

Meeting Notes

Chlorpyrifos Work Group Meeting 1

December 17, 2019

Oregon Department of Agriculture, 3rd floor conference room

DRAFT

Advisory Committee Members present

Lisa Arkin, Beyond Toxics

Bryan Ostlund, Oregon Seed League, Oregon Clover Seed Commission, Oregon Blueberry Commission, Oregon Fine Fescue Commission, Oregon Mint Commission, Oregon Ryegrass Growers Seed Commission, Oregon Tall Fescue Commission

Dave Phipps, Golf Course Superintendents Association of America

Scott Dahlman, Oregonians for Food and Shelter

Jenny Dresler, Oregon Farm Bureau

Martha Sonato, Pinos y Campesinos Unidos del Noroeste

Chal Landgren, Oregon State University

Jeff Stone, Oregon Association of Nurseries

Jeff Jenkins, Oregon State University

Fred Berman, Oregon State University and Oregon Health Sciences University

Pete Brentano, Brentano's Tree Farm and Board of Agriculture member

ODA staff present

Lisa Hanson, Deputy Director

Stephanie Page, Natural Resources & Pesticide Program Area Director

Rose Kachadoorian, Pesticide Program Manager

Dale Mitchell, Pesticide Program Manager

Toby Primbs, Fertilizer Program, incoming Pesticide Program Manager

Ann Ketter, Pesticide Case Reviewer

Ted Bunch, Pesticide Analytical Response Center Coordinator

Kirk Cook, Pesticide Stewardship Partnership Coordinator

Timindra Pratico, Office Specialist

Others present

Katie Fast, Oregonians for Food and Shelter

Alexander Korsunsky, Department of Anthropology, Vanderbilt University

Nargess Shadbeh, Oregon Law Center

Beth Reiley, Legislative Policy and Research Office

Nicole Crane, FarWest Agribusiness

Jennifer Eisele, Beyond Toxics
Oliver Neher, The Amalgamated Sugar Company LLC (via web/conference call)
Jonathan Sandau, Oregon Farm Bureau
Neil Lanning, Washington State Department of Agriculture
Crystal Abrams, Beyond Toxics
Dani Lightle, OSU
Anna Rankin, Pudding River Watershed Council
Paul Camuso, Valley Agronomics
Theresa Cira, Minnesota Department of Agriculture (via web/conference call)
Mackenzie Carroll, Legislative Director for Rep. Salinas (via conference call)

Introductions and opening comments

The committee members and others at the meeting introduced themselves. Lisa Hanson provided some introductory information about the purpose of the group. During the 2019 legislative session, there was a lot of discussion about chlorpyrifos and while no legislation was passed, we see a need for ongoing discussions. We've had a lot of discussion here at the department in terms of thinking about this product and the needs of agriculture and natural resources along with balancing with our mission, human health and the environment. Oregon agriculture is very diverse and there may be special uses where this is the only product. ODA is bringing a group of experts together to evaluate what you all know, talk about it in terms of uses today, and where to go long term. There may be uses that no longer make sense. We may identify special/unique pest control needs but still need to protect human health and the environment. Hope you all come to the table with an open mind and openness to conversations. We have not come with a set of draft rules because we want to have an open discussion first before we look at taking action.

We expect 3 meetings over the next several months. By meeting 3, we hope to talk about next steps so that we have a plan of action. We want to make sure we understand the different viewpoints before we come up with something. The second meeting will be in January 2020 and the third meeting will be in March 2020.

Stephanie Page noted key foundational protections related to chlorpyrifos and explained we will look at those protections and ways to build upon them, while also understanding unintended consequences. The key foundational protections include:

- Licensing and registration
- Worker Protection Standard
- Label restrictions
- Prohibitions on residential uses

Exposure Pathways

Ted Bunch gave a presentation on bystander pesticide exposure pathways. Bystanders are defined as people who are not involved in the pesticide application but who live, work, or are located nearby the site of application. Existing protections on pesticide product labels include Worker Protection Standard requirements, restricted entry intervals, and personal protective equipment requirements.

There are four main ways that bystanders are exposed to pesticides: drift, volatilization, surface deposits, and entry into treated areas.

There are multiple formulations for chlorpyrifos and it may be applied using multiple application methods. Ted noted the products that are classified as restricted-use (must be appropriately licensed to purchase and apply) as well as those that are general-use (may be purchased and used by the general public).

The Pesticide Analytical Response Center coordinates the state's response to pesticide incidents and concerns. ODA serves a coordinating role and works closely with the other PARC member agencies to investigate pesticide incidents and concerns, evaluate data for trends, and recommend ways to prevent incidents.

ODA Pesticide Cases Involving Chlorpyrifos

Dale Mitchell introduced Ann Ketter, who reviewed ODA's pesticide program cases involving chlorpyrifos. Ann explained that she extracted data from ODA's electronic database specific to chlorpyrifos. The query looked at actual cases from July 1, 2013 to October 31, 2019. All of the cases are closed cases where we know the outcome.

The total number of cases that ODA has investigated during that time involving all pesticide products is 3,587. Out of those, 57 had chlorpyrifos mentioned. Marion County had the highest number of cases. The top amount of cases involved cannabis, however it is not labeled as an application site.

Out of 57 cases, 21 cases had enforcement actions taken. Ann noted that not every enforcement act involves misuse (for example, it could involve contaminated product).

15 cases went to the Pesticide Analytical Response Center that involved chlorpyrifos, and 12 had a human claim of impact. Cases go to PARC when pesticide use has allegedly negatively impacted humans, animals, or the environment.

Martha Sonato asked about the number of cases that involved farmworkers. Ann noted that more data, for example data regarding who was allegedly impacted, can be pulled depending on the question.

Rose Kachadoorian explained that new federal certification requirements will be explained in future meetings, along with recordkeeping requirements and Worker Protection Standard requirements.

Chlorpyrifos Water Quality Data

Kirk Cook presented water quality monitoring information from 2013-2019 gathered through the Pesticide Stewardship Partnership program. Over 700,000 records have been gathered through this program and are maintained in DEQ's database. The program was developed to focus on environmental issues, including concerns about chemicals affecting endangered salmon. Chlorpyrifos has been found to be toxic to fish and aquatic invertebrates. It is relatively unique in that it has a water quality criteria.

Routes of entry into water identified by ODA include air blast and aerial spraying. In one area, it is likely moving into the water through irrigation induced erosion. PSP areas where we have seen issues are the Clackamas, Yamhill, Middle Deschutes, and Walla Walla.

Chlorpyrifos is generally not detected in dryland areas; it has been seen more frequently in water near orchards. Detections and levels have generally had downward trends, but we still see spikes and early spring detections. Generally, we are doing well making progress with chlorpyrifos in water quality in Oregon.

There was a question about chlorpyrifos detections in groundwater studies. Kirk Cook stated that because it is not very water soluble, it is not usually found in groundwater. DEQ conducts those studies and ODA will obtain information for the committee about chlorpyrifos detections in those studies.

Current Major Use Sites and Application Methods

Rose Kachadoorian explained that chlorpyrifos has a long regulatory history involving numerous lawsuits. Residential uses have been removed; no uses on apples past the bloom period. In 2006, due to occupational risks to farmworkers, EPA lowered allowed use rates on some sites. Also, buffers were established to address concerns about toxicity to aquatic life, it wasn't until 2012 that buffers were added to the label to address sensitive sites, such as residences.

In 2013 and 2016, EPA revised its human health risk assessment as part of its registration review. There was contention about how to measure impacts of chlorpyrifos to human health. We're not going to be getting into that topic; some of the top scientists in the world are debating this. We are going to be talking about how to decrease human exposure rather than debating toxicity.

45 products are registered in Oregon; 35 of those are restricted use products. The label will indicate at the top if it is a restricted use product. It has various uses on both food and non-food crops, and various application methods.

Critical Uses and Criteria for Determination

Rose Kachadoorian explained that part of ODA's mission is to support effective integrated pest management systems that also reduce risks to people and the environment. Various entities are reviewing public health and environmental concerns that could result in more restrictions for chlorpyrifos. Some states are phasing it out. Oregon has joined a motion to intervene in a multi-state lawsuit.

There are two directions we could go in reducing risk. One way involves identifying critical uses; the other involves reducing human exposure to chlorpyrifos to mitigate risk. ODA has the capacity to work on reducing exposure. Risk = toxicity X exposure. Again, with the toxicity issue, we have a world of scientists working on that. We here are capable of working on the exposure piece.

Stephanie Page asked the group whether additional information was needed to help provide ODA direction. Work group members had the following comments/questions.

- What are alternatives and their risks?
- Strategic planning - critical needs, production goals, vs environmental protection
- Ultimate goal of the group - Rose reiterated that one key issue is how to reduce bystander exposure, and asked what we could look at to reduce exposure. Jeff Jenkins mentioned that California has looked at the reduction benefits of various measures and has the resources to conduct this assessment, but noted that this would be challenging in Oregon given the crops and resources that we have.
- What is practical for Oregon? Oregon is unique in terms of major uses, such as grass seeds.
- Data may be from other states that are less geographically unique. Many Oregon stakeholders feel that generic data may not solve the problem.
- What are work group members' thoughts on focusing on application methods as a way to reduce bystander exposure? Jeff Jenkins noted that the worker protection standard may need to be revisited before we start layering on top of that; Jenny Dresler noted that recent rulemaking was done in 2018 and that some of Oregon's protections are more robust than the federal protections.
- Stephanie Page noted that the focus of the group is how to take current foundations and build upon them, rather than re-negotiating existing protections, but we should include more information about those existing protections at the next meeting.
- Discuss sensitive sites, schools, hospitals, farmworker housing, residential uses
- Advances in technology - any considerations? EPA - drift reduction, equipment technology using various technologies may allow for different buffer zones.

- Data gathered from California regarding re-entry intervals. When we are talking about crops that people could be touching, what sorts of REIs have been established?
- What risk level are we looking at? Type of exposure assessment
- What is ODA's authority and capacity to work on these issues?
- Would like to have licensing and registration requirements reviewed at the next meeting.
- Would like to have the strongest measures possible to provide a safe environment for farmworkers.
- What are examples of mitigation measures including those that ODA has already put into place related to other pesticide products?
- Advantages of the focus on mitigation measures?
 - Buffers
 - Modifying allowable application methods
 - Reducing the number of crops use is allowed
 - Evaluating sensitive areas
 - Management plans
 - Licensing
 - Education (public)
 - Notice of intent prior to applications
- Examples of existing mitigation measures - required trainings, requirements that only licensed applicators can use or handle a product, education and outreach around how to reduce drift of a particular product.

The group discussed that we should begin the next meeting with an overview of the existing regulatory framework, including existing risk reduction measures, today's product labels, and the worker protection standard. This will help identify gaps and areas to explore.

Lisa Arkin commented that the worldwide attention around chlorpyrifos is focused on the impacts to human health. Focusing on mitigation measures seems the most pertinent to getting at the human health risk. Hoping we can keep that at the forefront. Martha Sonato said she noticed the presentations were focused on watershed quality and water quality, and why we didn't have a specific PPT around what chlorpyrifos does to the human body. Could we have an organization come in and discuss this? Stephanie Page noted that Rose had noted in her presentation that ODA is not the toxicological experts, although we have included that expertise on the committee. There is science that is not 100% in agreement and that is why we are more focused on the reducing exposure side of the equation and not on the toxicology to the human body and what the studies have said.

For the next 2 meetings, a Doodle poll will be sent out to get them scheduled. Agenda items for the January meeting will include:

- Regulatory foundation

- Worker protection standard including recordkeeping requirements
- Federal certification and training requirements
- Mitigation in Oregon and other jurisdictions
- ODA's capacity and authority
- Combination of three focus areas
- Special Local Need uses
- Current product labels

Comments are due to EPA regarding changes proposed to the Application Exclusion Zone by January 2020.

Public comment

Alexander Korsunsky commented that he is an anthropology PhD candidate writing a dissertation on the formation of environmental ideas, perceptions, and practices among farmers and farmworkers in the Willamette Valley. His conclusions are that chlorpyrifos is dangerous to human health. Much of the concern is related to chronic exposure rather than acute exposure. Concerned that there are too many agricultural representatives on the group compared with farmworker representatives. Concerned that ODA did not include human health data in today's presentations. Other perspectives should be considered on the work group. Not criticizing the intent of the group but the focus has been artificially narrowed based on who is here and who is not. Today's topics reflect a lack of consideration for all perspectives and evidence.

Closing comments

Stephanie Page noted that we have reached the end of the agenda and reminded work group members to reach out to ODA if they have additional ideas on meeting 2 topics that would be helpful.

Lisa Arkin mentioned that some groups respond to public comment and that she thought the public comment about needing more expertise in pediatric epidemiology and toxicology is notable. She reiterated the global attention on chlorpyrifos because of the concerns about effects to children. Rose Kachadoorian responded that it's because we want to be able to do something meaningful and that conversations around all of the health data could go on for a long period of time and already has in both international and national levels. We could end up re-debating a lot of the issues; we are acknowledging there is a potential issue with health and that is why we are focused on reducing the possibility of exposure. While all of the international health research gets hashed out, we are saying that while we don't know the best way to measure it and whether there is an issue, we are going to be conservative and reduce the risk of chlorpyrifos exposure. We have more expertise in that area; we're used to looking at pesticide labels and looking at the ways that risk has been

reduced through labeling. Lisa Arkin noted that it's an issue of perspective and that other perspectives could help make the group's focus more well rounded.

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