they follow one of the following procedures:

- a) cattle are officially moved under CMMS by completing an NBAS31B (B&B application form) or
- b) where there are no cattle at the other location, the DVO must be notified in advance of the temporary movement of the cattle.

Where sheep are moved on a temporary basis onto another holding

- c) the normal identification procedures provided for in legislation apply if there are sheep on the receiving holding
- d) the DVO must be notified in advance of the temporary movement of the sheep if there are no sheep on the receiving holding

Where cattle/sheep are moved under b) or d) above, the change in livestock number and the type of livestock associated with this move must be taken into account, for the purpose of calculating compliance with the 170kg/ha limit, and compliance with the maximum fertilisation rates for nitrogen and phosphorus.

These arrangements reflect those in the Charter of Rights for Farmers 2005-2007 (Charter Section under General Issues – Good Agricultural and Environmental Conditions Pages 19 and 20).



## Precautions you must take when you are applying fertilisers

In order to prevent waters from being polluted by nitrogen and phosphorus, the **Regulations** say that you must do the following:

- You must spread livestock manure and other organic fertilisers, effluents and soiled water as accurately and as evenly as you can.
- You must not use an upward-facing splash plate or sludge irrigator on a tanker or umbilical system for spreading organic fertiliser or soiled water.
- You must not spread organic fertilisers or soiled water from a road or passageway, even if the road or passageway is on your own holding.
- You must not spread chemical fertilisers, livestock manure, soiled water or other organic fertilisers when:
  - The land is waterlogged;
  - The land is flooded, or it is likely to flood;
  - The land is frozen, or covered with snow;
  - Heavy rain is forecast within 48 hours (you must check the forecasts from Met Éireann).
- You must not spread chemical fertilisers, livestock manure, soiled water or other organic fertilisers if the ground has a steep slope and if there is a significant risk of causing pollution. When you are deciding whether there is a risk, you must take into account how close you are to waters, what condition the soil is in, the ground cover and how much rainfall there is or how much rainfall is expected.
- You must not spread chemical fertiliser on land within 1.5 metres of a surface watercourse.
- This table shows the different buffer zones for different kinds of water bodies (lakes, rivers, wells and so on). You must not spread soiled water, effluents, farmyard manures or other organic fertilisers inside those buffer zones.

Buffer zones for spreading organic fertilisers	
Water body/Feature	Buffer zone
Any water supply source providing 100m <sup>3</sup> or more of water per day, or serving 500 or more people	200 metres
Any water supply source providing 10m <sup>3</sup> or more of water per day, or serving 50 or more people	100 metres
Any other water supply for human consumption	25 metres
Lake shoreline	20 metres
Exposed cavernous or karstified limestone features (such as swallow holes and collapse features)	15 metres
Any surface watercourse where the slope towards the watercourse exceeds 10%	10 metres
Water body/Feature	Buffer zone
Any other watercourse	5 metres
Any open drain or where the area of land adjacent to the watercourse is a narrow parcel of land less than 50 metres wide and not more than 1 hectare in area	3 metres

Your Local Authority may specify a different buffer width from those specified above, in the case of water for human consumption. Your Local Authority will tell you if they do so, and they will tell the Department of Agriculture and Food as well.

### Take care when you are spreading soiled water

You can spread soiled water all the year round if the weather is suitable, if the condition of the land is suitable and if you do it in the way that the **Regulations** tell you to do it. However there are some restrictions and these are what they are:

- You must not spread more than 50,000 litres to the hectare in any six-week period.
- You must not spread more than 5 mm an hour by irrigation.

There are extra restrictions in areas that are identified, on maps produced by the Geological Survey of Ireland, as **extreme vulnerability areas** on **Karst Limestone Aquifers**. In these areas:

- You must not spread more than 25,000 litres to the hectare in any six-week period.
- You must not spread more than 3 mm an hour by irrigation.

## Storing farmyard manure in a field

You must not store farmyard manure in a field during the **prohibited spreading period** for farmyard manure (check the table below the map on page 4). You can store it in a field during the spreading season, but you must store it in a compact heap and you cannot store it within the buffer zones in the following table.

Buffer zones applicable when farmyard manure is stored in a field	
Water body/Feature	Buffer zone
Any water supply source providing 100m <sup>3</sup> or more of water per day, or serving 500 or more people	250 metres
Any water supply source providing 10m <sup>3</sup> or more of water per day, or serving 50 or more people	250 metres
Any other water supply for human consumption	50 metres
Lake shoreline	20 metres
Water body/Feature	Buffer zone
Exposed cavernous or karstified limestone features (such as swallow holes and collapse features)	50 metres
Any surface watercourse where the slope towards the watercourse exceeds 10%	10 metres
Any other watercourse	10 metres
Any open drain or where the area of land adjacent to the watercourse is a narrow parcel of land less than 50 metres wide and not more than 1 hectare in area	10 metres

## Ploughing and using non-selective herbicides

- Arable land ploughed between 1 July and 15 January must have a green cover from a sown crop within 6 weeks of ploughing.
- Grassland ploughed between 1 July and 15 October must have a green cover from a sown crop by 1 November.
- You must not plough grassland between 16 October and 30 November.
- If you use a non-selective herbicide on arable land or grassland between 1 July and 15 January, there must be green cover from a sown crop or from natural regeneration within 6 weeks from when you use the herbicide.
- If you provide green cover to abide by the rules about ploughing or using a non-selective herbicide, you must not remove it by ploughing or by using a non-selective herbicide before January 15, unless a crop is sown within two weeks of removing it

Under the **Regulations**, you have to keep records. You must keep the records for each calendar year and they must be finalised by **31 March** of the following year. For 2006, you are required to have records available by 31 March, 2007 on area farmed, cropping regime, types of livestock and numbers, storage facilities on farm. You will already have most of this information on your Single Payment application, stock registers and CMMS profiles. You must keep full records (including fertiliser/manure details) as set down in this Section of the Handbook for future years from 1 January, 2007. You must hold on to the records for five years.

These are the records you must keep:

- The **total area** of your holding in hectares (this is on your application form for the Single Payment Scheme if you are an applicant).
- The **net area** of the holding in hectares (this is on your application form for the Single Payment Scheme if you are an applicant).
- The **areas of grass and any other crops** on your holding (this is also in your application form for the Single Payment Scheme).
- An **estimate of how much fertiliser your holding requires** for the year, and a copy of any Nutrient Management Plan (for example a REPS plan) that might have been done for your holding (we recommend that you do this estimate early in the year using the record of the areas of grass and any other crops on your holding). Remember to take into account fertilisers applied in Autumn for Autumn sown crops.
- The numbers and type of livestock you have (see **Table 6 of Regulations** for a description of livestock types), as follows:
  - In the case of cattle, you do not need to keep any records additional to the Bovine Herd Register.
  - In the case of sheep, you do not need to keep any records additional to the Flock Register.
  - In the case of pigs and poultry, you can just write in the number of places.
  - You should also record the number of each livestock type other than the above on the holding on the first day of each quarter.
- The quantities and types of chemical fertilisers moved on to or off your holding, including opening stock, records of purchase and closing stock.
- The total amount of concentrates (including cereals produced on your holding) that you fed to grazing livestock.
- Livestock manure and other organic fertilisers moved on to or off the holding including quantities, type, dates and details of exporters/importers, as the case may be.
- Details of livestock temporarily moved to, or received from, another holding for grazing including cattle/sheep types, rental period, LPIS nos. of land grazed plus name and herd number of transferor/transferee.



## Record 2: Chemical fertilisers coming onto your holding (“imported”) or being sent out of it (“exported”)

Date		Type of fertiliser			Quantity (tonnes)	kgs of N	kgs of P
		N % (i)	P % (ii)	K %			
Opening stocks							
01/01/							
Purchases/moved onto holding	Name/address of exporter						
Sales/moved off holding	Name/address of importer						
Closing stocks							
31/12							
Total kgs of chemical nitrogen and phosphorus used (opening stock + purchases – sales – closing stock)							

Note: The “exporter” is the farmer sending fertiliser out of his or her holding. The “importer” is the farmer taking it in.







## SECTION 4:

## Controls

Local Authorities are the bodies which carry primary responsibility for implementing these **Regulations** and may in this regard visit farms when undertaking their responsibilities. The **Regulations** are also part of the Cross Compliance requirements introduced with the decoupled Single Payment. The Department of Agriculture and Food, by agreement with the Department of the Environment, Heritage and Local Government, has taken on responsibility for the undertaking of Cross Compliance inspections for the Single Payment Scheme. The advantage of this approach will be the ability to undertake the Cross Compliance inspections in a single visit using the Department of Agriculture & Food field inspection service.

### Cross Compliance Inspections

Cross Compliance inspections for these **Regulations** will be undertaken in conjunction with the other statutory management requirement measures applicable to each individual applicant. There is a checklist for these **Regulations** on pages 33 to 35. This checklist is also to be found in the booklet *The Single Payment Scheme Guide to Cross-Compliance Requirements to be implemented in 2006 and 2007*, which has already been issued to all Single Payment Scheme applicants. Cross Compliance infringements of a negligent nature may incur sanctions of 1%, 3% or 5% depending on the nature of the infringement. More serious breaches may incur a higher sanction. In applying the Cross Compliance controls, the Department of Agriculture and Food has developed a tolerance system to accommodate minor or inadvertent breaches for which no sanction will be applied. While Local Authorities will not be undertaking Cross Compliance inspections, they are however required under EU law to report breaches of these **Regulations** to the Single Payment Unit who will then determine if a sanction under the Single Payment Scheme is appropriate.

### Appeals

Farmers who are unhappy with the outcome of Cross Compliance decisions may appeal their cases to the Agriculture Appeals Office.

### Penalties for breaching the Regulations:

You will find details of the penalties in the **Regulations**.

A breach of the **Regulations** may also put part or all of your Single Payment at risk. If Local Authorities find farmers contravening these **Regulations**, they must report them to the Cross Compliance Unit of the Department of Agriculture and Food.

## HELPSHEET No 1

### Have you enough storage capacity for organic fertilisers?

This Helpsheet takes you through what you need to do to work out whether you have enough storage capacity on your holding.

You need to make out a list of the kind of storage facilities you have for livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds, farmyard manure pits or silage pits. You must also work out how much they can hold. Then you must work out whether you have enough storage to comply with the **Regulations**.

If you find that you have not got enough storage capacity then you must put matters right. There are a number of things you can do. Some of them are: —

- building extra storage
- renting storage capacity off your holding
- reducing your livestock numbers to what you have enough storage for
- outwintering in a way that meets the requirements of the **Regulations**.

### Step 1: Working out how much slurry storage capacity you need for your livestock

Livestock type	No. of livestock during storage period <sup>1</sup>	Volume of slurry m <sup>3</sup> /week	Weeks storage required (16, 18, 20 or 22)	Total volume required m <sup>3</sup>
	(a)	(b)	(c)	(d) = (a) x (b) x (c)
Dairy cow		0.33		
Suckler cow		0.29		
Cattle > 2 years		0.26		
Cattle (18-24 months old)		0.26		
Cattle (12-18 months old)		0.15		
Cattle (6-12 months old)		0.15		
Cattle (0-6 months old)		0.08		
Lowland ewe <sup>2</sup>		0.03	6	
Mountain ewe <sup>2</sup>		0.02	6	
Lamb-finishing <sup>2</sup>		0.01	6	
Poultry - layers per 1,000 birds (30% DM)		0.81		
Breeding unit (per sow place)				
Integrated unit (per sow place)				
Finishing unit (per pig)				
Other (specify)				
Slurry storage capacity required (m <sup>3</sup> )				A

<sup>1</sup> Average number of livestock over the prohibited spreading period

<sup>2</sup> 6 weeks storage is sufficient for sheep

## Step 2: Working out how much storage capacity you require for rainfall and soiled water draining into the tank

The average net rainfall in **Table 4** of the **Regulations** is used to calculate the storage capacity required for rain falling directly (on a weekly basis) onto uncovered storage tanks and onto other surface areas draining to the storage tank.

### Form 1B Storage capacity required for rainfall entering tank (m<sup>3</sup>)

Tank	Area of uncovered storage tank <i>plus</i> area of other surfaces draining to tank (m <sup>2</sup> )	Millimetres per week	Weekly rainfall volume into storage tank (m <sup>3</sup> )	Weeks storage required (16, 18, 20 or 22)	Additional storage required for rainfall m <sup>3</sup>
	(a)	(b)	(c) = (a) x (b) /1000	(d)	(e) =(c x d)
Storage required for rainfall entering tank (m <sup>3</sup> )					B

## Step 3: Working out how much storage you need altogether

You can work out how much slurry storage capacity you need altogether (in m<sup>3</sup>) by adding a in step 1 to b in step 2. Write down the result here:

You may be able to reduce this to take account of any livestock that you have outwintered in accordance with the **Regulations**.

You must have 200mm freeboard in all covered tanks and 300mm freeboard in all uncovered tanks.

**Step 4: How much slurry storage capacity have you got in covered tanks?**

Tank	Length (m)	Breadth (m)	Depth – 200mm (m) <sup>1</sup>	Capacity m <sup>3</sup>
	(a)	(b)	(c)	(d) = (a x b x c)
Total capacity of existing covered tanks (m <sup>3</sup> )				C

<sup>1</sup> Freeboard specified for covered tanks (200mm)

**Step 5: How much slurry storage capacity have you got in uncovered tanks?**

Tank	Length (m)	Breadth (m)	Depth – 300mm (m) <sup>1</sup>	Capacity m <sup>3</sup>
	(a)	(b)	(c)	(d) = (a x b x c)
Total capacity of existing uncovered tanks (m <sup>3</sup> )				D

<sup>1</sup> Freeboard specified for uncovered tanks (300mm)

**Step 6: How much slurry storage capacity have you got altogether?**

You can work out the total storage capacity you have (in m<sup>3</sup>) by adding C from Step 4 to D from Step 5. Write down the result here:

**Step 7: Have you got enough storage capacity?**

Is the figure in the second box (Step 6) greater than the figure in the first box (Step 3) on page 23? If the answer is YES, then you are already complying with the Regulations. If the answer is NO and you don't have any straw bedded housing which complies with the Regulations, then you do not have enough storage and you must do something about it — perhaps by building extra storage, by renting storage capacity off your own holding, by reducing your livestock numbers down to what you have enough storage for or by outwintering in a way that meets the requirements of the Regulations.

## Step 8: Have you got enough storage for dungsteads?

Livestock type	No. of livestock during storage period <sup>1</sup>	Solid fraction			Seepage	
		Solid fraction (m <sup>3</sup> /week)	Weeks storage required (16, 18, 20 or 22)	Dungstead capacity required (m <sup>3</sup> )	Seepage fraction (m <sup>3</sup> /week)	Storage required (m <sup>3</sup> ) <sup>1</sup>
	(a)	(b)	(c)	(a x b x c)	(d)	(a x c x d)
Dairy cow		0.28			0.04	
Suckler cow		0.25			0.03	
Cattle > 2 years		0.23			0.02	
Cattle (18-24 months old)		0.23			0.02	
Cattle (12-18 months old)		0.13			0.01	
Cattle (6-12 months old)		0.13			0.01	
Cattle (0-6 months old)		0.07			0.01	
<b>TOTAL CAPACITY REQUIRED (M<sup>3</sup>)</b>						

<sup>1</sup>Average number of livestock over the prohibited spreading period

**Note:** You must make an allowance for net rainfall (Table 4 of Regulations) during the specified storage period, for the surface area of the dungstead and also for the seepage tank if it is not covered.

## HELPSHEET No 2

### Working out whether you are within the limit of 170 kg of nitrogen to the hectare per year from livestock manure

If you follow the Steps on this Helpsheet, you can work out whether you are complying with the limit of 170 kgs of nitrogen to the hectare per year from livestock manure.

#### Step 1: Working out the total nitrogen and phosphorus produced by grazing livestock on your holding

Grazing livestock	Annual average numbers	Nitrogen excretion (kg/year)	Total Nitrogen <sup>1</sup> (kg)	Phosphorus excretion (kg/year)	Total Phosphorus <sup>1</sup> (kg)
	(a)	(b)	(a x b)	(d)	(a x d)
Dairy cow		85		13	
Suckler cow		65		10	
Cattle (0-1 year old)		24		3	
Cattle (1-2 year old)		57		8	
Cattle > 2 years		65		10	
Mountain ewe & lambs		7		1	
Lowland ewe & lambs		13		2	
Mountain hogget		4		0.6	
Lowland hogget		6		1	
Other <sup>3</sup> (specify)					
<b>Total N produced by grazing livestock</b>			<b>(a) <sup>2</sup></b>		
<b>Total P produced by grazing livestock</b>					<b>(b) <sup>2</sup></b>

<sup>1</sup> The Annual Nitrogen and Phosphorous Statement from the Department of Agriculture and Food will provide figures for the total amounts of nitrogen and phosphorus produced by all cattle on your holding. For sheep you can use the average of numbers and types held on the first day fo each quarter of the year as on your flock register.

<sup>2</sup> The available nitrogen or phosphorous to be taken into account as a source of such nutrients for the holding can be derived from these figures.

<sup>3</sup> See Table 6 of the **Regulations** for excretion rates for other livestock.

## Step 2: Working out the total nitrogen and phosphorus produced by other livestock on your holding

Non grazing livestock	Annual average numbers	Nitrogen excretion (kg/year)	Total Nitrogen (kg)	Phosphorus excretion (kg/year)	Total Phosphorus (kg)
	(a)	(b)	(a x b)	(d)	(a x d)
Breeding unit (per sow place)		35		8	
Integrated unit (per sow place)		87		17	
Finishing unit (per pig place)		9.2		1.7	
Laying hen per bird place		0.56		0.12	
Broiler per bird place		0.24		0.09	
Turkey per bird place		1		0.4	
Other <sup>1</sup> (specify)					
<b>Total nutrients produced by other livestock on the holding</b>			<b>(c)</b>		<b>(d)</b>

<sup>1</sup> Contact the Department of Agriculture and Food for excretion rates for other non-grazing livestock

### Step 3: Are you within the 170 kg limit ?

<b>Total N produced by grazing livestock (kg)</b> (a from Step 1)		(e)
<b>Total N produced by other livestock on the holding (kg)</b> (c from Step 2)		(f)
<b>Total N from SMC produced on the holding (kg)</b> Based on amount of mushroom compost used		(g)
<b>Total N produced on the holding (kg)</b>	(e + f + g)	(h)
<b>Net area of the holding (ha)</b>		(k)
<b>Nitrogen from livestock manure produced on the holding kg/N/ha/yr</b> (h / k)		(l)
<b>Adjustments for import and export</b>		
<b>Total Nitrogen from imported livestock manure and SMC (kg)</b> calculated from Record 3		(m)
<b>Total Nitrogen in exported livestock manure and SMC (kg)</b> calculated from Record 3		(n)
<b>Total Nitrogen from livestock manure on the holding</b> (produced on the holding and imported - exported)	(h + m - n)	(o)
<b>Nitrogen from livestock manure kg/N/ha/yr</b>	(o / k)	(p)

You have complied with the 170 kg N/ha/yr limit from livestock manure when (p) in this table is less than or equal to 170. However, if (l) is greater than 170 you must take action to achieve compliance by for example, reducing livestock numbers or taking extra land or exporting livestock manure or applying for a derogation.

## HELPSHEET No 3

### Calculating your grassland stocking rate and the maximum nitrogen and phosphorus allowed on the holding

#### Step 1: Working Out Your Grassland Stocking Rate

Total N produced by grazing livestock (kg) (a) from the table in Step 1 on page 26	(a)
Net grassland area of the holding (ha)	(b)
Grassland stocking rate kg N/ha/year (a / b)	(c)

#### Step 2: Working Out How Much Nitrogen You Are Allowed

To calculate the maximum available nitrogen allowance for grassland on your holding, select the appropriate fertilisation rate from **Table 12** of the **Regulations** corresponding to (c) from Step 1.

<b>Grassland</b>					
Grassland stocking rate (kg N/ha/year)	Area (ha)		Max. fertilisation rate available N (kg) (Table 12 of Regulations)		Total available N allowed (kg)
		x		=	
<b>Maximum available nitrogen for grassland</b>					(d)
<b>Other Crops (including grass, cut only, no grazing livestock on holding)</b>					
Crop	N Index (Table 10 of Regulations)	Area (ha)	Max. fertilisation rate available N (kg) (Tables 14, 16, 18, 20 of Regulations)		Total available N allowed (kg)
				x	=
				x	=
				x	=
				x	=
				x	=
				x	=
				x	=
				x	=
				x	=
<b>Maximum available nitrogen for crops on holding</b>					(e)
<b>Maximum available nitrogen for holding</b> (d + e)					(f)

### Step 3: How much available nitrogen can you bring into your holding?

<i>SOURCE OF NITROGEN</i>	Total N (kg)
<b>Available nitrogen in manure produced by grazing livestock on the holding during the storage period<sup>1</sup></b> (a) from Step 1 (page 26)/52 X (weeks storage required) X appropriate nitrogen availability <sup>1</sup> for cattle manure from <b>Table 9</b> of the Regulations	(g)
<b>Available nitrogen from other livestock manure and SMC produced on the holding<sup>1</sup></b> Sum of the following: Pig and poultry X appropriate nitrogen availability from <b>Table 9</b> SMC X appropriate nitrogen availability from <b>Table 9</b> Other livestock types X appropriate nitrogen availability from <b>Table 9</b>	(h)
<b>Total available nitrogen produced on holding</b> (g + h)	(k)
<b>Maximum amount of available nitrogen (chemical and organic) that may be imported onto the holding</b> (f from Step 2 on page 29) – k	(l)
Adjustments for import and export of organic fertilisers	
<b>Available nitrogen from organic fertiliser imported onto the holding<sup>1</sup></b> Sum of the following: Pig and poultry X appropriate nitrogen availability from <b>Table 9</b> Farmyard manure X appropriate nitrogen availability from <b>Table 9</b> SMC X appropriate nitrogen availability from <b>Table 9</b> Cattle manure and other organic fertilisers X appropriate nitrogen availability from <b>Table 9</b>	(m)
<b>Available nitrogen from organic fertiliser exported from the holding<sup>1</sup></b> Sum of the following: Pig and poultry X appropriate nitrogen availability from <b>Table 9</b> Farmyard manure X appropriate nitrogen availability from <b>Table 9</b> SMC X appropriate nitrogen availability from <b>Table 9</b> Cattle manure and other organic fertilisers X appropriate nitrogen availability from <b>Table 9</b>	(n)
<b>Maximum amount of nitrogen from chemical fertiliser for the holding</b> (l – m + n)	(o)

<sup>1</sup>Note: nitrogen availability figures change on 1 January 2008 and 1 January 2010.

## Step 4: Working out how much phosphorus you are allowed on your holding

To work out the maximum phosphorus allowance for grassland on your holding, select the appropriate fertilisation rate from **Table 13** of the **Regulations** corresponding to (c) from Step 1 on page 29.

Grassland						
Grassland stocking rate (kg N/ha/year)	P Index (Table 11 of Regulations)	Area (ha)		Max. P fertilisation rate (kg) (Table 13 of Regulations)		Total P allowed (kg)
			X		=	
			X		=	
			X		=	
			X		=	
			X		=	
			X		=	
			X		=	
<b>Maximum phosphorus for grassland</b>						<b>(p)</b>
Other Crops (including grass, cut only, no grazing livestock on holding)						
Crop	P Index (Table 11 of Regulations)	Area (ha)		Max. P fertilisation rate (kg) (Tables 15,17,19,21 of Regulations)		Total P allowed (kg)
			X		=	
			X		=	
			X		=	
			X		=	
			X		=	
			X		=	
<b>Maximum phosphorus for crops on holding</b>						<b>(q)</b>
<b>Maximum phosphorus for holding</b>					<b>(p + q)</b>	<b>(r)</b>

## Step 5: How much phosphorus can you bring into your holding?

<i>SOURCE OF PHOSPHORUS</i>	Total P (kg)
<b>Phosphorus in manure produced by grazing livestock on the holding during the storage period</b> (b) from Step 1 on page 29/52 X (weeks storage required)	(s)
<b>Phosphorus from other livestock manure and SMC produced on the holding<sup>1</sup></b> (d) from Step 2 on page 29 + phosphorus from SMC	(t)
<b>Phosphorus from concentrated feedstuffs fed to grazing livestock on the holding</b> 0.5 kg P for each 100 kg fed	(u)
<b>Total phosphorus produced on holding</b> (s + t + u)	(v)
<b>Maximum amount of phosphorus that may be imported onto the holding</b> (r from step 4 page 31 – v)	(w)
Adjustments for import and export of organic fertilisers	
<b>Phosphorus from organic fertiliser imported onto the holding</b> calculated from Record 3 (page 19)	(x)
<b>Phosphorus in organic fertiliser exported from the holding</b> calculated from Record 3 (page 19)	(y)
<b>Maximum amount of phosphorus from chemical fertiliser for the holding</b> (w – x + y)	(z)

**Note:** The application of livestock manure on the holding is already subject to the overall limit of 170 kgs of nitrogen per hectare per year. After 1 January 2011, the application of livestock manure from pigs and poultry or spent mushroom compost will also be subject to the limits imposed by the maximum phosphorus fertilisation rates in the Regulations.

## THE CROSS-COMPLIANCE CHECKLIST

### Livestock Manures and other Organic Fertilisers

- Is there visual evidence of inadequate collection of livestock manure, other organic fertilisers, soiled water or silage effluent
- Is there visual evidence of inadequate management of the storage facilities for livestock manure, other organic fertilisers, soiled water or silage effluent
- Is there visual evidence of structural defects in the storage facilities in use leading to direct or indirect runoff to groundwater or surface water
- Where reduced storage capacity conditions are in place due to outwintering, does the holding fail to satisfy the outwintering requirements
- Has FYM been stored in such a way or location that it breached the requirements of the Regulations
- Is there evidence that farmyard manure is or has been stockpiled on land during the prohibited spreading period

Note:- Under the Nitrates Regulations farmers are subject to a limit of 170 kilograms of organic nitrogen (nitrogen from livestock manure) per hectare per calendar year with effect from 1 February 2006. Ireland has applied for a derogation from the 170kg figure up to 250kg per hectare.

### Landspreading of Chemical and Organic Fertiliser

- Is there evidence that chemical fertiliser has been applied within 1.5 m of a surface watercourse
- Is there evidence that organic fertiliser or soiled water has been applied within the minimum buffer zones for water extraction points as specified in the Regulations
- Is there evidence that organic fertiliser or soiled water has been applied within 20 m of a lake shoreline
- Is there evidence that organic fertiliser or soiled water has been applied within 15 m of exposed cavernous or karstified limestone features
- Is there evidence that organic fertiliser or soiled water has been applied within 5 m of a surface watercourse or 3 m as applicable under certain conditions as specified in the Regulations

## Application of Chemical and Organic Fertilisers

- Is there evidence of the spreading of chemical fertiliser or organic fertiliser including farmyard manure during a prohibited spreading period
- Is there evidence of a poor spread pattern of livestock manure, other organic fertilisers or soiled water on the land
- Is there evidence of the application of fertilisers or soiled water to land that is waterlogged, flooded, snow covered, frozen or when heavy rain is forecast
- Is there evidence of the application of fertilisers or soiled water to steeply sloping ground where there is a significant risk of causing water pollution because of proximity to water, ground conditions, ground cover or rainfall
- Is there evidence of the application of organic fertiliser or soiled water using an upward facing splashplate, or sludge irrigator mounted on a tanker
- Is there evidence of the application of organic fertiliser or soiled water from a road or passageway
- Is there evidence of the application of soiled water in quantities exceeding 25,000 l/ha in any 42 day period (3mm per hour by irrigation) in extreme vulnerability areas or 50,000l/ha in other areas (5mm per hour by irrigation)

## Ploughing and use of non-selective herbicides

- Is there evidence that grassland has been ploughed between 16th October and 30th November
- Is there evidence of insufficient emergence of green cover by 1st November after the ploughing of grassland between 1st July and 15th October
- Is there evidence, where arable land has been ploughed between 1st July and 15th January, of insufficient emergence of green cover within 6 weeks of the ploughing
- Is there evidence of insufficient emergence of green cover within 6 weeks of the application of a non-selective herbicide between 1st July and 15th January
- Is there evidence of the complete removal of required green cover, by ploughing or the use of non-selective herbicide, before the 15th January unless a crop is sown within two weeks of its removal
- Is there evidence that the holding exceeded the maximum fertilisation rates of available nitrogen or phosphorus in the relevant calendar year
- Is there evidence that all required records are not being maintained and retained

- Is there evidence that clean water is not being diverted to a clean water outfall to minimise soiled water generation
- Is there evidence of inadequate storage capacity for pig manure on or off the holding

**Note:** In relation to other livestock manures, where a farmer currently has insufficient storage capacity, he/she has until 31 December 2008 to provide adequate storage facilities.