

## 1990 No. 245

## EUROPEAN COMMUNITIES

## PUBLIC HEALTH

**The Sludge (Use in Agriculture) Regulations  
(Northern Ireland) 1990**

*Made* . . . . . 26th June 1990

*Coming into operation* . . . . . 30th July 1990

The Department of the Environment, being a department designated(a) for the purposes of section 2(2) of the European Communities Act 1972(b) in relation to the regulation and control of the use of sewage sludge in agriculture, in exercise of the powers conferred on it by that section and of every other power enabling it in that behalf, hereby makes the following Regulations:

*Citation and commencement*

1. These Regulations may be cited as the Sludge (Use in Agriculture) Regulations (Northern Ireland) 1990 and shall come into operation on 30th July 1990.

*Interpretation*

2.—(1) The Interpretation Act (Northern Ireland) 1954(c) shall apply to these Regulations as it applies to a Measure of the Northern Ireland Assembly.

(2) In these Regulations—

“agriculture” means the growing of all types of commercial food crops, including for stock-rearing purposes;

“agricultural unit” means an area of agricultural land used for a single agricultural purpose, not exceeding 5 hectares;

“the Department” means the Department of the Environment;

“the operative date” means 30th July 1990;

“sludge” means residual sludge from sewage plants treating domestic or urban waste waters and from other sewage plants treating waste waters of a composition similar to domestic and urban waste waters;

“septic tank sludge” means residual sludge from septic tanks and other similar installations for the treatment of sewage;

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(a) S.I. 1988/785

(b) 1972 c. 68

(c) 1954 c. 33 (N.I.)

- “sludge producer” means the Department and any person who manages a plant at which sludge is produced for disposal;
- “the sludge table” means the table so described in Schedule 1;
- “the soil table” means the table so described in Schedule 2;
- “treated sludge” means sludge or septic tank sludge which has undergone biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use, and “untreated sludge” shall be construed accordingly; and
- “use” means spreading on the soil or any other application on or in the soil.

#### *Prohibition on use of sludge*

3.—(1) No person shall cause or knowingly permit sludge to be used on agricultural land unless the requirements of paragraphs (2) to (7) are fulfilled.

(2) The sludge shall be tested in accordance with Schedule 1.

(3) The soil on the land shall be tested or assessed in accordance with Schedule 2.

(4) (a) The average annual rate of addition to the land by means of the sludge of any of the elements listed in column (1) of the sludge table shall not exceed the limit (in kilograms per hectare per year) specified in column (2); and

(b) the concentration in the soil of any of the elements listed in column (1) of the soil table shall not exceed the limit value specified in column (2); and where that limit value is not exceeded at the time of the use, it shall not be exceeded by reason of the use.

(5) The pH of the soil shall not be less than 5.

(6) No fruit or vegetable crops, other than fruit trees, shall be growing or being harvested in the soil at the time of the use.

(7) The sludge shall be used in such a way that account is taken of the nutrient needs of the plants and that the quality of the soil and of the surface and ground water is not impaired.

#### *Prohibition on supply of sludge*

4. No person shall supply sludge for use on agricultural land if he knows or has reason to believe that the requirements of regulation 3(6) will not be fulfilled when the sludge is so used, or that the precautions set out in regulation 5 will not be observed after such use.

#### *Precautions to be taken after sludge is used*

5.—(1) Where any sludge or septic tank sludge has been used on agricultural land, no person shall cause or knowingly permit the activities specified in column (1) of the following Table to be carried out on that land before the expiry of the period specified in column (2).

TABLE

(1) Activity	(2) Period
Grazing animals or harvesting forage crops	3 weeks commencing on the date of the use
Harvesting fruit and vegetable crops which are grown in direct contact with the soil and normally eaten raw	10 months commencing on the date of the use

(2) Where any untreated sludge has been used on agricultural land without being injected into the soil, the occupier of the land affected shall, as soon as reasonably practicable thereafter, cause such sludge to be worked into the soil of the land affected.

*Information to be supplied to sludge producer*

6. Where sludge has been used on any agricultural land, other than by or on behalf of a sludge producer, the occupier of that land shall forthwith provide the following information to the sludge producer:—

- (a) the address and area of the agricultural unit concerned;
- (b) the date on which the sludge was used;
- (c) the quantity of sludge so used; and
- (d) where the sludge was not supplied by the sludge producer, the name and address of the person who supplied that sludge, and the quantity of sludge so used which was supplied by that person.

*Register to be kept by sludge producer*

7.—(1) Every sludge producer shall prepare and maintain a register containing the following particulars:—

- (a) the total quantity of sludge produced in any year;
- (b) in relation to sludge supplied for the purpose of use in agriculture in any year—
  - (i) the total quantity of sludge supplied;
  - (ii) the composition and properties of that sludge as determined in accordance with Schedule 1;
  - (iii) the quantities of treated sludge supplied, and the type of treatment;
  - (iv) the names and addresses of the persons to whom the sludge was supplied; and
  - (v) the address and area of each agricultural unit on which sludge has been used, the quantity of sludge used thereon, and the amount of chromium and of each of the elements listed in the sludge table which has been added thereto;

(c) a copy of every analysis or assessment made under Schedule 2 relating to the soil of an agricultural unit on which sludge has been used.

(2) In this regulation "year" means the period from the operative date to 31st December 1990, and thereafter the period of 12 months from 31st December.

*Supply of information about sludge*

8.—(1) A sludge producer (other than the Department) shall make the register maintained under regulation 7 available for inspection by the Department at all reasonable times and shall furnish the Department with such information or facilities as it may reasonably require relating to (or to verifying the information contained in) the register or otherwise relating to sludge supplied by the sludge producer, including facilities for analysis of representative samples of sludge or soil.

(2) As soon as reasonably practicable after testing sludge in accordance with Schedule 1, every sludge producer shall provide details of the analysis made under that Schedule to all persons to whom he or it supplies sludge.

*Penalties*

9. Any person who contravenes any of these regulations shall be guilty of an offence and liable on summary conviction to a fine not exceeding £2,000(a).

Sealed with the Official Seal of the Department of the Environment on  
26th June 1990.

(L.S.)

*Harold Carson*

Assistant Secretary

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(a) See para. 1(1)(d) of Sch. 2 to 1972 c. 68 read with Arts. 5 and 8 of the Fines and Penalties (Northern Ireland) Order 1984 (S.I. 1984/703 (N.I. 3)) as amended by Sch. 4 to S.R. 1984 No. 253

**Testing of Sludge**

1. Every sludge producer shall ensure that sludge produced by the sludge producer and supplied for the purpose of use in agriculture is tested in accordance with this Schedule as soon as reasonably practicable after the operative date, and thereafter at intervals of not more than 6 months, and in any event where changes occur in the characteristics of the waste water being treated.

2. Representative samples of sludge intended to be used on agricultural land shall be taken after processing, but before delivery to the user.

3. Each sample shall be analysed so as to determine—

- (a) the pH thereof;
- (b) the percentage content of dry matter, organic matter, nitrogen and phosphorus; and
- (c) the concentration in milligrams per kilogram of dry matter of—
  - (i) chromium;
  - (ii) the elements listed in column (1) of the sludge table.

4. The analysis requisite to ascertain the concentration of metals referred to in paragraph 3(c) shall be carried out following strong acid digestion, the reference method of analysis shall be that of atomic absorption spectrometry, and the limit of detection for each metal shall not exceed the appropriate limit value specified in column (3) of the sludge table or, in the case of chromium, 25 milligrams per kilogram of dry matter.

5. The average annual rate of addition referred to in regulation 3(4) shall be ascertained for each of the elements in the sludge table by taking the average amount of that element in the sludge used on that land in the period of ten years ending on the date of such use.

**Sludge Table**

(1) <i>Element</i>	(2) <i>Limit in kilograms per hectare per year</i>	(3) <i>Limit value of detection (milligrams per kilogram of dry matter)</i>
Zinc	15	50
Copper	7.5	25
Nickel	3	10
Cadmium	0.15	1
Lead	15	25
Mercury	0.1	0.1

**Testing of Agricultural Soil**

1. The sludge producer shall ensure that agricultural soil is tested or assessed in accordance with this Schedule.

2.—(1) Where—

- (a) sludge has been used on an agricultural unit before the operative date; and
- (b) adequate scientific evidence is available as to the characteristics of the soil thereof, and the sludge used thereon, before that date;

an assessment shall be made as soon as possible after the operative date of the pH of the soil as at that date, and the probable concentrations in the soil as at that date of—

- (i) chromium;
- (ii) the elements listed in column (1) of the soil table;

and the soil shall be tested not later than 31st December 1991.

(2) Subject to paragraph (1), the soil of agricultural land shall be tested—

- (a) where sludge is to be used on that land for the first time after the operative date;
- (b) as soon as may be after the twentieth anniversary of the date when the soil was last tested in accordance with this Schedule; or
- (c) where the sludge producer is so requested in writing by the occupier of the land or by the Department, and not less than 5 years have elapsed since the soil was last tested in accordance with this Schedule.

3. For each agricultural unit on which sludge is to be used, a representative sample of soil shall be obtained by mixing together 25 separate core samples, each taken to the depth of the soil or 25 centimetres, whichever is the lesser depth.

4. Each representative sample shall be analysed so as to ascertain—

- (a) the pH of the sample;
- (b) the concentration in that sample of the following metals—
  - (i) chromium;
  - (ii) the elements set out in the soil table.

5. The analysis requisite to ascertain the concentration of metals referred to in paragraph 4(b) shall be carried out following strong acid digestion, the reference method of analysis shall be that of atomic absorption spectrometry, and the limit of detection for each metal shall not exceed 10% of the appropriate limit value specified in the soil table or, in the case of chromium, 25 milligrams per kilogram of dry matter.

6. For the purposes of regulation 3(4), the specified limit value of concentration of elements in any representative sample, expressed in milligrams per kilogram of dry matter, is set out in the soil table.

## Soil Table

(1)	(2)			
<i>Element</i>	<i>Limit value of samples in milligrams per kilogram of dry matter According to pH of soil</i>			
	For pH 5.0 < 5.5	For pH 5.5 < 6.0	For pH 6.0-7.0	For pH >7.0
Zinc	200	250	300	450
Copper	80	100	135	200
Nickel	50	60	75	110
Lead	300	300	300	300
Cadmium	3	3	3	3
Mercury	1	1	1	1

## EXPLANATORY NOTE

*(This note is not part of the Regulations.)*

These Regulations implement Council Directive No. 86/278/EEC (OJ No. L181/6) on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture.

Regulations 3 and 4 prohibit sludge from sewage treatment plants from being used in agriculture unless specified requirements are fulfilled. They include the testing of both the sludge and the soil (Schedules 1 and 2).

Regulation 5 specifies precautions which must be taken after sludge from sewage treatment plants or septic tanks is used on agricultural land.

Regulation 6 requires the occupier of land on which sludge has been used to provide the sludge producer with information about the land and the sludge used.

Regulation 7 requires every sludge producer (including the Department of the Environment) to maintain a register of the quantities of sludge produced and supplied for use in agriculture, including the results of analyses of both the sludge and the soil.

Regulation 8 requires a sludge producer other than the Department to make the register available to the Department for inspection. A sludge producer is also required to provide the results of analysis of the sludge to those whom he supplies.

Regulation 9 provides that any person who contravenes any of the Regulations shall be guilty of an offence and liable to a maximum fine of £2,000.