

TORONTO STAFF REPORT

April 21, 2004

To: Board of Health

From: Dr. Barbara Yaffe, Acting Medical Officer of Health

Subject: Inclusion of Corn Gluten Meal in the City of Toronto Pesticide By-law
(Municipal Code Ch. 612)

Purpose:

To give the rationale for including corn gluten meal on the list of pest control products exempted from further control under the pesticide by-law.

Financial Implications and Impact Statement:

There are no financial implications or impacts arising directly from this report.

Recommendations:

It is recommended that:

- (1) the Board of Health endorse this report and forward it to City Council for approval;
- (2) City Council amend Ch. 612-1B(2) of the Toronto Municipal Code:
 - (i) to delete the words “any of” and replace them with the word “only”; and,
 - (ii) to add subclause “(k) Corn gluten meal.”
- (3) the Board of Health forward this report to the Works Committee, the Economic Development and Parks Committee, the Ontario Ministry of the Environment, and Health Canada’s Pest Management Regulatory Agency for their information and appropriate action; and;
- (4) the appropriate City officials be authorized and directed to take the necessary action to give effect thereto.

Background:

At its meeting of May 21, 22, 23, 2003, Toronto City Council passed By-law 456-2003 (Municipal Code, Chapter 612) (see Appendix A), the pesticides by-law. In its “Definitions” section, the by-law lists several active ingredients found in pest control products and provides that, for the purposes of the by-law, products containing one (or more) of these substances as their only active ingredients are not subject to further restrictions under the by-law. The substances on the “exempted products list” are federally registered active ingredients that pose very low or no health or environmental risks.

In her report to the Board of Health of March 25, 2003, the Medical Officer of Health advised that these products provide adequate pest control tools for most of the pest problems that may arise on residential lawns and gardens when used in conjunction with proper lawn care practices.

The Pesticide By-law Advisory Committee in its February 10, 2004 report to the Board of Health recommends, among other things, that the Medical Officer of Health review new products that could be added to the exempt product list and make recommendations to the Board of Health, if appropriate, as they emerge or on an ongoing basis.

This report provides a rationale for the inclusion of corn gluten meal – a very low risk, food-grade product already in common use in Toronto as a natural fertilizer – as an active ingredient on the “exempted products list.” This report was prepared in consultation with the City Legal Department.

Comments:

Gluten meal is a by-product of corn extracted in wet-milling processes and is used as an animal feed. It contains approximately 10% nitrogen by weight and has been sold in Canada for the past five years as a natural fertilizer. In the early 1990s, agricultural researchers discovered that corn gluten meal has weed suppressant qualities. Further research has shown that corn gluten meal contains a substance that inhibits root formation in several species, including crabgrass and dandelions.

In the early 1990’s, the United States Environmental Protection Agency (USEPA) listed corn gluten meal on its list of least toxic pesticides and waived all environmental fate and toxicology data requirements for registration. The registration of corn gluten meal as a pre-emergent herbicide in the U.S. has been exempt by the USEPA since 1994 because of its “least toxic” status. The Canadian Pest Management Regulatory Agency (PMRA) registered corn gluten meal for use as a pre-emergence weed seed germination inhibitor in September 2003. The PMRA recognizes that corn gluten meal is a feed grade material and is used in the manufacturing of food material for animals, birds and fish. It is also used in the commercial fishing industry as a commercial fish food. It is considered non-toxic to wild birds, mammals, fish, terrestrial and aquatic invertebrates. Corn gluten meal is, therefore, expected to have negligible adverse effects on non-target terrestrial and aquatic organisms. According to the PMRA, allergy is the most common adverse effect reported for humans. The product label includes a precautionary

statement regarding corn as a potential allergen and recommends personal protective equipment for applicators.

Inclusion in the Toronto pesticide by-law as an exempted product:

The list of exempted pesticides recognizes that some registered pest control products pose very low or no health or environmental risks. Corn gluten meal was considered as a candidate for the by-law's original exempted product list, because, as a food-grade material, it poses virtually no risks to human health or the environment. However, at that time, corn gluten meal was still not a registered pesticide in Canada. Because of this, it was not included on the original list. Now that the product has been registered by PMRA, it is the recommendation of the Medical Officer of Health that corn gluten meal be included on the exempted products list so that it may be available for use by residents of Toronto in this first summer of the pesticide by-law being in effect.

Minor amendment to the by-law:

The intention of the by-law is to permit, without further restriction, the use of products containing only the active ingredients on the list set out in Ch. 612-1B(2). To more accurately reflect that intention, Ch. 612-1B(2) should be amended to read "A product that is or contains only the following active ingredients." The section currently reads "A product that is or contains any of the following active ingredients."

Future "exempted product" assessments:

The addition of corn gluten meal to the present by-law is consistent with the selection process for the original list of exempted products. The Medical Officer of Health will continue to monitor other candidate substances and make recommendations regarding new exempted products for the Pesticide By-law as they emerge.

Conclusion:

Now that corn gluten meal is federally registered as a pest control product, it should be added to the exempted products list under the Pesticide By-law (Municipal Code Ch. 612). The US Environmental Protection Agency has listed corn gluten meal on its list of least toxic pesticides and waived all environmental fate and toxicology data requirements. Health Canada recognises corn gluten meal as a substance that may be effective in inhibiting the germination of crabgrass and dandelion seeds. Corn gluten meal was not included on the original "exempted products list" because it was not a registered pest control product in Canada at the time the pesticide by-law was developed. Now that it is registered for use, the Medical Officer of Health recommends that corn gluten meal be added to the list of exempted products under the by-law.

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List of Attachments:

Appendix A: City of Toronto By-law No. 456-2003, City of Toronto Municipal Code
Chapter 612, Use of Pesticides

References:

US EPA, Corn Gluten Meal Biopesticides Registration Action Document
http://www.epa.gov/pesticides/biopesticides/ingredients/tech_docs/brad_100137.pdf

PMRA, September 5, 2003, Corn Gluten Meal, Regulatory Note REG2003-09, (Ottawa: Health
Canada).

Authority: Board of Health Report No. 3, Clause No. 1,
adopted as amended, by City of Toronto Council on May 21, 22 and 23, 2003
Enacted by Council: May 23, 2003

CITY OF TORONTO

BY-LAW No. 456-2003

To adopt a new City of Toronto Municipal Code Chapter 612, Pesticides, Use of.

WHEREAS environmental protection has emerged as a fundamental value in Canadian society and the common future of every Canadian community depends on a healthy environment; and

WHEREAS the Council of the City of Toronto wishes to respond to the concerns expressed by City residents about health risks associated with the use of pesticides within the City of Toronto; and

WHEREAS avoiding unnecessary exposure to pesticides conforms to the precautionary principle as it applies to the use of pesticides; and

WHEREAS minimizing the use of pesticides will promote the health of the inhabitants of the City of Toronto; and

WHEREAS pesticides used in lawn and garden care are known to enter streams and rivers, which discharge into Lake Ontario, the source of drinking water for the City of Toronto;

WHEREAS under section 130 of the *Municipal Act, 2001*, by-laws may be passed by a municipality to provide for the protection of the health, safety and well-being of residents in the municipality; and

WHEREAS under section 425 of the *Municipal Act, 2001*, by-laws may be passed by a municipality for providing that any person who contravenes any by-law of the municipality, passed under the authority of the *Municipal Act, 2001*, is guilty of an offence;

The Council of the City of Toronto HEREBY ENACTS as follows:

1. The City of Toronto Municipal Code is amended by adding the following chapter:

Chapter 612

PESTICIDES, USE OF

§ 612-1. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

ENCLOSED – Closed in by a roof or ceiling and walls with an appropriate opening or openings for ingress or egress, which openings are equipped with doors which are kept closed except when actually in use for egress or ingress.

HEALTH HAZARD – A pest which has or is likely to have an adverse effect on the health of any person.

INFESTATION – The presence of pests in numbers or under conditions which involve an immediate or potential risk of substantial loss or damage.

PEST – An animal, a plant or other organism that is injurious, noxious or troublesome, whether directly or indirectly, and an injurious, noxious or troublesome condition or organic function of an animal, a plant or other organism.

PESTICIDE – Includes

- A. A product, an organism or a substance that is a registered control product under the federal Pest Control Products Act which is used as a means for directly or indirectly controlling, destroying, attracting or repelling a pest or for mitigating or preventing its injurious, noxious or troublesome effects.
- B. Despite Subsection A, a pesticide does not include:
 - (1) A product that uses pheromones to lure pests, sticky media to trap pests or ‘quick-kill’ traps for vertebrate species considered pests such as mice and rats.
 - (2) A product that is or contains any of the following active ingredients:
 - (a) A soap;
 - (b) A mineral oil, also called dormant or horticultural oil;
 - (c) Silicon dioxide, also called diatomaceous earth;
 - (d) Bt (*Bacillus thuringiensis*), nematodes and other biological control organisms;
 - (e) Borax, also called boric acid or boracic acid;
 - (f) Ferric phosphate;
 - (g) Acetic acid;
 - (h) Pyrethrum or pyrethrins;
 - (i) Fatty acids; or
 - (j) Sulphur.

§ 612-2. Restrictions.

- A. No person shall apply or cause or permit the application of pesticides within the boundaries of the City.
- B. The provision set out in Subsection A does not apply when pesticides are used:
- (1) To disinfect swimming pools, whirlpools, spas or wading pools;
 - (2) To purify water intended for the use of humans or animals;
 - (3) Within an enclosed building;
 - (4) To control termites;
 - (5) To control or destroy a health hazard;
 - (6) To control or destroy pests which have caused infestation to property;
 - (7) To exterminate or repel rodents;
 - (8) As a wood preservative;
 - (9) As an insecticide bait which is enclosed by the manufacturer in a plastic or metal container that has been made in a way that prevents or minimizes access to the bait by humans and pets;
 - (10) For injection into trees, stumps or wooden poles;
 - (11) To comply with the *Weed Control Act* and the regulations made thereunder; or
 - (12) As an insect repellent for personal use.

§ 612-3. Offences.

Any person who contravenes any provision of this chapter is guilty of an offence and upon conviction, is liable to a fine or penalty provided for in the *Provincial Offences Act*.

2. This by-law comes into force on April 1, 2004.

ENACTED AND PASSED this 23rd day of May, A.D. 2003.

MEL LASTMAN,
Mayor

ULLI S. WATKISS
City Clerk

(Corporate Seal)