



BIOSECURITY ACT 2015

Consultation Paper: Fertilisers, recycled waste, liming material, trace element products

April 2016



Comments on this paper close on 20 May 2016

Email your submission to: submissions.biosecuritylegislation@dpi.nsw.gov.au

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For more information

See: www.dpi.nsw.gov.au/biosecurityact

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Summary

The *Biosecurity Act 2015* will repeal the *Fertilisers Act 1985*, which currently provides the regulatory controls and powers with respect to the sale of fertilisers, recycled waste products, liming materials and trace element products.

Having considered the existing arrangement and risks associated with fertilisers, recycled waste products, liming materials and trace element products, it is proposed to manage the biosecurity risks of these products using the **General Biosecurity Duty** (GBD) and a specific **regulation** for the management of heavy metals in these products.

Background Information

What is the issue?

Fertilisers, recycled waste products, liming materials and trace element products may contain heavy metal contaminants, such as cadmium, mercury and lead. Continued use of these products if they contain high levels of these contaminants may lead to the accumulation of contaminants in soil, detrimental impacts on soil health and function and the unsafe build-up of residues in plants and animals.

A range of other materials that are being used as fertilisers or soil conditioners such as manure, compost, mixed waste composts, seaweed, biosolids and biosolid products, unprocessed animal waste, recycled organic and inorganic materials may also contain heavy metals, chemical residues, pathogens, animal material or weed seeds. Application of these materials to land may spread disease and pest plant species as well as impact on soil health and function and contamination of the food chain.

Why is it important?

Fertilisers, recycled waste, liming material and trace element products are important soil improving agents used by the agricultural industry and the general public. However, their misuse can have adverse consequences for trade, animal health, the environment and community.

What is the outcome we are seeking?

The desired outcome is to prevent a biosecurity risk from the use of harmful heavy metals in fertilisers, recycled waste, liming material and trace element products; and minimise and manage other biosecurity risks from these products on market access, the environment and community.

Current management arrangements

Legislation

The *Fertilisers Act 1985* (Fertilisers Act) currently provides the regulatory controls and powers with respect to fertilisers, liming materials and trace element products. Current objectives are:

- (a) to protect human health so that unsafe levels of heavy metals and other contaminants that may occur in soil improving agents or trace element products do not make their way into the human food chain, and
- (b) to facilitate international trade so that agricultural products destined for export markets comply with requirements of international trading partners in relation to the presence of heavy metals and other contaminants, and
- (c) to protect the environment by better informing purchasers of the composition of soil improving agents and trace element products and by restricting the proportion of certain substances that soil improving agents and trace element products may contain.

To achieve these objectives, the Fertilisers Act and a number of subsequent orders specifically:

- Define fertilisers and identify substances that are excluded from regulation under the Fertilisers Act. The substances currently excluded from regulation are unprocessed animal manure including composted manure, septic tank sludge and crude night soil, crude offal, compost, seaweed, unmanufactured refuse, biosolids and biosolid products.
- Include maximum limits for heavy metals such as cadmium, mercury and lead in fertilisers, liming materials and trace element products.
- Specify the particulars that must be marked on the fertiliser products, including the proportion of nitrogen, phosphorus, potassium, sulphur, cadmium, lead, mercury, biuret, and trace elements. A 'warning' on the product is also required if it contains a certain amount of any of these agents.
- Specify the particulars that must be marked on liming material products other than gypsum. These particulars include the proportion of calcium or magnesium. A 'warning' on the product is also required if it contains calcium oxide.
- Specify the particulars that must be marked on gypsum packaging. These particulars include the proportion of calcium, magnesium, and sulphur. A 'warning' on the product is also required if it contains a certain amount of sodium.
- Require the quantity of trace elements contained in a product, the respective form in which each trace element occurs, the respective proportion in which each such form of trace element occurs in the product, and the proportions in which cadmium, lead and mercury are present to be marked on the product.

The *Protection of the Environment Operations Act 1997* (POEO Act), administered by the Environment Protection Authority (EPA), prohibits the application of septic tank sludge and crude night soil, crude offal and un-manufactured refuse to land. The land application of biosolids is also regulated under the POEO Act, the *Use and Disposal of Biosolids Products*, Biosolid Order and Biosolid Exemption, and Waste Classification Guidelines.

The application of a number of other waste products is enabled by a Resource Recovery Order under Part 9, Clause 93 of the POEO (Waste) Regulation 2014. These products include recycled waste products such as bulk agricultural crop waste, organic outputs derived from mixed waste, compost, effluent, liquid food waste, solid food waste, manure, pasteurised garden organics, processed animal waste, raw mulch and treated grease trap waste.

Proposed management under the NSW Biosecurity Act

1. Definition of fertilisers, liming materials and trace element products

Fertilisers, recycled waste, liming materials and trace element products are defined in Part 2 of the Biosecurity Act (see Appendix 1 for definitions). It is proposed to broaden the **definition** of fertiliser to include sulphur as it is also one of the major plant nutrients routinely applied to crops and land as a fertiliser to promote plant growth.

It is also proposed that those substances currently exempt from the Fertilisers Act will be subject to the Biosecurity Act. These substances, including unprocessed animal manures, compost, septic tank sludge and crude night soil, crude offal and un-manufactured refuse, biosolids and biosolid products, seaweed and other recycled waste materials may pose a biosecurity risk if they are applied to land. Moreover, a range of other products including bulk agricultural crop waste, organic outputs derived from mixed waste, compost, effluent, liquid food waste, solid food waste, manure, pasteurised garden organics, processed animal waste, raw mulch and treated grease trap waste will also be subject to the Biosecurity Act, where they meet the definition of 'fertiliser'.

The Biosecurity Act includes a number of tools that will enable the Government to respond to any biosecurity risk generated from the use of these or any other waste products.

2. Management of heavy metals

It is proposed to continue to prescribe in **regulation** the maximum limits of cadmium, lead and mercury in fertilisers, recycled waste, liming materials and trace element products in order to prevent accumulation in the environment, entry into the food chain and threat to trading arrangements.

It is proposed to remove the requirement for the concentration of cadmium, lead and mercury in fertilisers, recycled waste, liming materials and trace element products to be included on product labels. The labelling requirements are not considered necessary as the biosecurity risk from heavy metals is mitigated through the regulation of maximum limits. Maximum limits in food commodities are also prescribed in the Food Standards Australia and New Zealand Food Standards Code (Standard 1.4.1 Contaminants and natural toxicants).

3. Management of nutrient contents and labelling of products

There are a range of nutrients that the Fertiliser Act requires to be identified on the label of fertilisers, liming materials and trace element products. There are also a range of other matters that the Fertiliser Act requires to be identified on the label, for example the quantity of product, and particle size distribution and nutrient value for liming materials. A summary of these requirements are included in Appendix 2.

The purpose for the labelling of nutrients and other matters are more about product integrity to enable consumer choice, access to information, improved productivity and/or for work health and safety. These purposes are considered to be outside the scope of the Biosecurity Act and can be managed by producers of fertilisers, recycled waste products, liming material and trace element products in accordance with the expectations of consumers and market demands.

It is proposed to manage any biosecurity risk from nutrients and other matters currently addressed by labelling using the General Biosecurity Duty.

The **General Biosecurity Duty** (GBD) requires any person dealing with biosecurity matter¹ or a carrier of biosecurity matter and who knows or ought to know of the biosecurity risks associated with that activity to take measures to prevent, minimise or eliminate the risk as far as is reasonably practicable. This means that producers of fertilisers, recycled waste products, liming materials, and trace element products must take measures to prevent, minimise or eliminate the biosecurity risk of these products. These measures could include accurate and clear labelling of their products, and provision of appropriate guidance to enable informed consumer decision-making.

How individuals can discharge their GBD may be outlined in Industry Standards, Codes of Practice, guidelines or other advisory or education material. For example draft 'National Code of Practice for Fertiliser Description and Labelling' published by Fertiliser Australia provides the industry with best practice guidelines with respect to labelling of their products.

4. Management of other biosecurity risks

Fertiliser substances such as unprocessed animal manure (including composted manure), food processing wastes, compost and other waste products, as well as fertilisers, recycled waste products, liming materials and trace element products may pose a biosecurity risk. For example, these substances may be carriers of heavy metals, chemical residues, pathogens, animal material² or seeds from significant weed species which may spread animal and/or plant disease

¹ Biosecurity Matter is

- any living thing, part of a living thing or product of a living thing (other than a human), or
- a disease, prion or contaminant, or
- a disease agent that can cause disease in a living thing (other than a human) or that can cause disease in a human via transmission from a non-human host (ie zoonosis).

² It is proposed to use the General Biosecurity Duty with Mandatory measures to manage the risk of transmission of transmissible spongiform encephalopathies from Restricted Animal Material (RAM). This issue was the subject of a separate [discussion paper](#).

and pest plant species if they are applied to land. They may also impact on soil health and function, contaminate the food chain and thus impact on trade.

It is proposed to manage these biosecurity risks using the **GBD**. The GBD applies in addition to any requirements included in instruments made under the Biosecurity Act (i.e., instruments in relation to maximum limits for heavy metals, management of weeds species, and restricted animal material). As described in Part 3 above, the GBD requires any person dealing with biosecurity matter or a carrier of biosecurity matter and who knows or ought to know of the biosecurity risks associated with that activity to take measures to prevent, minimise or eliminate the risk as far as is reasonably practicable. This means that a person dealing with fertilisers, liming materials, trace element products or any 'fertiliser' product should ensure that they take measures to prevent, minimise or eliminate the risk of contamination or the spread of pests and diseases from their use. It also means that producers of fertilisers, recycled waste products, liming materials, trace element products or any other 'fertiliser' product must take measures to prevent, minimise or eliminate the biosecurity risk of these products. These measures could include effective quality control measures with respect to their products.

In order to support the GBD and management of biosecurity risks from fertiliser and recycled waste products, a broader suite of guidance and advisory materials will need to be developed, particularly in relation to the new and emerging fertiliser products. This is an area that will require collaboration within DPI and with other relevant agencies, including the Environment Protection Authority.

What do you think?

We value your comments on how we can improve our biosecurity system and look forward to receiving your input into this important process.

Please complete the following survey on 'Fertilisers' at:
<https://www.surveymonkey.com/r/fertilisers1>.

Alternatively, submit your feedback by **Monday, 20 May 2016** via [email](#) or post to:

Biosecurity Act 2015
NSW Department of Primary Industries
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Orange NSW 2800

For more information about the *Biosecurity Act 2015* and regulatory framework, please visit www.dpi.nsw.gov.au/biosecurityact.

Appendix 1

Definitions – Biosecurity Act 2015

Fertiliser means:

- a) a substance that consists of or contains nitrogen, phosphorus or potassium (or any combination of nitrogen, phosphorus or potassium) and is manufactured, represented, sold or used as a means for directly or indirectly supplying nutriment for the purpose of enhancing the development, productivity, quality or reproductive capacity of vegetation, other than a substance excluded from this definition by the regulations, or
- b) any other substance prescribed by the regulations to be a fertiliser.

Liming material means a substance that:

- a) consists of or contains dolomite (an artificially prepared or naturally occurring mixture of carbonates, oxides or hydroxides of calcium and magnesium), gypsum (the sulphate of calcium in either hydrated or anhydrous form), lime (an oxide, hydroxide or carbonate compound of calcium) or magnesium (an oxide, hydroxide or carbonate compound e.g., magnesium), and
- b) is manufactured, represented, sold or used as a means for directly or indirectly affecting the nature or composition of soil or any other matter in which vegetation is grown.

Trace element product means a substance that:

- a) consists of or contains trace element (that is, boron, cobalt, copper, iron, magnesium, manganese, molybdenum, selenium or zinc or any other element prescribed by the regulations), or any compound of a trace element, and
- b) is manufactured, represented, sold or used as a means for directly or indirectly:
 - i. supplying nutriment for the purpose of enhancing the development, productivity, quality or reproductive capacity of vegetation, or
 - ii. affecting the nature or composition of soil or any other matter in which vegetation is grown.

Appendix 2

Fertiliser Act 1940 – Label Warnings

Table A

Nutrient	Warning on label
Fertilisers	
Nitrogen	None
Phosphorus	None
Potassium	None
Sulphur	None
Trace elements	None
Buriat	For fertiliser that contains nitrogen and biuret, a warning must be included with respect to foliar application.
Molybdenum	A warning must be included with respect to effect on stock, and must recommend a non-grazing period.
Selenium	A warning must be included with respect to stock.
Liming materials	
Calcium	Where the product contains calcium oxide, a warning must be included with respect to health implications ie swallowing product and contact with eyes and skin.
Magnesium	None
Sulphur (in element form or sulphate compound)	None
Gypsum	
Calcium	None
Magnesium	None
Sulphur (incl. in element form or compound)	None
Sodium	Warning must be included with respect to reclamation of saline sodic soils.
Trace element products	
Forms within which trace element occurs	None
Portion in which such form of trace element occurs	None

Table B

Issue	Warning on label
Quantity of product	None
Fertilisers – bulk packaging 25 kilo or more	Warning must be included with respect to danger of dust
Liming material – particle size distribution expressed per cent of weight passing a specified range of sieves	None
Liming material – nutrient value (relative to pure calcium carbonate) for specified particle size ranges	None