



The Management of Sewage Sludge in Ireland

October 7th, 2013

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Cré is a non-profit Association that promotes composting, anaerobic digestion (AD) and the use of compost and digestate. Formed in 2001, Cre has a broad base membership which includes operators of composting and AD facilities, waste collectors, waste management companies, consultants, equipment suppliers, local authorities and researchers. Members are from the public and private sectors. Cré is the recognised national representative body for the composting and anaerobic digestion industry in Ireland and Northern Ireland. Cré is an active member of the European Compost Network and the European Biogas Association.

The overall responsibility for running the association is by the Board of Directors. Daily management is by the Association Chair, Treasurer and Chief Executive who report to the Board. The Association has three committees – the Technical Committee, the Public Relations Committee and the Anaerobic Digestion Steering Committee.

W: www.cre.ie

T: 00 363 (0) 86 8129260

E: info@cre.ie

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1. Executive Summary

Last year, members of Cré made their concerns known to the Association on the changes taking place in the management of sewage sludge in Ireland. In response, Cré undertook a survey of Local Authorities to determine the facts on how sewage sludge is managed in Ireland.

The main results from the survey were:

- ▶ The vast majority of local authorities were making it a requirement in contracts that sludge is managed according to the 'Code of Good Practice for the Use of Biosolids in Agriculture'.
- ▶ **5 local authorities did not make the Code of Good Practice a requirement.** A further local authority said they made the Code of Good Practice a requirement, but were using the exemption in the legislation¹ to spread the sludge untreated onto land.
- ▶ **23,793 wet tonnes of untreated sludge was landspread in Ireland in 2012².** In addition to this figure, one local authority reports that they landspread untreated sludge; but the figure was provided in cubic metres which could not be included.

Cré has reviewed the management of sewage sludge in Ireland and is making the following recommendations:

- 1. The 'Code of Good Practice for the Use of Biosolids in Agriculture' should be made into legislation.**
- 2. There are a number of exemptions and provisions in the current Regulations which should be removed as they conflict with the Code of Good Practice and give rise to food safety concerns.**

Specific examples of the legislative changes required include:

Untreated Sludge

The Regulations should be changed to prevent untreated sludge being landspread or injected into the soil.

Residual Sludge from Septic Tanks

The Regulations should be changed to prevent residual sludge from septic tanks being landspread untreated.

No Records of Sludge from Plants less than 5,000 persons

The Regulations should be changed to remove this exemption for plants less than 5,000 p.e.

Section 51 of Waste Management Act

Lime Stabilisation Plants are exempt from a waste permit/licence if sludge goes onto agriculture land.

Cré proposes the following changes to Section 51:

- ▶ **The Minister should amend the Act and remove the exemption 'that sludge from a local authority waste water treatment plant shall not be required to have a waste licence'.**
- ▶ **The Minister should amend the Act so that 'injection of waste into land' is not regarded as 'recovery'.**

¹ Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 and the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 2001.

² Not all sludge tonnage data for 2012, some for 2011.

3. Additional Controls are Required in Waste Permits/Waste Licences /Waste Water Discharge Licences

Local authorities and the Environmental Protection Agency need to include the following in the conditions of waste permits and waste licences for driers and lime stabilisation plants:

- ▶ A documented processing standard.
- ▶ Pathogen testing done before release of material.

Discharge licences should include the following controls for lime stabilisation plants located at waste water treatment plants:

- ▶ Processing standard monitoring, e.g. temperature.
- ▶ Pathogen testing before release.
- ▶ Details of ultimate recovery (location of facility, permit number, unique landbank identification number).

Food Safety Authority of Ireland

It should be noted that Cré's recommendations are aligned with those of the Food Safety Authority of Ireland (FSAI).

In 2008, FSAI published a report³ on the management of organic wastes onto land. In this report the FSAI outlined the commitment the Department of Environment gave to them that a limited revision of the Regulations would be provided.

This revision has not been carried out to-date.

³ Food Safety Implications of Land-spreading Agricultural, Municipal and Industrial Organic Materials on Agricultural Land used for Food Production in Ireland (Food Safety Authority of Ireland, 2008)

2. Methodology

Last year, members of Cré made their concerns known to the Association on the changes taking place in the management of sewage sludge in Ireland.

In response, Cré undertook a survey of Local Authorities to determine the facts on how sewage sludge is managed in Ireland.

Data on sewage sludge quantities and management practices was sourced from local authorities under the European Communities (Access to Information on the Environment) Regulations 2007 (S.I. 133 of 2007).

Four local authorities did not respond to the request for information.

Cré also reviewed the 2008 Food Safety Authority of Ireland report on the management of sewage sludge⁴ in Ireland to determine if its recommendation had being implemented.

⁴ Food Safety Implications of Land-spreading Agricultural, Municipal and Industrial Organic Materials on Agricultural Land used for Food Production in Ireland (Food Safety Authority of Ireland, 2008).

3. Results

The main results from the survey were:

- ▶ The vast majority of local authorities were making it a requirement in contracts that sludge is managed according to the 'Code of Good Practice for the Use of Biosolids in Agriculture'.
- ▶ **5 local authorities did not make the Code of Good Practice a requirement.** A further local authority said they made the Code of Good Practice a requirement, but were using the exemption in the legislation⁵ to spread the sludge untreated onto land.
- ▶ **23,793 wet tonnes of untreated sludge was landspread in Ireland in 2012⁶.** In addition to this figure, one local authority reports that they landspread untreated sludge; but the figure was provided in cubic metres which could not be included.

Table 1 below outlines the amount of sewage sludge treated by the methods outlined in the **Code of Good Practice and the amount that had no treatment prior to being used in the agricultural sector.**

Table 1: Results from Survey on Treatment Methods, No Treatment and Tonnes

Treatment	Approx Tonnes
Mesophilic anaerobic digestion with pre & post pasteurisation	19,921
Thermophilic anaerobic digestion	0
Thermophilic aerobic digestion	0
Thermal drying	10,269
Composting (windrows, static pile, or in-vessel)	26,381
Alkaline stabilisation	72,030
NO TREATMENT	23,793*

Please note some sludge was treated twice (mesophilic AD) goes to thermal/ composting.

Some thermal drying goes to composting.

*Another Local Authority provided data in cubic metres which could not be added to the figure.

⁵ Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 and the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 2001.

⁶ Not all sludge tonnage data for 2012, some for 2011.

4. Recommendations

Cré has reviewed the management of sewage sludge in Ireland and is making the following recommendations:

- 1. The 'Code of Good Practice for the Use of Biosolids in Agriculture' should be made into legislation.**
- 2. There are a number of exemptions and provisions in the current Regulations which should be removed as they conflict with the Code of Good Practice and give rise to food safety concerns.**

Specific examples of the legislative changes required include:

Untreated Sludge

The Code of Good Practice states that untreated wastewater sludge should not be landspread or injected into soil. However, the Regulations⁷ allows for the latter practice.

The Regulations should be changed to prevent untreated sludge being landspread or injected into the soil.

Residual Sludge from Septic Tanks

The provision under the Regulations⁸ for the use of residual sludge from septic tanks on grassland and the use of untreated sludge (worked/injected into ground) in agriculture is a matter of concern as it may introduce pathogens into the food chain.

The Regulations should be changed to prevent residual sludge from septic tanks being landspread untreated.

No Records of Sludge from Plants less than 5,000 persons

The Sludge register⁹ does not have to contain details of sludge from plants of 5,000 p.e. This represents a breakdown in the traceability and monitoring necessary for the safe use of sludge in agriculture and is a matter of concern.

The Regulations should be changed to remove this exemption for plants less than 5,000 p.e.

⁷ Article 3 (3) "untreated sludge maybe used in agricultural provided that it is previously injected or otherwise worked into land" of the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 and the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 2001.

⁸ Article 3 (4) "Residual sludge from septic tanks may be used on grassland provided that the grassland is not grazed within six months following such use" in the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 and the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 2001.

⁹ "Article 8 (1) and (2) (b), (c) and (d) shall not apply to sludge from septic tanks or from sewage treatment plants with a treatment capacity below 300 kg BOD 5 per day, corresponding to a population equivalent of 5,000 persons, and designed primarily for the treatment of domestic waste water" in the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 and the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 2001.

Section 51 of Waste Management Act¹⁰

Lime Stabilisation Plants are exempt from a waste permit/licence if sludge goes onto agriculture land (Section 51 of Waste Management Act).

Cré proposes the following changes to Section 51

- ▶ **The Minister should amend the Act and remove the exemption 'that sludge from a local authority waste water treatment plant shall not be required to have a waste licence'** (Section 51, subsection Part 2 (a)). Section 51, subsection (2) (b) provides the power to make this change.
- ▶ **The Minister should amend the Act so that 'injection of waste into land' is not regarded as 'recovery'**. Section 51 subsection 3 provides the power to make this change.

3. Additional Controls are Required in Waste Permits/Waste Licences /Waste Water Discharge Licences

Local authorities and the Environmental Protection Agency need to include the following in the conditions of waste permits and waste licences for driers and lime stabilisation plants:

- ▶ A documented processing standard.
- ▶ Pathogen testing done before release of material.

Discharge licences should include the following controls for lime stabilisation plants located at waste water treatment plants:

- ▶ Processing standard monitoring, e.g. temperature.
- ▶ Pathogen testing before release.
- ▶ Details of ultimate recovery (location of facility, permit number, unique landbank identification number).

¹⁰ Article 51 of Waste Management Act States the following:

Recovery of sludges and agricultural waste:

51.—(1) The provisions of this section shall apply notwithstanding the provisions of any bye-law made under section 21 of the Local Government (Water Pollution) (Amendment) Act, 1990

(2) (a) Subject to paragraph (b), a waste licence under section 39 shall not be required for the recovery of—

- (i) sludge from a facility operated by a local authority for the treatment of water or waste water,
- (ii) blood of animal or poultry origin,
- (iii) faecal matter of animal or poultry origin in the form of manure or slurry, or
- (iv) such natural agricultural waste as may be prescribed.

(b) The Minister may make regulations amending *paragraph (a)* by adding or deleting to or from that provision any specified class or classes of waste or waste recovery activity.

(c) "Recovery", for the purpose of this section, includes the injection of waste into land for the purpose of benefiting the carrying on of any agricultural or silvicultural activity or an ecological system.

(3) The Minister may make regulations prohibiting, or limiting or controlling in a specified manner and to a specified extent, the recovery of any waste to which *subsection (2)* applies (hereafter in this section referred to as "*relevant waste*").

Amendments

Section 51(2) was changed by the EC (Waste Directive) Regulations 2011 (SI 126 of 2911: see Article 23 at <http://www.irishstatutebook.ie/pdf/2011/en.si.2011.0126.pdf>).

Amendment of section 51 of Act of 1996

23. Section 51(2) of the Act of 1996 is amended by substituting the following paragraph for paragraph (a):

"(a) subject to paragraph (b), a waste licence under section 39 shall not be required for the recovery of sludge for use in agriculture."

5. Food Safety Authority of Ireland

It should be noted that Cré's recommendations are aligned with those of the Food Safety Authority of Ireland (FSAI).

In 2008, FSAI published a report¹¹ on the management of organic wastes onto land. In this report the FSAI outlined the commitment the Department of Environment gave to them that a limited revision of the Regulations would be provided. This revision has not been carried out to date.

The revision proposed at that time was to include the following:

- ▶ Provisions to set standards for treated sludges.
- ▶ Prohibitions on the use of untreated sludge.
- ▶ Limitations on the use of permitted domestic septic tank sludge.
- ▶ Provisions for more explicit Local Authority powers to perform their supervisory function.

¹¹ Food Safety Implications of Land-spreading Agricultural, Municipal and Industrial Organic Materials on Agricultural Land used for Food Production in Ireland

6. List of Key Stakeholders Sent a Copy of This Report

The following list of key stakeholders was sent a copy of this report by post on 7 October 2013.

- ▶ Aidan Cotter, Bord Bia
- ▶ Ciarán Lynch, Committee on Environment, Transport, Culture and the Gaeltacht
- ▶ Fergus O'Dowd T.D, Minister of State Environment, Community and Local Government
- ▶ Geraldine Tallon, Department of the Environment, Community and Local Government
- ▶ John Tierney, Irish Water
- ▶ James O'Reilly T.D, Minister for Health
- ▶ Justin McCarthy, Irish Farmers Journal
- ▶ John Bryan, Irish Farmers' Association
- ▶ Laura Burke, Environmental Protection Agency
- ▶ Noel O'Keefe, Irish Water
- ▶ Alan Reilly, Food Safety Authority of Ireland
- ▶ Pdraig Brennan, Bord Bia
- ▶ Phil Hogan T.D, Minister for the Environment, Community and Local Government
- ▶ Simon Coveney T.D, Minister for the Agriculture, Marine and Food