

Current status of chlorpyrifos and neonicotinoid insecticides

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1. Chlorpyrifos and certain neonicotinoids carry significant risks that require management, and both have restrictions upon use printed on the mandatory part of the pesticide label.
2. EPA considers risks, benefits and alternatives in making it's regulatory decisions, using scientific evidence and credible sources of evidence.
3. Both have been (chlorpyrifos), or are currently (neonicotinoids), the subject of regulatory review by EPA, and detailed risk assessments for human health and environmental impacts have been published by EPA (see below). These result in changes to use patterns, required risk mitigation practices, and label requirements.
4. Chlorpyrifos presents concerns across the spectrum of adverse impacts, and recent research has focused upon chronic (i.e. long term) neurological harm to humans.
5. Neonicotinoids are toxic to bees, and potentially aquatic invertebrates and some wildlife, and they are persistent in the environment.
6. Both chlorpyrifos and certain neonicotinoids have been among the most used pesticides in the world because of their toxicity to many pest species.
 - a. Concerns about chlorpyrifos and other pesticides in the group (organophosphates) are long standing, and efforts to reduce or eliminate uses has been driven by the marketplace, and concern among farmers, as well as through regulatory restrictions. Use in tree fruit has been virtually eliminated, and education campaigns have also encouraged more efficient use in Oregon through the Pesticide Stewardship Partnerships.
 - b. Neonicotinoid concerns are more recent, and reductions have taken place through voluntary action in for example, the nursery industry, through market pressures. Neonicotinoids have replaced other pesticides that have high mammalian toxicity, and toxicity to fish and other beneficial insects, and some of these older pesticides are being used as alternatives again, because of concerns about neonicotinoids.

7. Professional users have been consulted about possible label changes or restrictions and this information has been sent to USDA and USEPA (<https://agsci.oregonstate.edu/integrated-plant-protection-center/pacific-northwest-epa-comment-coordination>). Letters that summarize industry responses can be found here: <http://westernipm.org/index.cfm/searchable-data-sources/information-request-replies/>.
8. For both neonicotinoids and chlorpyrifos there are specific uses that important industries in Oregon rely upon, although alternatives are sought by many of Oregon's agricultural industries, and highlighted in State IPM Program strategic planning process (<https://agsci.oregonstate.edu/integrated-plant-protection-center/ipm-strategic-planning>).
9. Three comment letters to EPA, with comments from Oregon and PNW industries regarding use patterns, continued needs, and alternatives (labeled "Murray") are submitted with this testimony.
10. OSU, in partnership with numerous industries, is engaged in finding IPM alternatives to neonicotinoids and chlorpyrifos, including alternative pesticides, but this requires research and education programs to be carried out, and a gradual phasing in of new materials. When alternatives are available, farmers will use these assuming they are efficacious and affordable.

EPA regulatory reviews and risk assessments:

Nov 2016 notice of revised human health risk assessment:

<https://www.epa.gov/pesticides/updated-human-health-risk-analyses-chlorpyrifos>

Regulations.gov EPA docket which contains records of decisions and risk

assessments: <https://www.regulations.gov/docket?D=EPA-HQ-OPP-2015-0653>

Schedule for review of neonicotinoid insecticides: <https://www.epa.gov/pollinator-protection/schedule-review-neonicotinoid-pesticides>

EPA docket for imidacloprid: <https://www.regulations.gov/docket?D=EPA-HQ-OPP-2008-0844>

EPA docket for clothianidin: <https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0865>

EPA docket for thiamethoxam: <https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0581>

EPA docket for dinotefuran: docket# [EPA-HQ-OPP-2011-0920](https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0920)

EPA docket for acetamiprid: <https://www.regulations.gov/docket?D=EPA-HQ-OPP-2012-0329>