Response to individual comments on the draft special registration review neonicotinoid scoping document

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Minnesota Department of Agriculture
Pesticide and Fertilizer Management Division

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Acknowledgements

The Minnesota Department of Agriculture would like to thank everyone that submitted written comments. Thank you for taking time to contribute to the revision process.

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Introduction

The purpose of this document is to address comments submitted to the Minnesota Department of Agriculture (MDA) regarding the special registration review of neonicotinoid insecticides during the March 3 – May 2, 2014 public comment period. Comments are arranged in the order which they appear in Unique comments and Common text comments documents posted at the MDA website. Click the blue underlined text associated with the comment of interest to be re-directed to the full comment.

Comment 1

Amelia Kroeger and Common text comments

The commenters ask the MDA to consider reducing and restricting the use of neonicotinoid insecticides, consider that using neonicotinoid treated seed does not always confer a yield or profit benefit for crops produced in Minnesota, and to enhance applicator education and enforcement related to per acre use limits for neonicotinoid product labels.

To view Amelia Kroeger's entire comment visit: Amelia Kroeger

To view all form letters visit: Common text comments

MDA Response: The MDA recognizes the important pollination services and honey crop provided by Minnesota's managed honey bees, as well as the services that wild pollinator populations provide. The threatened decline of these critical species is concerning and warrants an in-depth evaluation and review of all contributing factors. As the MDA is Minnesota's lead state agency for pesticide and fertilizer environmental and regulatory functions (Minn. Stat. Chapter 18B), the Commissioner of Agriculture has initiated a review to summarize the scientific evidence of the impact of neonicotinoid insecticides on pollinators. Included in the scope of the review is the development of potential Minnesota-specific opportunities for action. The MDA has clarified in the revised Scoping Document that these opportunities include the possibility of restricting the use of or cancelling neonicotinoid-containing pesticide products. In addition, the MDA intends to summarize peer-reviewed research and information from academic trials related to yield, crop quality, and profitability claims of seed treatments. While the MDA has recently and is currently updating various materials related to applicator education, any further areas identified during the course of this review will be included. The review will also include a summary of how the MDA enforces Minnesota's pesticide laws.

Comment 2

Barb Mager

The commenter supports legislative and MDA work being done in regards to pollinators, specifically the effective labeling of plants sold to the public.

To view the entire comment visit: Barb Mager

MDA Response: The MDA believes that the summary generated from this review will contribute to the conversations taking place among citizens, legislators, registrants, and policy makers. This review is separate from MDA's efforts to implement legislation passed in 2014 requiring that plants labeled and sold as "beneficial to pollinators" must not be treated with or have detectable levels of systemic insecticides that have bee toxicity warnings on their product labels.

Comment 3

Bayer CropScience

The commenter supports comprehensive research, meaningful stewardship and collaborative measures that reduce potential exposures to protect bees and other pollinators. The commenter suggests consideration of unintended consequences from limited use of new technologies, especially when alternative products may be unavailable, less effective, or pose greater potential risks to human safety or the environment. The commenter believes use of neonicotinoid treated seed has significantly improved the performance of farmers' business operations and fits well into an IPM program. Additionally, the commenter states large studies show poor bee health correlates well with presence of Varroa mite and bee diseases, but not with exposure to agrochemicals. The commenter asks the MDA to clarify in a revised Scoping Document that not all exposure routes to neonicotinoids are exploited equally by pollinators; that insecticide residues vary depending on the type of plant tissue; and that while dust from abraded treated seed can cause bee kills, in general, it is not a contributing factor to honey bee decline.

To view the entire comment visit: Bayer CropScience

MDA Response: The MDA is aware of and will take into account both the benefits and risks associated with use of the neonicotinoid class of insecticides. A complete assessment and summary of the benefits and risks of other available insecticide classes for all relevant use patterns is beyond the scope of the review, though a general discussion of the use of neonicotinoid alternatives will be included. The MDA recognizes that seed treatments can have important benefits over foliar and soil applied insecticide applications. The MDA will explore a variety of perspectives regarding the current use

of seed treatments on major Minnesota grown crops and the appropriate fit of seed treatments in an integrated pest management program. There is a general agreement among the scientific community that that the challenges faced by bees and other insect pollinators include multiple stressors; nevertheless, the MDA's task is to review and summarize the scientific evidence as it relates to neonicotinoid insecticides. With respect to the translocation of neonicotinoids to various parts of the plant, the MDA has clarified in a revised Scoping Document that not all exposure routes are likely to be exploited equally. The review will include additional opportunities for increasing communication between farmers, beekeepers, and applicators. In addition, the review will include a summary of product improvements and new application technologies developed by industry.

Comment 4

Chris Cowen

The commenter requests a conclusion regarding the negative unintended consequences of neonicotinoid use. In addition, the commenter asks the MDA to consider if use of neonicotinoids is appropriate given all of their potential impacts.

To view the entire comment visit: Chris Cowen

MDA Response: The MDA intends to review and summarize multiple concerns related to the use of neonicotinoid insecticides and their impacts on insect pollinators. As such, the goal of this review is to provide interested parties with a greater understanding of these concerns and highlight opportunities for action, one of which may include restricting or cancelling products if the Commissioner of Agriculture determines such action is warranted.

Comment 5

Diane Hilscher

The commenter asks the MDA to support the bee-related initiatives for the 2013 - 2014 legislative session. In addition, the commenter asks that the MDA consider suggestions included in Comment 1 above.

To view the entire comment visit: Diane Hilscher

MDA Response: The MDA evaluates legislative initiatives on a case-by-case basis and in consideration of statutory obligations associated with existing law. For MDA's response to comments related to the draft Scoping Document, please refer to the response to Comment 1 above.

Comment 6

Golden Ridge Honey

The commenter is concerned about dust from neonicotinoid-treated seed and the negative impacts the dust can have to bee-friendly plants, in addition to its direct effects to honey bee colonies. Further concern was expressed about insecticide residues in soil and their ability to be translocated up through the plant into pollen and nectar that bees collect. The commenter asks that MDA consider suggestions from Comment 1 above.

To view the entire comment visit: Golden Ridge Honey

MDA Response: Neonicotinoid seed treatments, soil and foliar applications, and their movement in the environment are topics that will be summarized in the review. For MDA's response to other concerns, see the response to Comment 1 above.

Comment 7

Humming for Bees (Jeff Dinsmore)

The commenter would like the MDA to study as broadly as possible the impact neonicotinoids have on pollinators, and to monitor a range of water, soil, and plants for neonicotinoids in urban and rural settings. In addition, the commenter would like MDA to promote integrated pest management (IPM) as the best approach to insect control, to publish and promote correct pesticide application practices that reduce impacts to pollinators, to work to remove and ultimately eliminate neonicotinoid products from use in all environments, and to conduct peer-reviewed research that is independent from special interest groups.

To view Humming for Bees entire comment visit: Humming for Bees

To view Jeff Dinsmore's entire comment visit: Jeff Dinsmore

MDA Response: The MDA is already engaged in monitoring surface water and groundwater in urban and rural areas for a suite of chemicals, including neonicotinoids, across Minnesota. Monitoring results are available at Monitoring & Assessment for Agricultural Chemicals in the Environment. Please refer to Comment 17 for more information on Minnesota's water quality monitoring program. In addition, the MDA strongly supports and promotes integrated pest management (IPM) through a variety of education and outreach programs, and through promotion of Best Management Practices for pesticide use. The MDA has developed pollinator habitat BMPs for agricultural, right-of-way, and home & garden settings that include how to enhance and create pollinator habitat as well as smart pesticide practices applicable to neonicotinoid

insecticide use. Within these BMPs and many other MDA produced resources, the MDA suggests using IPM for efficient cost-effective pest control. Conducting novel research related to neonicotinoids or other newer insecticides is outside the scope of this review. The MDA can potentially support research that would further the understanding of non-target impacts from neonicotinoids, and the Scoping Document has been revised to include a consideration for related opportunities for action. Any opportunities for action identified by the MDA will be based on the summary of available scientific information reviewed.

Comment 8

Jeff Anderson

The commenter describes increased overwintering mortality in his honey bees and decreased honey production which he associates with neonicotinoid use. The commenter feels that pesticide registration in Minnesota should be held to a higher standard than federal standards due to the 1913 Common Law Principle from the court case Farrell v. Minneapolis & R.R. Ry. Co. and a 2005 binding case law Anderson v. State. When considering these rulings, the commenter believes these principles set precedence for Minnesota to restrict or deny registration for pesticides that do not fit within the framework laid out by these rulings. The commenter asks the MDA to consider the following: reclassify the planting of treated seeds from a treated article to a pesticide application; implement stronger label enforcement or label restrictions that will prevent misuse of pesticides; change the U.S. Environmental Protection Agency (EPA) protection of pollinators box that appears on bee-toxic pesticides; illustrate neonicotinoid use and comparisons made in the scoping document in multiple forms; and consider that the high percentage of neonicotinoid seed treatment use in corn and soybean fields is not likely part of an appropriate IPM practice.

To view the entire comment visit: Jeff Anderson

MDA Response: Regarding the commenter's legal concerns, Minnesota case law involving landowner obligation is beyond the scope of the review for evaluating scientific evidence of neonicotinoid impacts to pollinators. However, MDA has forwarded these comments to appropriate legal staff at the department. All other commenter concerns will be addressed as part of this review. In addition, the Scoping Document was revised to reflect more clearly that Minnesota sales and use comparisons will be made for all neonicotinoids based on data collected by the MDA.

Comment 9

Jim & Chris Whitlock

The commenters are concerned about the high use of neonicotinoid insecticides, as well as their mode of action which targets pests and beneficial insects, and their water solubility which they feel causes these products to run off into collection pond basins, ponds, rivers, lakes, and streams.

To view the entire comment visit: Jim & Chris Whitlock

MDA Response: The MDA review will summarize use and sales of neonicotinoids in Minnesota as well as all modes of action and effects to target and beneficial insects or their surrogates. In addition, note that the MDA currently has a water quality monitoring program in place. Please refer to Comment 17 for more information on Minnesota's water quality monitoring program.

Comment 10

Laurie Schneider

The commenter feels that while the MDA's Scoping Document points out some serious problems with the use of neonicotinoid insecticides, the MDA is also taking the situation too lightly given the winter mortality of bee colonies and concerns about pollinator decline. The commenter asks that Minnesota be a leader by banning neonicotinoid use until the scientific evidence regarding their safety is definitive, similar to what the European Union has done. The commenter feels that bees are continuing to become weakened by monoculture plantings and neonicotinoid insecticide use.

To view the entire comment visit: Laurie Schneider

MDA Response: The MDA is aware of state and national statistics related to bee colony mortality and pollinator populations. The Scoping Document has been revised to specifically address the possibility of restricting the use of or cancelling neonicotinoid products. While habitat loss is often cited in the scientific community as one of the leading stressors for bees, the legislature and the Commissioner of Agriculture directed the MDA to scope the criteria to be used in a review of neonicotinoid insecticides and pollinator impacts.

Comment 11

Margot Monson

The commenter is concerned about systemic insecticide use, especially the impacts of neonicotinoids in aquatic systems. The commenter notes that in addition to honey bees, wild pollinators are important to maintain many ecosystems, and should be addressed in the review. The commenter personally has observed a decrease in wild pollinators in the area where her husband grew up. Additional comments were similar to those in Comments 1 and 5 above.

To view the entire comment visit: Margot Monson

MDA Response: The MDA will summarize aquatic life toxicity and benchmarks in the review. The review will also summarize evidence of neonicotinoid impacts on wild pollinators. See Comments 1 and 5 above for the MDA's response to additional concerns.

Comment 12

Minnesota Crop Production Retailers (MCPR)

The commenter asks the MDA to: utilize an exclusively science-based method to conduct the review; focus on label and BMP education; and communicate with and encourage beekeepers to utilize DriftWatch, a program that facilitates communication between applicators, producers, and beekeepers. The commenter believes that seed treatments are an important tool that fit into an integrated pest management program, especially because there are few alternatives.

To view the entire comment visit: Minnesota Crop Production Retailers

MDA Response: The MDA's review will rely on a summary of scientific findings to outline any opportunities for action, including opportunities for increased education on label-based requirements and hazards. In addition, the review will summarize Minnesota-specific use of neonicotinoid-treated seeds and their relationship to integrated pest management programs. The MDA has revised the Scoping Document to reflect the need for increased communication between farmers, beekeepers, and applicators. The MDA has developed a set of Best Management Practices for enhancing and creating pollinator habitat (in agricultural, right-of-way, and home & garden landscapes) that highlight smart pesticide practices. These BMPs are available to the general public by visiting Pollinator Habitat BMPs, and to applicators/county inspectors during annual trainings.

Comment 13

Agri-Growth Council

The commenter notes that leading scientific opinion suggests that colony collapse disorder (CCD) is due to a number of contributing factors, and that it is in everyone's best interest to determine the cause of this phenomenon, including the role of pesticides. The commenter feels that the neonicotinoid class of insecticides is beneficial due to its reduced human health concerns, lower likelihood for target species developing resistance, lower net applications, and reduced drift concerns. The commenter asks that the MDA: utilize a scientific approach when conducting the review; acknowledge voluntary industry efforts currently underway to reduce pollinator exposure to pesticides via new application technology and methods; encourage beekeepers to utilize DriftWatch, a program that facilities communication between applicators, producers, and beekeepers; and look at all factors affecting pollinators when developing solutions.

To view the entire comment visit: Agri-Growth Council

MDA Response: While the scope of the review is focused on summarizing issues related to pollinator decline as they relate to neonicotinoid insecticides, the review will note other leading factors thought to be contributing to pollinator decline. The MDA will summarize the benefits of neonicotinoid use. In addition, the MDA has revised the Scoping Document to clarify that the review includes: a summary of new application technologies and methods; a discussion of ways to increase communication between beekeepers, producers and applicators; and consideration of a variety of factors related to pollinator decline.

Comment 14

Minnesota Farm Bureau Federation

The commenter notes that the Minnesota Farm Bureau Federation cares about healthy and productive pollinator populations, and supports the scoping criteria outlined in the draft Scoping Document. The commenter suggests moving the "Neonicotinoid application and movement in the environment" section to immediately after the "Neonicotinoid use and sales" section. In addition, the commenter believes that use of neonicotinoid-treated seed is backed by sound management principles and does not run counter to IPM. Other suggestions include the following: highlighting areas where more research attention is needed; clarifying crop establishment benefits with regard to seed treatments; and identifying the types of plants requiring pollination services.

To view the entire comment visit: Minnesota Farm Bureau Federation

MDA Response: The MDA has revised the Scoping Document to address the section flow suggested by the commenter, to clarify how the MDA will review neonicotinoid use related to IPM, and to include the identification of issues needing further research. Additional comments outlined above will be covered during the course of the review.

Comment 15

Old Mill Honey Co.

The commenter feels that there is an absence of collaborators with practical experience beekeeping and/or collaborators who have experienced bee kills first hand. The commenter wants the review to include recent litigation surrounding three neonicotinoids in relation to pollinators. In addition, the commenter wants the MDA to disclose the following: any direct or indirect revenue it receives from sales of neonicotinoid products; total sales of non-restricted pesticides; total sales of treated seed; evaluation of other products known to have synergistic affects with neonicotinoids; and effects on bees resulting from sublethal and lethal exposure. The commenter also asks that the review include an assessment of all exposure routes (including run-off via rain events), as well as a yield/cost-benefit analysis for neonicotinoid treated seeds.

To view the entire comment visit: Old Mill Honey Co.

MDA Response: In drafting the Scoping Document, collaborators were identified from among the list of entities named in 2013 Session Law (H.F. No. 976), consisting of university, state, and other governmental agencies. However, the MDA solicited input from the general public, interested beekeepers, and industries during the initial development of the review's scope, and beekeeper input was again solicited during the public comment period. The MDA revised the Scoping Document to include: a summary of pending legal challenges to neonicotinoid registration; additional clarification of the approach to estimating revenue generated through the sale and registration of neonicotinoid products; acknowledgment of potential synergistic effects with other pesticides, pathogens, or parasites; characterization of exposure routes (including water); a summary of potential sub-lethal and lethal effects; and a summary of peer-reviewed research on yield and benefit analysis for treated seeds. The MDA currently discloses total active ingredient sales for crop chemicals that are not part of pre-packaged "treated articles" (like treated seeds) on the MDA website, Minnesota Pesticide Sales Information, as well as for home and garden products. The review will estimate total active ingredient use in pounds for neonicotinoid-treated seed.

Comment 16

Organic Consumers Association

The commenter is actively working to address colony collapse disorder and legislative initiatives related to reducing insecticide effects on pollinators. Please view Comment 1 and 2 for commenter concerns.

To view the entire comment visit: Organic Consumers Association

MDA Response: Please see Comments 1 and 2 for MDA's response.

Comment 17

Pesticide Action Network North America (PANNA)

The commenter asks that the MDA: develop a method and implementation plan to track neonicotinoid-treated seed use; take an in-depth look at the economic and environmental impacts from prophylactic use of neonicotinoid-treated seed; address the impact to other beneficial insects; and include synergistic effects in the review scope. In addition, the commenter asks that the MDA consider: increasing the availability of non-treated, neonicotinoid-free seed; classifying neonicotinoids as restricted use pesticides; adding a research tax for registration of neonicotinoid products; creating a Minnesota-specific label with restrictions that exceed those on the current label; and developing an environmental monitoring protocol to track the occurrence and distribution of neonicotinoids in Minnesota water and soil. See Comment 1 and 2 for additional commenter concerns.

To view the entire comment visit: Pesticide Action Network North America

MDA Response: The MDA has revised the Scoping Document to include the following: an estimate of the additional total pounds of neonicotinoid active ingredient used within the state from treated seed; a summary of seed treatments and their role in integrated pest management programs; acknowledgement of potential synergistic effects with other pesticides, pathogens, or parasites; and a summary of neonicotinoid impacts to non-pollinator beneficial insects. Regulatory actions will be considered as part of the review. The MDA has been involved with water quality monitoring since 1985 and has continued to increase both the quantity and quality of water samples taken over time. Methods currently include analyzing samples for neonicotinoid insecticides (acetamiprid, clothianidin, dinotefuran, imidacloprid, and thiamethoxam) at parts per trillion reporting limits. MDA monitoring reports are available at Monitoring & Assessment for Agricultural Chemicals in the Environment. The MDA assesses neonicotinoid impacts to soil on a limited basis, and is piloting analysis of wetland

sediments for insecticides. See Comments 1 and 2 for MDA's response to additional concerns.

Comment 18

Patricia Hauser

The commenter asks that the MDA: support integrated pest management; ban prophylactic insecticide use and/or all systemic pesticides; explain how neonicotinoids and the Mississippi River's dead zone are related; explain how mammals and insect nervous systems differ; and increase label enforcement and outreach education. In addition, the commenter asks the MDA to support smaller farms, and make available non-neonicotinoid treated seed. For more of the commenter's concerns see Comment 1.

To view the entire comment visit: Patricia Hauser

MDA Response: The MDA strongly supports and promotes integrated pest management (IPM) on all Minnesota farms and in all MDA Best Management Practices (BMPs). The Mississippi River delta "dead zone" is caused by an environmental phenomenon resulting from eutrophication, which occurs when fertilizers nutrients, untreated sewage effluent, or natural depositional events affect a water body. The potential role of pesticides – including neonicotinoids – in the development of such dead zones is beyond the scope of the review. The MDA has revised the Scoping Document to clarify how the review will address concerns related to prophylactic insecticide use, will include possible outcomes like increased label enforcement, will assess opportunities for increased education and outreach, and will include the possibility of restricting or canceling products. See Comment 1 for MDA's response to additional concerns.

Comment 19

Representative Rick Hansen and 16 other representatives

The commenter wants the Scoping Document modified to reflect the MDA's option to refuse the registration of neonicotinoid products for use in Minnesota. In addition, the commenter notes that the MDA has the authority, independent of the EPA, to accept or deny a pesticide's registration. The commenter also feels that the public has had inadequate opportunity for involvement in the neonicotinoid review process and wants the MDA to develop means to update the public on the status of the review.

To view the entire comment visit:
Representative Rick Hansen and 16 other representatives

MDA Response: The MDA did not limit the scope of the special registration review of neonicotinoids so as to exclude product use restrictions or cancellation as a potential opportunity for action. Rather, the MDA noted that it could employ "*other measures designed to minimize the impacts of pesticide use on human health and the environment,*" which would include, among other possible measures, product restrictions or cancellations to protect insect pollinators from the impacts of neonicotinoids. The Scoping Document has been revised to specifically include "restricted or canceled products" as a potential measure to minimize impacts of concern. References in the Scoping Document to Minnesota's review not being redundant of the EPA's registration review are designed to address the fact that the MDA will not re-assess neonicotinoid risks already reviewed or being reviewed by EPA; rather, the MDA will use its resources to summarize EPA's assessments and regulatory position as part of identifying potential opportunities for action within Minnesota to reduce neonicotinoid impacts on pollinators. For example, the MDA will not re-consider the conclusions of previously evaluated pollinator toxicity endpoints and risk quotients or attempt to derive new endpoints and risk quotients from available studies. The MDA will also not evaluate risk assessment models and their resulting data, or request and evaluate new toxicity tests, all of which are currently being done by the EPA. During the process of preparing the Scoping Document, the MDA solicited input from, agencies, industry and the general public (including beekeepers) in addition to the initial diverse workgroup involved to determine the review's draft scope. As a result of the review's announcement in the State Registry, an MDA pesticide listerver, press releases and media coverage, and distribution through social media, the MDA received 444 public comments. To better facilitate ongoing communication with interested parties, the MDA has created a pollinator-specific listserver and revised the Scoping Document to include the following: "During the course of the review the MDA will provide information about review-related topics through a public listserv and by posting updates to the MDA website. Interested parties may enroll in the listserv through the MDA website. In addition, the MDA may provide status updates through meetings with interested stakeholders."

Comment 20

Ryan Drum

The commenter is concerned about three things: that neonicotinoids have become ubiquitous in agricultural landscapes; that pesticide labels are not clearly marked as containing neonicotinoid insecticides; and that there are not enough alternative products available. The commenter also notes the following: additional research toward ecological and human health risks are needed; risks extend to other non-target organisms besides pollinators; a risk-benefit analysis should be used to evaluate direct and indirect impacts; increased education about environmental risks and product labels

are needed; increased regulations are needed for neonicotinoid pesticides; a neonicotinoid ban should be implemented for all state-owned lands (except by permit); and water/soil should be monitored for pesticides by the MDA and Minnesota Pollution Control Agency.

To view the entire comment visit: Ryan Drum

MDA Response: The review is scoped to summarize concerns about the presence of neonicotinoids in agricultural landscapes; pesticide ingredient labelling; and the availability of neonicotinoid alternatives. The Scoping Document notes that among potential opportunities for action is the identification of "research topics that would further the understanding of non-target impacts from neonicotinoids to aid policymakers, funding agencies, and regulatory agencies, etc."; the need for "applicator guidance and social network tools developed to enhance product stewardship"; the need for "targeted enforcement-related education"; and an evaluation of the need for "restriction or cancellation of products." The Scoping Document also notes that the review will summarize non-target effects to other beneficial organisms, and will include considerations of the potential risks and benefits associated with neonicotinoid use. See Comment 17 for the MDA's response to additional concerns regarding pesticide monitoring in surface and ground water.

Comment 21

Sandra Shanley

The commenter asks that the MDA track the use of neonicotinoid insecticides within the state; recommend Minnesota residents use untreated seeds/plants; and restrict/reduce the allowable amount of neonicotinoid insecticide products used.

To view the entire comment visit: Sandra Shanley

MDA Response: See Comment 15 for MDA's response regarding information on tracking the use of neonicotinoids, and Comment 1 for the MDA's response to restricting and reducing neonicotinoid products. Use of untreated seeds and plants will be considered during the course of the review. Opportunities for action will be based on the scientific findings summarized in the review.

Comment 22

Syngenta

The commenter notes that while a single neonicotinoid application in some settings (for example in the treatment of trees for emerald ash borer) can last for several months or years, most neonicotinoid applications last for shorter periods of time. In addition, the

commenter feels that neonicotinoid seed treatments are a critical component of IPM programs, and when compared to previous classes of insecticides, are proven to be less harmful to beneficial arthropods. While the MDA's scoping document stated that treated seeds may expose birds and other taxa to acute or chronic doses of a neonicotinoid, the commenter notes that available databases have no reports of any bird incidents related to the neonicotinoid insecticide thiamethoxam. The commenter provided information related to residue studies conducted to look at effects of neonicotinoid seed treatments over a 4-year period, as well as information on studies submitted to EPA on thiamethoxam uptake and bioefficacy in regards to pollen and nectar. The commenter asks that the MDA incorporate beekeepers into the Minnesota DriftWatch program.

To view the entire comment visit: Syngenta

MDA Response: The MDA is aware of the wide range of residue concentrations and half-life durations that have been reported in various neonicotinoid environmental fate studies and will consider such differences in the review. In addition, the MDA has revised Scoping Document statements related to neonicotinoids and integrated pest management (IPM). The review will also consider information and comments regarding toxicity to birds, as well as information pertaining to seed treatment residue, pollen, and nectar studies. The MDA has revised the Scoping Document to include opportunities to increase communication between farmers, beekeepers, and pesticide applicators.

Comment 23

Thomas Thiss

The commenter has concerns with the chemicals lawn care companies use during lawn maintenance. For more of the commenter's concerns see Comment 1.

To view the entire comment visit: Thomas Thiss

MDA Response: Please see MDA's response to Comment 1.

Comment 24

The Xerces Society for Invertebrate Conservation

The commenter asks that the MDA include the following in its review: a review of neonicotinoid product labels in order to understand how products can be used; a comparison of allowable application rates for active ingredients found in homeowner products vs. agricultural products; a review of clarity, consistency, and visibility for toxicity language warning of potential risks to pollinators on product labels; an evaluation of allowable label application rates compared to the rate of efficacy; a review

of labels that recommend using a combination of products; and an evaluation of clearly marked seasonal use limits. In addition, the commenter asks the MDA to review the number of neonicotinoid treatments occurring on the same site in a single year, other active ingredients being used in conjunction with neonicotinoid applications, how often applicators are applying products below the maximum application rate, and the number of years neonicotinoids are applied to the same site. The commenter wants the MDA to consider increased action to protect imperiled bee, butterfly, and caddisfly species. The commenter recommends creating a map to show where imperiled species are located and prohibiting neonicotinoid use in these identified regions, as well as reviewing methods to protect key habitat including host and forage plants needed by these species. The commenter also asks the MDA to consider prohibiting use of neonicotinoids on bee-attractive and pollinator host plants. Additionally, the commenter asks the MDA to consider: determining where further training/oversight is needed for applicators; considering moving some general use neonicotinoids to restricted use; assessing current training materials to identify potential gaps; identifying and providing alternatives to prophylactic use of treated seed or other application methods; and estimating cost in pollinator losses due to the use of neonicotinoids in Minnesota.

To view the entire comment visit: The Xerces Society

MDA Response: The MDA will review and identify general themes related to label differences and issues outlined by the commenter. The MDA will also use available information to summarize neonicotinoid use rates, frequency, and pesticide combinations commonly used. Imperiled beneficial invertebrates and prophylactic use will also be summarized within the review. The Scoping Document has been revised to more specifically address the possibility of restricting or cancelling products, as well as developing additional applicator/inspector guidance and social network tools to enhance product stewardship. The MDA is currently updating all applicator training manuals to include pollinator-specific protection information and practices. In addition, the MDA developed pollinator habitat best management practices for a variety of land use settings in the state, all of which will also be incorporated into pesticide applicator training. Conducting research into whether seed treatment, soil pre-treatments or other prophylactic use could increase pest resistance is beyond the scope of the review. Estimating the cost (or value) of pollinator losses due to neonicotinoids in Minnesota presumes that such losses occur at meaningful levels and are measurable. Arriving at such an estimate would be, as noted by the commenter, a complicated undertaking lacking the necessary information and measurements. Currently, federal and state pesticide registration occurs within a risk-benefit framework (which may differ from a species- or ecosystem-specific cost-benefit analysis), with unreasonable risks (as evaluated through toxicity testing) weighed against a variety of costs and benefits.