
STATUTORY RULES OF NORTHERN IRELAND

2014 No. 308

ENVIRONMENTAL PROTECTION

**The Phosphorus (Use in Agriculture)
Regulations (Northern Ireland) 2014**

Made - - - - *11th December 2014*

Coming into operation *1st January 2015*

The Department of the Environment, being a department designated⁽¹⁾ for the purposes of section 2(2) of the European Communities Act 1972⁽²⁾ in relation to the environment, in exercise of the powers conferred upon it by that section and by Article 32 of the Waste and Contaminated Land (Northern Ireland) Order 1997⁽³⁾ and, in accordance with Article 32(3) of that Order, having published a notice indicating the effect of these Regulations and having taken into consideration the representations made to it in accordance with the notice, makes the following Regulations.

PART 1

Preliminary

Citation and commencement

1. These Regulations may be cited as the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2014 and shall come into operation on 1st January 2015.

Interpretation

2.—(1) The Interpretation Act (Northern Ireland) 1954⁽⁴⁾ applies to these Regulations as it applies to an Act of the Assembly.

(2) In these Regulations—

“agricultural land” has the same meaning as in the Agriculture Act (Northern Ireland) 1949⁽⁵⁾;

(1) S.I. 2008/301
(2) 1972 c.68
(3) S.I. 1997/2778 (N.I. 19)
(4) 1954 c.33 (N.I.)
(5) 1949 c.2 (N.I.)

“Appeals Commission” means the Water Appeals Commission for Northern Ireland as constituted in accordance with Article 292 of the Water and Sewerage Services (Northern Ireland) Order 2006⁽⁶⁾;

“authorised person” means a person authorised by the Department in accordance with Article 72 of the Order;

“available phosphorus” means forms of phosphorus that can be taken up by a crop immediately or within a short period, the proportion of which contained in fertilisers is set out in Table 2 of Schedule 2 to these Regulations;

“chemical phosphorus fertiliser” means any fertiliser containing one or more phosphorus compounds which is manufactured or blended by an industrial process;

“Code of Good Agricultural Practice” means the “Code of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil” published by the Department of Agriculture and Rural Development (as may from time to time be reissued);

“controller” means in relation to a holding, the person charged with management of the holding for the calendar year in question and will be taken to be—

- (a) for calendar years prior to 2015 and in the absence of a written nitrates controller agreement to the contrary, the person claiming direct agricultural aid payments for the agricultural area or, where direct agricultural aid payments are not being claimed, the owner of the agricultural area; or
- (b) for calendar years from 2015, the person claiming direct agricultural aid payments for the agricultural area or, where direct agricultural aid payments are not being claimed, the person who enjoys the decision making power, benefits and financial risks in relation to the agricultural activity carried out on the land.

“crop requirement” means the amount of nitrogen, phosphorus and other plant nutrients in fertiliser which is reasonable to apply to land in any year for the purpose of promoting the growth of the crop having regard to the foreseeable nutrient supply to the crop from the soil and from other sources, including any previous applications of livestock and other organic manure and any chemical fertilisers estimated as described in the fertiliser technical standards and, with regard to phosphorus, regulation 6 of these regulations;

“Department” means Department of the Environment;

“Directive” means Council Directive 91/676/EEC⁽⁷⁾ of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources;

“environment” means any or all of the following media, namely the air, water and land;

“fertiliser” means any substance containing plant nutrients utilised on land to enhance growth of vegetation and may include livestock manure, the residues from fish farms and sewage sludge;

“fertiliser technical standards” means—

- (a) the “DEFRA Fertiliser Manual (RB209) 8th Edition” (as may from time to time be reissued) and any supplementary guidance;
- (b) with regards to phosphorus recommendations for grassland, Table 1 of Schedule 2 to these Regulations; and
- (c) any other publication by DEFRA or the Department and the Department of Agriculture and Rural Development substituting any of the standards referred to in sub-paragraphs (a) and (b);

⁽⁶⁾ S.I. 2006/3336 (N.I. 21)

⁽⁷⁾ OJL 375, 31.12.91, p. 1-8

“grassland” means any land on which the vegetation consists predominantly of grass species;

“holding” in relation to a controller means all the agricultural area managed by that controller;

“land application” means the addition of materials to agricultural land whether by spreading on the surface of the land, injection into the land, placing below the surface of the land or mixing with the surface layers of the land but does not include the direct deposition of manure onto land by animals;

“livestock” means any animal kept for use or profit;

“livestock manure” means waste products excreted by livestock or a mixture of litter and waste products excreted by livestock, even in processed form;

“nitrates controller agreement” means, for any stipulated calendar years prior to 2015, a written agreement transferring responsibility for compliance with these Regulations and the Nitrates Action Programme Regulations (Northern Ireland) 2014⁽⁸⁾ for a defined agricultural area from—

- (a) the person claiming direct agricultural aid payments for the agricultural area; or
- (b) where direct agricultural aid payments are not being claimed, the owner of the agricultural area

to a third person who enjoys the decision making power, benefits and financial risks in relation to the agricultural activity carried out on the defined agricultural area;

“notice” means notice in writing;

“organic manure” means

- (a) livestock manure; and
- (b) fertiliser not being livestock manure or chemical fertiliser, derived from organic matter, and includes sewage sludge, residues from fish farms and other organic wastes.

“phosphorus fertiliser” means any substance, including chemical fertiliser, containing one or more phosphorus compounds utilised on land to enhance growth of vegetation;

“soil phosphorus index” means the index number (0 to 4) assigned to the soil in accordance with Schedule 1 to indicate the amount of phosphorus available from the soil to the crop;

“soil test” means the chemical analysis of phosphorus in a soil sample taken and analysed in accordance with Schedule 1 and any supplementary guidance;

“the Order” means The Waste and Contaminated Land (Northern Ireland) Order 1997;

Revocations

3. The following Regulations are revoked—

- (a) the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006⁽⁹⁾; and
- (b) the Phosphorus (Use in Agriculture) (Amendment) Regulations (Northern Ireland) 2007⁽¹⁰⁾.

⁽⁸⁾ S.R. 2014 No. 307

⁽⁹⁾ S.R. 2006 No. 488

⁽¹⁰⁾ S.R. 2007 No. 273

PART 2

General

Duty of the controller to comply with these Regulations

4. In complying with any duty under these Regulations, the controller of a holding shall have regard to any guidance which may be issued from time to time by the Department and/or by the Department of Agriculture and Rural Development for the purposes of these Regulations and, in accordance with Article 4 of the Directive, the Code of Good Agricultural Practice as may be amended from time to time.

Exemptions granted by the Department

- 5.—(1) The Department may exempt from the requirements of these Regulations—
- (a) research activities of the Department and/or the Department of Agriculture and Rural Development, and institutes or agencies authorised by the Department, for the purpose of—
 - (i) protecting or improving water quality; or
 - (ii) increasing nutrient efficiency in agricultural systems; and
 - (b) activities carried out by the Department and/or the Department Agriculture and Rural Development, and institutes or agencies authorised by the Department, so as to address emergency situations where there is a risk of—
 - (i) impact on human health;
 - (ii) widespread impact on animal health; or
 - (iii) impact on the quality of the environment as a whole.
- (2) The Department shall record all exemptions under this regulation.

PART 3

Measures relating to the land application of fertilisers

Measures governing limits on the land application of chemical phosphorus fertiliser

6.—(1) The controller of a holding shall ensure that the total amount of available phosphorus in chemical phosphorus fertiliser applied each year to grassland and to land other than grassland shall not exceed the recommendations contained in the fertiliser technical standards for crop requirement for phosphorus taking into consideration soil phosphorus index, the recommended soil phosphorus index for the crop and the supply of phosphorus available from the application of organic manures.

- (2) For the purposes of paragraph (1)—
- (a) the soil phosphorus index shall be ascertained in accordance with Schedule 1;
 - (b) the phosphorus fertiliser recommendations for grassland shall be those set out in Table 1 of Schedule 2, adjusted in accordance with the notes to the table; and
 - (c) the available phosphorus content of livestock manures and other fertilisers is as set out in Table 2 of Schedule 2.

PART 4

Record keeping, compliance monitoring and enforcement

Duty of controller to provide information

7.—(1) In relation to a holding where chemical phosphorus fertiliser has been applied and in accordance with paragraphs (2) and (3), the controller of the holding shall keep sufficient records to allow the following information to be ascertained on an annual basis—

- (a) the identity of the controller for the calendar year in question;
- (b) the size and location of each field in the holding to which chemical phosphorus fertiliser was applied;
- (c) the results of any soil tests carried out to satisfy compliance with regulation 6(1);
- (d) a statement of the foreseeable crop requirement for phosphorus;
- (e) the quantity of each type of phosphorus fertiliser applied;
- (f) the certified phosphorus content of the chemical phosphorus fertiliser and the available phosphorus content of any organic manures applied in accordance with Table 2 of Schedule 2;
- (g) the date of application of any phosphorus fertiliser; and
- (h) the type and date of any crop sown.

(2) Records under paragraph (1) shall be prepared for each calendar year by 30 June of the following year and shall be retained for a period of 5 years from that date.

(3) The controller shall not compile records which are false or misleading or furnish any false or misleading information in any notice or other document for the purposes of these Regulations.

(4) Records under paragraph (1) shall be made available by the controller for inspection by the Department on request.

Monitoring and inspections

8. An authorised person may exercise any of the functions specified in Article 72 of the Order to determine or ensure compliance with these Regulations.

Notices

9.—(1) Where the Department is of the opinion that a controller is in breach or is likely to be in breach of these Regulations, the Department may serve a notice on that controller to—

- (a) require the controller to carry out such works, provide such information or to take such precautions or other steps as the Department may specify in the notice as appropriate to prevent any breach, to remedy any breach or to prevent the continuation or repetition of any breach to which the notice relates;
- (b) subject to paragraph (2) specify the period within which a requirement under subparagraph (a) is to be complied with; and
- (c) inform the controller on whom the notice is served of their right to appeal under paragraph (3).

(2) The period for compliance stated in the notice pursuant to paragraph (1)(b) shall be such as is reasonable in the circumstances and shall not in any case be less than 28 days from the day on which the notice is served.

(3) A notice served pursuant to this regulation may be appealed in accordance with regulation 10.

(4) Where an appeal is brought in accordance with regulation 10, the notice shall be of no effect pending the final determination or the withdrawal of the appeal.

(5) The Department may at any time—

- (a) withdraw the notice;
- (b) extend the period for compliance; or
- (c) with the consent of the person on whom the notice is served, modify any requirement of the notice.

Appeals against notices requiring works etc.

10.—(1) A controller upon whom a notice is served in accordance with regulation 9 may, within the period of 28 days from the day on which the notice is served, appeal in writing against the notice to the Appeals Commission;

(2) An appeal in accordance with paragraph (1) shall be determined by the Appeals Commission in accordance with the procedure specified in Article 293 of the Water and Sewerage Services (Northern Ireland) Order 2006(**11**) and for the purposes of an appeal under these Regulations references to the relevant department in Article 293 shall be construed as references to the Department.

Offences

11.—(1) It shall be an offence to fail to comply with regulations 6 or 7.

(2) It shall be an offence for a controller to fail to comply without reasonable excuse with the conditions of a notice served under regulation 9.

Penalties

12. A controller guilty of an offence under regulation 11 shall be liable on summary conviction to a fine not exceeding level 5 on the standard scale (if not calculated on a daily basis) or, in the case of a continuing offence, not exceeding an amount equal to one-tenth of level 5 on the standard scale.

Sealed with the Official Seal of the Department of the Environment on 11th December 2014



Dave Foster
A senior officer of the Department of the
Environment

SCHEDULES

SCHEDULE 1

Soil test for phosphorus

1. Reference to the results of a soil test is a reference to the results of an analysis of a soil sample carried out by a soil-testing laboratory competent to analyse soils for phosphorus. Each analysis, provided by the competent laboratory, will require a UKAS accreditation or (National equivalent) statement.

2. The taking of soil samples and the analysis for phosphorus shall be carried out in accordance with the procedures below.

Soil sampling procedure

3. Area to sample: The size of the area from which one sample can be taken varies but shall not be more than 4 hectares. Generally one sample shall be collected from each field. Within one field, areas which are not uniform for crop growth and areas which have been cropped or fertilised differently shall be sampled separately.

4. Time of sampling: Sampling every fourth year shall be satisfactory as a basis for phosphorus fertiliser recommendations. A field shall not be sampled for phosphorus until at least 3 months after the last application of any fertiliser (organic or chemical) containing this nutrient.

5. Depth of sampling: Grassland shall be sampled to a depth of 75 millimetres and arable land to a depth of 150 millimetres.

6. Method of sampling: A soil sample shall be made up by bulking at least 25 sub-samples taken from the area to be sampled. The sub-sampling points shall be selected systematically to give an even distribution over the whole sampling area. This distribution shall be achieved by following the pattern of a letter "W" and taking sub-samples at regularly spaced intervals. Taking sub-samples from headlands, dung and urine patches, areas where stock gather or other unusual features shall be avoided. Each sub-sample shall be taken using a soil auger which takes an even core of soil throughout the sampling depth. The soil sample shall be stored in a clean, labelled plastic bag.

Soil analysis for phosphorus

7. The soil test for phosphorus shall be carried out after the soil sample has been air-dried and ground.

8. Air-drying and grinding soil: The entire soil sample shall be dried to constant weight in an oven with a current of air at a temperature not exceeding 30 °C. Then the whole of the air-dried sample, excluding stones and fibrous material from roots, shall be ground to pass a 2 millimetre sieve.

9. Soil analysis for Olsen extractable phosphorus: The measure of phosphorus which is available for crop growth shall be given by the amount extracted from soil at 20 ± 1 °C with a sodium bicarbonate solution of pH 8.5. Details of the analytical procedure are given in The Analysis of Agricultural Materials, Third Edition, pp183-185, Ministry of Agriculture, Fisheries and Food reference Book 427, 1986. Olsen extractable phosphorus results are expressed as milligrammes phosphorus per litre (mg P/l) of soil, rounded to the nearest whole number.

Status: This is the original version (as it was originally made).

10. Classification of soil analysis results into indices: The Olsen extractable phosphorus concentration in soil is classified into an index according to the following scale.

Soil phosphorus index	Olsen extractable phosphorus (P) (mg P/l)
0	0-9
1	10-15
2-	16-20
2+	21-25
3	26-45
4	46-70

SCHEDULE 2

Criteria as to nutrient management

Table 1

Phosphorus (as orthophosphate (P₂O₅)) recommendations for grassland on soils of different soil phosphorus index

	<i>Soil phosphorus index</i>					
	0	1	2-	2+	3	4
	<i>Phosphorus recommendation (kg P₂O₅ ha⁻¹)</i>					
At grass establishment	120	80	65	50	30	0
Grazing⁽¹⁾	80	50	35	20	0	0
	<i>Soil phosphorus index</i>					
	0	1	2-	2+	3	4
	<i>Phosphorus recommendation (kg P₂O₅ ha⁻¹)</i>					
Silage cut⁽¹⁾						
<i>1st</i>	100	70	55	40	20	0
<i>2nd</i>	25	25	25	25	0	0
<i>3rd</i>	15	15	15	15	0	0
<i>4th</i>	10	10	10	10	0	0
Hay⁽¹⁾	80	55	43	30	0	0

(1) The amount of phosphate applied for establishment shall be deducted from the first season's grazing, silage or hay crop requirement for phosphorus.

Table 2
Available phosphate (P₂O₅) values for fertilisers

<i>Liquid/slurry manure types</i>	<i>Dry matter content (%)</i>	<i>Soil phosphorus index of 0 or 1⁽¹⁾</i>	<i>Soil phosphorus index of 2- or greater</i>
<i>Available phosphate (kg P₂O₅/m³)</i>			
Liquids⁽²⁾			
Dirty water	0.5	0.05	0.10
Cattle slurries⁽²⁾			
	2	0.3	0.6
Cattle slurry ⁽³⁾	6	0.6	1.2
	10	0.9	1.8
Separated cattle slurries (liquid portion)⁽²⁾			
Strainer box	1.5	0.15	0.3
Weeping wall	3	0.25	0.5
Mechanical Separator	4	0.6	1.2
Pig slurries⁽²⁾			
	2	0.5	1.0
Pig slurry ⁽³⁾	4	0.9	1.8
	6	1.3	2.6
Separated pig slurry (liquid portion)	3	0.8	1.6
<i>Solid manure types</i>	<i>Dry matter content (%)</i>	<i>Soil phosphorus index of 0 or 1</i>	<i>Soil phosphorus index of 2- or greater</i>
<i>Available phosphate (kg P₂O₅/t)</i>			
Poultry manures⁽⁴⁾			
Broiler litter	66	9.6	16
Layer manure	30	7.8 ⁽⁵⁾	13 ⁽⁵⁾
Turkey litter	60	15 ⁽⁵⁾	25 ⁽⁵⁾
Duck manure	25	3.3 ⁽⁵⁾	5.5 ⁽⁵⁾
Farmyard manures⁽⁴⁾			

(1) For potatoes and vegetable crops, these availabilities should be used regardless of soil phosphorus index.

(2) 50 % phosphate availability assumed at soil phosphorus index of 0 or 1 and for potatoes and vegetables.

(3) Figures in bold are the most common values.

(4) 60 % phosphate availability assumed at soil phosphorus index of 0 or 1 and for potatoes and vegetables.

(5) Values that may change if further research into poultry manure nutrient content is carried out.

Status: This is the original version (as it was originally made).

Cattle manure	25	1.9	3.2
Sheep manure	25	1.9	3.2
Goat manure	25	1.7	2.8
Pig manure	25	3.6	6.0
Horse manure	30	3.0	5.0
<i>Solid manure types</i>	<i>Dry matter content (%)</i>	<i>Soil phosphorus index of 0 or 1</i>	<i>Soil phosphorus index of 2- or greater</i>
		<i>Available phosphate (kg P₂O₅/t)</i>	
Miscellaneous manures⁽²⁾			
Spent mushroom compost	35	1.7	3.4
Separated cattle slurry (solid portion)	20	1.0	2.0
Separated pig slurry (solid portion)	20	2.3	4.6
<i>Other manures</i>	<i>organic</i>	Dry matter content and total phosphorus content to be declared in accordance with the Waste Management Licensing Regulations (Northern Ireland) 2003(12). 60 % phosphate availability assumed at soil phosphorus index of 0 or 1 ⁽¹⁾ ; 100 % phosphate availability assumed at soil phosphorus index greater than 1	
<i>Chemical fertilisers</i>		Dry matter content and total phosphorus content as certified by the producer. Phosphate availability assumed to be 100 % for all soil phosphorus indices	

- (1) For potatoes and vegetable crops, these availabilities should be used regardless of soil phosphorus index.
- (2) 50 % phosphate availability assumed at soil phosphorus index of 0 or 1 and for potatoes and vegetables.
- (3) Figures in bold are the most common values.
- (4) 60 % phosphate availability assumed at soil phosphorus index of 0 or 1 and for potatoes and vegetables.
- (5) Values that may change if further research into poultry manure nutrient content is carried out.

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations aim to reduce water pollution by limiting the amount of chemical phosphorus fertiliser applied to land. In regards to eutrophication, they supplement the measures in the Nitrates Action Programme Regulations (Northern Ireland) 2014 which implement Article 5 of European Council Directive [91/676/EEC\(13\)](#) concerning the protection of waters against pollution caused by nitrates from agricultural sources. The Regulations also support the implementation of Directive [2000/60/EC\(14\)](#) of the European Parliament and of the Council (establishing a framework for Community action in the field of water policy).

Regulation 4 imposes obligations on the controller of a holding in complying with these Regulations to have regard to any guidance issued and to the Code of Good Agricultural Practice.

Regulation 5 prescribes in what circumstance exemptions to the Regulations may be granted.

Regulation 6 restricts the amount of chemical phosphorus fertiliser applied to land to crop requirement for phosphorus whilst taking into consideration the phosphorus already available from the soil and organic manures. These variables are to be calculated in accordance with the Schedules to these Regulations.

Regulation 7 imposes an obligation on the controller of a holding to keep sufficient records for each calendar year to ascertain the identity of the controller, the size, location and cropping regime for fields of the holding to which chemical phosphorus fertiliser was applied, the results of soil phosphorus tests, the quantity and type of phosphorus fertiliser applied and the date of application and a statement of the foreseeable crop requirement for phosphorus. These records must be ready for inspection, held for 5 years, be accurate and not misleading.

Regulation 8 prescribes monitoring and inspection functions under these Regulations.

Regulation 9 prescribes how the Department of the Environment may serve a notice on a controller where the controller is in breach or likely to be in breach of the Regulations and the requirements to be met when the notice is served.

Regulation 10 creates a right of appeal to the Appeals Commission against any notice issued under regulation 9.

Regulations 11 and 12 set out the offences under these Regulations and their corresponding penalties.

Copies of the Code of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil, referred to in regulation 4, may be obtained from the Department of Agriculture and Rural Development's website:<http://www.dardni.gov.uk>

Copies of the DEFRA Fertiliser Manual (RB209, 8th Edition) may be obtained from the Department for Environment, Food and Rural Affairs website:<http://www.defra.gov.uk>

Copies of [Council Directive 91/676/EEC](#) and of Directive [2000/60/EC](#) of the European Parliament and of the Council may be obtained from the website for European Union legislation:<http://eur-lex.europa.eu/homepage.html>

(13) OJL 375, 31.12.91, p. 1-8

(14) OJL 327, 22.12.2000, p. 1-73