

Secretary of State
STATEMENT OF NEED AND FISCAL IMPACT
A Notice of Proposed Rulemaking Hearing accompanies this form.

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Department of Agriculture
Agency and Division

603
Administrative Rules Chapter Number

Prohibits the application of four neonicotinoid insecticides, regardless of application method, on linden trees.

Rule Caption (Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.)

In the Matter of:

Adoption of 603-057-0388

Statutory Authority:

ORS 561.020; ORS 634.322(6); ORS 634.900 and ORS Chapter 183

Other Authority:

ORS Chapter 634

Statutes Implemented:

ORS Chapter 634

Need for the Rule(s):

The Oregon Department of Agriculture (Department) documented four separate bumble bee kill incidents related to applications of dinotefuran or imidacloprid on linden trees (*Tilia* spp) in June and July of 2013; and three separate incidents in 2014. The pesticide applications were made using a variety of application methods, including: foliar, tree injection, soil drench and a basal bark treatment. Linden trees, basswood trees or other *Tilia* species are grown as ornamental street or shade trees. The flowers of *Tilia* species are highly attractive to bees and other pollinators.

On November 12, 2013, the Department determined that the use of dinotefuran or imidacloprid on *Tilia* species, regardless of method of application, represented an unacceptable risk, and was detrimental to the environment and may damage wildlife (bumble bees). In response, the department required as a condition of 2014 state pesticide registration that a label statement prohibiting use on *Tilia* species trees would be required, for certain products containing dinotefuran or imidacloprid.

The new label language does not appear on products that were registered prior to 2014, and it is likely that these new labels will not be in the market place until 2015 or later. Without a rule in place prohibiting the use of dinotefuran or imidacloprid on linden trees, applicators following the instructions on older pesticide labels could still legally apply products containing these active ingredients to *Tilia* species.

In June 2014, the Department received several reports of bee kills because of pesticide use on linden trees. The Department has three documented incidents of imidacloprid use related to bumble bee deaths. The first incident occurred when imidacloprid was foliarly applied to linden trees in bloom in Eugene, Oregon. Two incidents occurred when imidacloprid was injected into linden trees (pre-bloom) in Beaverton and Portland, Oregon.

In response to the 2013 and 2014 bee kills, On June 26, 2014 a temporary rule was enacted, prohibiting the application of any product containing dinotefuran or imidacloprid, regardless of application method, to linden trees, basswood trees or other *Tilia* species, OAR 603-057-0387.

Because of the Department's outreach efforts regarding the hazards to pollinators when using the neonicotinoid insecticides dinotefuran or imidacloprid on *Tilia* spp. trees, pesticide applicators began using the insecticides thiamethoxam, or clothianidin as alternatives or replacements. Unfortunately, thiamethoxam, and clothianidin are closely chemically related to dinotefuran and imidacloprid (all are nitroguanidine neonicotinoid insecticides), and can be equally or possibly more hazardous to bumble bees. Therefore, to prevent the strong likelihood of additional bumble bee deaths, the Department is also prohibiting the application of thiamethoxam, and clothianidin, regardless of application method, to linden trees, basswood trees or other *Tilia* species.

Documents Relied Upon, and where they are available:

- August 12, 2014 Oregon Department of Agriculture (ODA) Letter to Jack Housenger, Director-Office of Pesticide Programs, USEPA, regarding 2013 and 2014 sampling results.

- November 12, 2013 Oregon Department of Agriculture (ODA) Letter to Pesticides registrants regarding, Oregon, 2014 Pesticide Product Registration, Pollinator Protection Labeling for Nitroguanidine.
 - November 20, 2013 Oregon Department of Agriculture Letter to Steven Bradbury, Director-Office of Pesticide Programs, USEPA, regarding 2013 bumble bee incidents and pesticide labels.
 - List of Neonicotinoid Products Containing Dinotefuran or Imidacloprid, Use Restrictions on Linden or Basswood Trees (*Tilia* species).
 - ODA Pesticide Use Investigation findings from 2013 and 2014, including pesticide application records with documented bumblebee deaths.
 - Laboratory analysis (both foliage and dead bees) from previous and current pesticide use investigations with confirmed imidacloprid or dinotefuran exposure.
 - EPA's Pollinator Risk Assessment Guidance and EPA's Information on Residue Toxicity Time <http://www2.epa.gov/pollinator-protection/pollinator-risk-assessment-guidance>
 - Clothianidin DATA EVALUATION RECORD HONEY BEE - ACUTE ORAL LD50,TEST http://www.epa.gov/pesticides/chem_search/cleared_reviews/csr_PC-044309_20-Mar-03_d.pdf
 - EFED Risk Assessment for the Seed Treatment of Clothianidin 600FS on Corn and Canola (PC Code 044309; DP Barcode: D278 10) http://www.epa.gov/pesticides/chem_search/cleared_reviews/csr_PC-044309_20-Feb-03_a.pdf
 - EFED Registration Chapter for Clothianidin for use on Potatoes and Grapes as a spray treatment and as a Seed Treatment for Sorghum and Cotton , EPA OPPTS PC Code 044309 September 28, 2005 http://www.epa.gov/pesticides/chem_search/cleared_reviews/csr_PC-044309_28-Sep-05_a.pdf
 - Revised Assessment for Clothianidin Registration of Prosper T400 Seed Treatment on Mustard Seed (Oilseed and Condiment) and Poncho Notivo Seed Treatment on Cotton, http://www.epa.gov/opp00001/chem_search/cleared_reviews/csr_PC-044309_3-Dec-10_b.pdf
 - Neonicotinoid insecticides and the environment: What you need to know. Michael Merchant Texas A&M Extension
 - <http://npic.orst.edu/factsheets/imidacloprid.pdf>
 - <http://www.npic.orst.edu/ingred/imid.html>
 - Environmental Fate of Imidacloprid, Revised by Matthew Fossen, Ph.D. Environmental Monitoring Department of Pesticide Regulation Sacramento, CA 95812-4015 April 2006 <http://www.cdpr.ca.gov/docs/emon/pubs/fatememo/Imidclprdfate2.pdf>
 - EPA OPPTS Name of Chemical: Dinotefuran Reason for Issuance: Conditional Registration Year Issued: September 2004, http://www.epa.gov/opp00001/chem_search/reg_actions/registration/fs_PC-044312_01-Sep-04.pdf
 - Persistence, metabolism and safety evaluation of thiamethoxam in tomato crop. Karmakar R1, Kulshrestha G.
 - Envirofacts Syngenta Crop Protection Thiamethoxam 2004
 - <http://www.cdpr.ca.gov/docs/emon/surfwtr/presentations/dpr%20notice.pdf>
 - <http://www.epa.gov/fedrgstr/EPA-PEST/2008/April/Day-18/p8398.htm>
 - <https://www.federalregister.gov/articles/2012/08/29/2012-21215/clothianidin-pesticide-tolerances>
 - http://www.epa.gov/opp00001/chem_search/reg_actions/registration/fs_PC-044312_01-Sep-04.pdf
- Unless otherwise specified, all documents can be found in the Oregon Department of Agriculture Pesticides Program files.

Fiscal and Economic Impact:

It is anticipated that in most situations, minimal additional cost will be incurred because other pesticides are registered for use on *Tilia* spp.

Statement of Cost of Compliance:

1. Impact on state agencies, units of local government and the public (ORS 183.335(2)(b)(E)):

The enactment of this rule will save the Oregon Department of Agriculture approximately \$50,000.00 - \$75,000.00 dollars a year in pesticide investigations, laboratory analyses and outreach expenses.

In most situations, local governments and the public will incur minimal extra cost in treating *Tilia* spp. trees, because other pesticides are available for use. However, in some limited situations, when pest pressures are high, extra expense will be incurred because more than one pesticide application may be required. Nitroguanidine neonicotinoid insecticides have been commonly used in recent years to control aphids on linden (*Tilia* spp.) trees because of their persistence, and applicators typically only need to make one application in a one to two year period. Most alternative pesticides do not have the same level of persistence as the four neonicotinoid insecticides specified in this rule.

Existing stocks of imidacloprid, dinotefuran, clothianidin and thiamethoxam, can still be legally used on other sites indicated on pesticide labels; only applications to one genus of tree (*Tilia*) will be prohibited by enactment of this rule.

2. Cost of compliance effect on small business (ORS 183.336):

a. Estimate the number of small business and types of businesses and industries with small businesses subject to the rule:

This rule will potentially impact approximately 226 Commercial Pesticide Operators and 40 nursery owners, by prohibiting application of imidacloprid, dinotefuran, clothianidin and thiamethoxam, regardless of application method, to linden trees, basswood trees or other *Tilia* species.

b. Projected reporting, recordkeeping and other administrative activities required for compliance, including costs of professional services:

There are no additional requirements mandated by this rule.

c. Equipment, supplies, labor and increased administration required for compliance:

There are no additional requirements mandated by this rule.

How were small businesses involved in the development of this rule?

The Department worked extensively with small business owners, industry representatives and associations, and other interested parties for over 1.5 years. Entities were aware of two previous temporary rules that were enacted because of bumble bee kills associated with linden trees. These were OAR 603-057-0386 and OAR 603-057-0387.

Administrative Rule Advisory Committee consulted?: No

If not, why?:

In addition to working with industry representative for over 1.5 years, the Department attended and contributed to the Joint Task Force on Pollinator Health (HB 4139) meetings. The 10-member Task Force includes two legislators who serve as non-voting members and eight members appointed by the Governor who represent a variety of interests involved in pollinator health issues. The Task Force held a total of seven public meetings at the State Capitol; its first meeting was on June 30, 2014.

It was a consensus recommendation out of the legislative task force that the Department enact a permanent rule prohibiting the use of imidacloprid and dinotefuran on linden trees; and that the Department should continue to investigate alternatives to the use of certain neonicotinoids (thiamethoxam, or clothianidin) on Linden trees. The task force also made a split opinion recommendation that the Department should expand the ban of the use of certain neonicotinoids on Linden trees to include two additional neonicotinoids (clothianidin and thiamethoxam).

After evaluating the toxicity and half-lives of thiamethoxam, and clothianidin; the potential of exposure to pollinators; investigating the alternatives to thiamethoxam, and clothianidin; and discussing the finding with industry, the Department concluded that the use of all four neonicotinoids (imidacloprid, dinotefuran, clothianidin and thiamethoxam) should be prohibited, regardless of application method, to linden trees, basswood trees or other Tilia species.

<u>01-21-2015 5:00 p.m.</u>	<u>Sue Gooch</u>	<u>Susan.C.Gooch@state.or.us</u>
Last Day (m/d/yyyy) and Time for public comment	Printed Name	Email Address