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Pesticide Registration Review: Do Comments Make a Difference?

Dr. Alfred Fournier
Arizona Pest Management Center
University of Arizona



COLLEGE OF AGRICULTURE
AND LIFE SCIENCES
COOPERATIVE EXTENSION
Arizona Pest Management Center

Survey

<http://bit.ly/2019CPL>

Before we start, please use your phone or device and visit this web address to complete a short survey. Thank you.



Registration Review

- **EPA reviews registered pesticides every 15 years**
- **EPA considers risks and benefits of use**
- **EPA solicits input from stakeholders and the general public on its decisions**

EPA is the federal agency responsible by statute for registration and continuing review of pesticides. The Food Quality Protection Act (FQPA) of 1996 amended statute (FIFRA) to include registration review. All registered pesticides are reviewed on a 15-year schedule. EPA's goal is to ensure that all registered pesticides continue to meet the statutory standard of no unreasonable adverse effects to human health and the environment. It is important to recognize that EPA's process considers both risks and benefits of pesticide use.

EPA solicits input from stakeholders and the general public on pesticide registration review, but you might not find their requests unless you read the Federal Register.



EPA Risk Assessment

“ensure no unreasonable adverse effects to human health and the environment”

- **Human health:** drinking water, food residue, aggregate, occupational risk
- **Environmental:** mammals, birds, fish, aquatic, pollinators...

EPA Risk Assessments are conducted in accordance with EPA’s mandate to ensure no unreasonable adverse effects to human health and the environment. A large part of the focus of EPA risk assessment is on this human health aspect, protecting applicators and other farm workers, and assessing potential risks to drinking water and residues in food, they also look at risk to mammals, birds, fish and aquatic invertebrates. EPA publishes multiple separate assessments of these different types of risk for each chemistry.



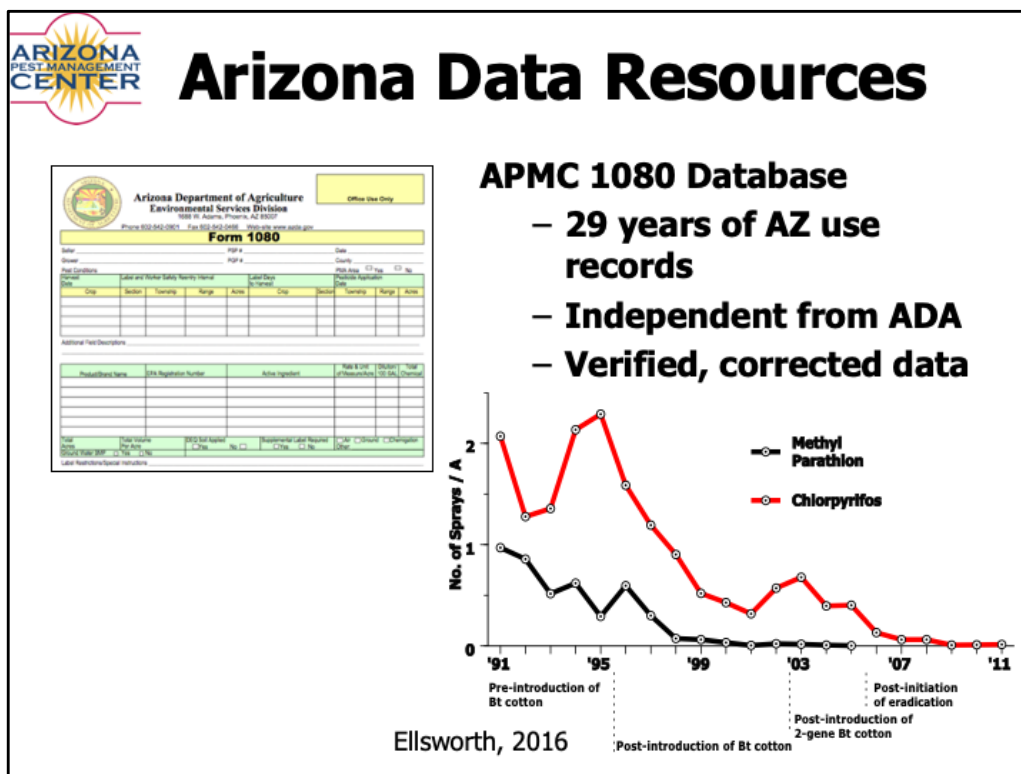
EPA Risk Assessment

Our Goals:

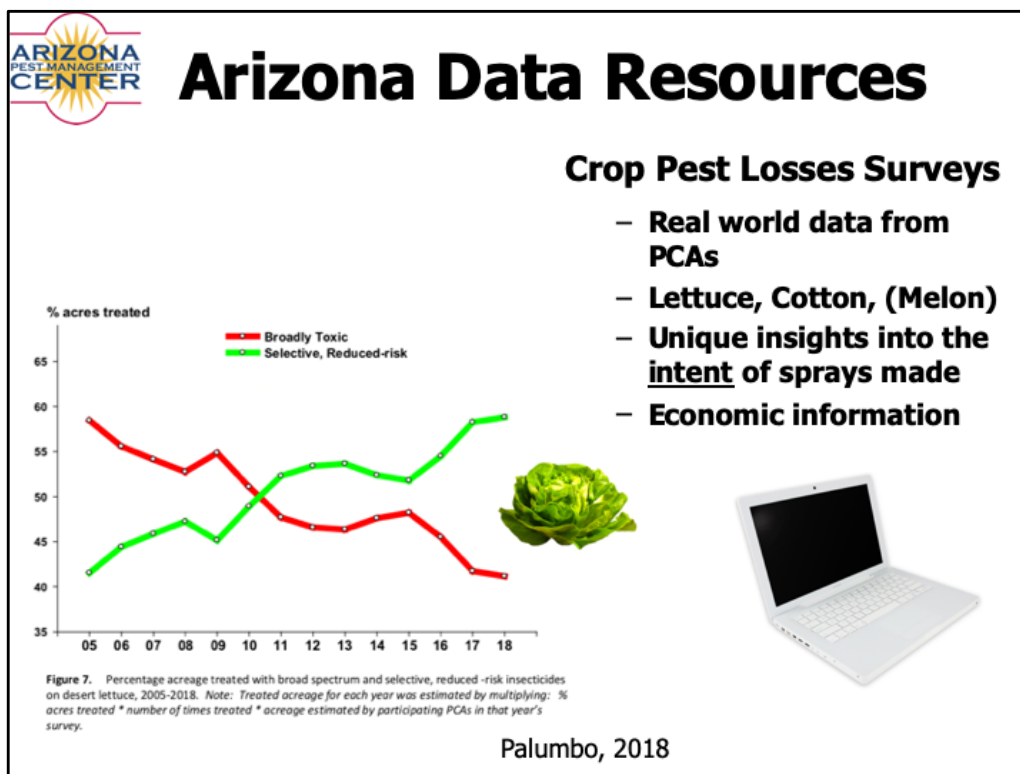
Inform EPA risk models with realistic estimates of exposure

Convey science-based data to an agency charged with protecting public health (first) while considering the benefits that pesticides bring (second)

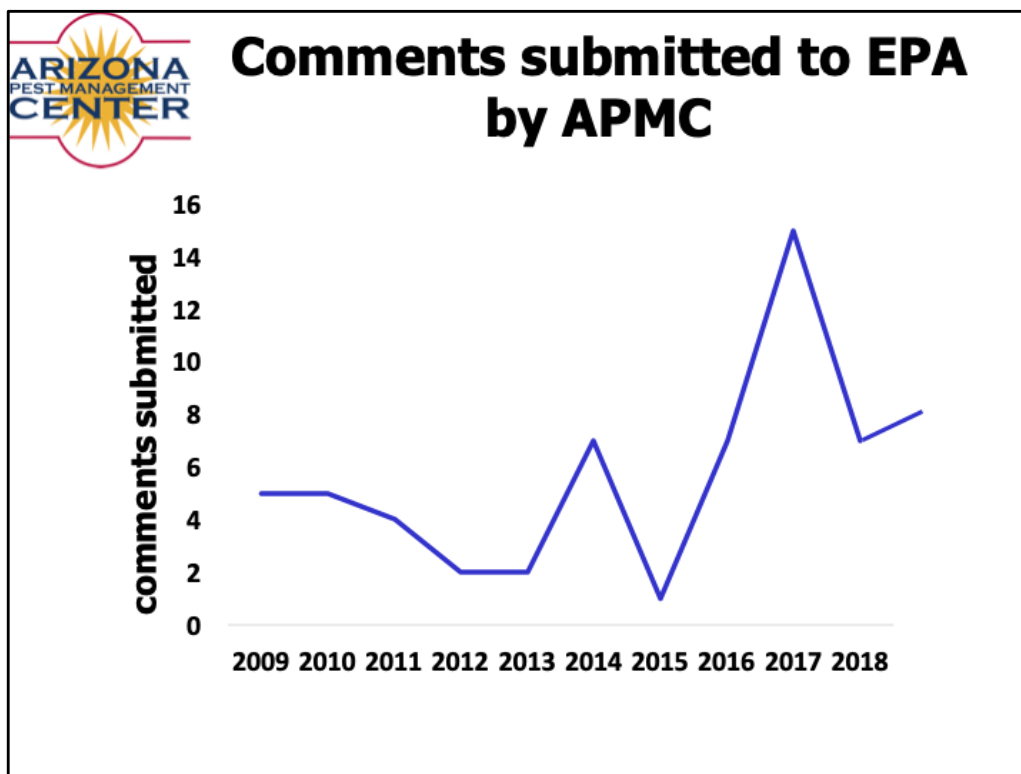
Our Goals: Inform EPA risk models with realistic estimates of exposure. Convey science-based data to an agency charged with protecting public health (first) while respecting the benefits that pesticides bring (second).



Two important data sources inform our communications with EPA on pesticide registration review. The Arizona Pest Management Center Pesticide Use Database, which contains pesticide application records (1080s) submitted by grower communities to the Arizona Department of Agriculture.

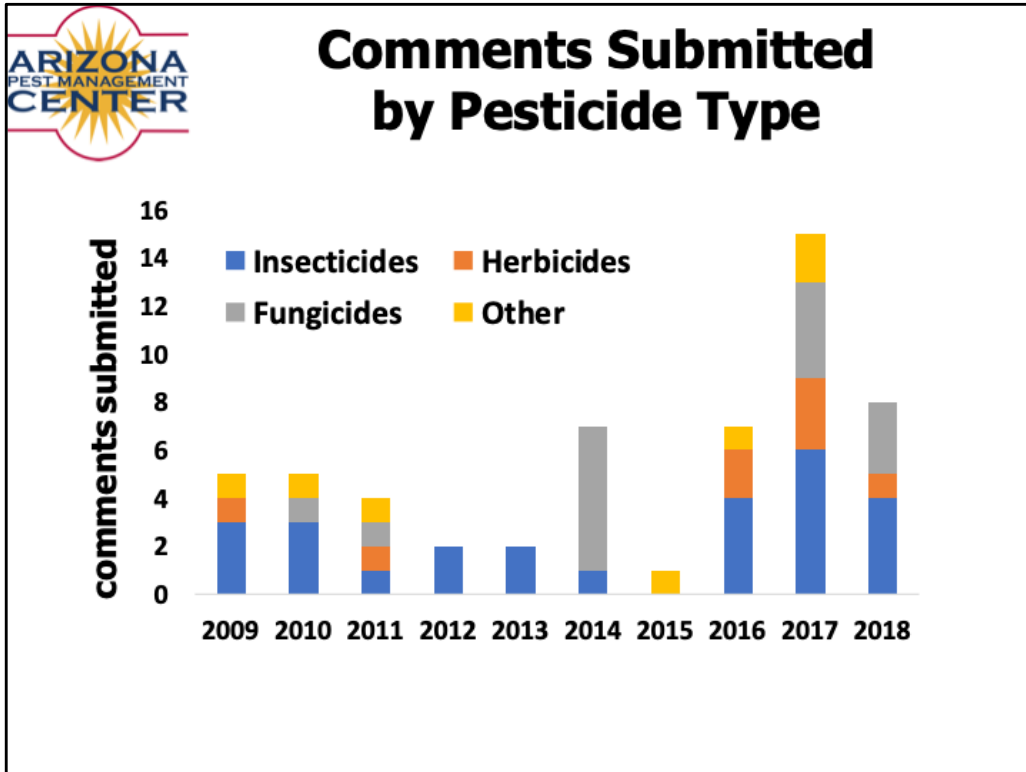


And secondly, data from Crop Pest Losses surveys conducted by Peter Ellsworth for Cotton and John Palumbo for Lettuce.



We have lead or been involved in nearly 100 comments to EPA since 2005. We have made comments directly as the Arizona Pest Management Center on behalf of growers (~80); we have contributed to comments by ADA, National Cotton Council, Arizona Farm Bureau and other organizations.

The pace at which these chemical reviews are happening has increased. It can be a challenge keeping up. The submitted comments shown in this chart does not include many AZ Farm Bureau comments we have reviewed and contributed data and scientific expertise to.



We submit comments on all types of pesticides.



Recent Registration Reviews (9 in 2019)

- **2,4-DB**
- **Linuron (Lorox DF) melons**
- **Metam Sodium (Vapam) melons**
- **Flumioxazin (Chateau)**
- **Etoxazole (Zeal)**
- **Buprofezin (Courier, Applaud)**
- **Methomyl / Thiodicarb**
- **GE for Bt Resistance in cotton**
- **Paraquat**

This is a list of pesticide registrations review we commented on in 2019.



So What?

Influencing Registration Decisions

So What? We are submitting comments. Is it making any difference?

Methods

- **30 APMC comments, 2012 – 2018**
- **Examined EPA documents in the dockets**
- **Extracted qualitative data**
- **Identified level of EPA's engagement and response to our comments**
- **Identified factors frequently cited by EPA**

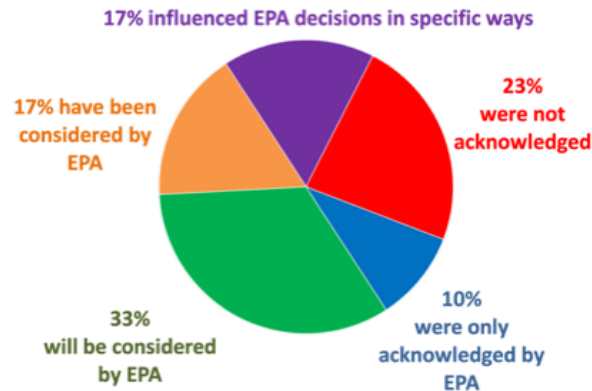
This past summer I was fortunate to work with an intern, Madison Hampton, who help me conduct a major review of APMC comments submitted to EPA registration reviews since 2012.

We conducted the evaluation for 30 comments submitted since 2012 for which EPA had had the opportunity to review and respond to. Prior to 2012, procedures at EPA were less transparent, and there was less of a paper trail to follow.

The slide shows the methods used to collect and analyze the data.

EPA is Listening

Use of APMC Comments in Pesticide Registration Review (2012 – 2018)



This chart shows the results, which clearly indicate, more often than not, the information we provide to EPA is making a difference. EPA indicated that 67% of our comments were considered, or would be considered in registration review, depending on the timeframe of when we commented. In 17% of cases (included in the 67%), EPA identified specific elements of our comments that were used and explained how the information impacted its registration decisions. 23% of our comments were not officially acknowledged in EPA's responses. In some cases, this may be because the comments we provided were not "substantive" to the issue being reviewed. In other cases, our comments may have been grouped with similar comments from other stakeholders and not individually acknowledged.

What's Most Important?

Benefits of Pesticides

Efficacy	70%
Resistance Management	25%
Importance in IPM	20%
Economic Factors	20%

Pesticide Use Patterns

Crops / Use Sites	75%
Application Methods	30%
Mixtures	10%
Use Rates	10%
Application Timing	10%

Other Factors

Target Pests	60%
Crop Distribution	10%
Local Conditions	10%
Risks of Use	10%
Re-entry Intervals	10%
Pollinators	5%

When EPA did consider our comments, this is the kind of information that they cited as being important.



Prometryn (1) (Caparol)



APMC (in RA): cotton, celery, cilantro, fennel, parsley, carrots

EPA (in PID): used APMC comments "showing that prometryn is used at lower rates than allowed on pesticide product labels...modeled additional risk scenarios using the average application rates."

Results: Closed mixing-loading systems for Cotton. Proposed changing REI from 12 to 48 hour for carrots, celery, celeriac, fennel, parsley, dill, leafy petiole vegetables.

I want to provide a specific example of how our comments have impacted registration review, in this case for prometryn (Caparol), a herbicide used in celery and related crops. In response to EPA's Risk Assessments, the APMC provided data on how we use prometryn, including the crops and rates. EPA responded to our comments in the Proposed Interim Decision (PID). Our data showing we used lower rates than those in their risk models, caused them to re-calculate risk assessments using lower rates.

Independently from our comments, the PID also proposed shorter Re-entry Intervals for several crops. Some of these were problematic, according to our PCAs.



Prometryn (2) (Caparol)



APMC (to PID): "crop advisors are concerned about 48-hour REI for...crops which require [earlier] re-entry after planting for irrigation."

EPA Response (in PID): "Based on a re-calculation of the re-entry risk estimates using the lower post-emergence application rate...[we] determined the...48-hour REI is appropriate for carrots, celery, celeriac, and fennel, but is not warranted for...parsley, dill, and leafy petiole vegetables, [where] 12-hour REIs will be retained."

We responded to the PID with additional comments indicating that shorter REIs would be problematic for some of these crops. In this case, EPA responded by retaining 12-hour Re-entries on some of the crops, based on recalculations of risk using lower application rates.

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You are commenting on:

The Environmental Protection Agency (EPA) Notice: [Registration Review Proposed Interim Decisions for Several Pesticides](#)
For related information, [Open Docket Folder](#)

1 Your Information **2 Your Preview** **3 Your Receipt**

Information entered will be viewable on Regulations.gov

Comment (Required)

Anyone Can Comment!

5000 characters remaining

Upload file(s) (Optional)
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☐ I am submitting on behalf of a third party

Continue

Any interested citizen can provide comments to EPA during an open comment period. It is a relatively simple online process, on the Regulations.Gov website. A section of our website provides instructions on how to develop effective comments and how to submit them online.



This Activity is Important!

- **Comments make a difference for Arizona agriculture!**
- **Help us proactively promote your interests while protecting people and the environment**
- **Join my email list to get updates on EPA registration reviews**



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My main message to you today is that we are in a powerful position in Arizona and we have a strong voice to influence EPA registration reviews for two reasons.

- (1) Because of the excellent data we have on actual pesticide use patterns; and
 - (2) because of the outstanding stewardship practices of our agriculture industry.
- We *can* and *have* influenced many decisions that impact many of you in the room. And, by being aware, by being proactive, we have the potential to do even better. Together, we can really make a difference for the future of Arizona agriculture.

Jan 12: Pyrethroid Comments

- **Jan 12: Pyrethroid Proposed Interim Decisions**
 - **5 pyrethroids with no reported AZ agricultural uses**
 - cyphenothrin, flumethrin, imiprothrin, momfluorothrin, and tetramethrin
 - ***Pyrethroids and Pyrethrins Ecological Risk Mitigation Proposal for 23 Chemicals***

My final slides show some of the Registration Review comment deadlines that are coming up.

Jan 17: Risk Assessments

- **Boscalid (Endura, fungicide)**
veggies
- **Flonicamid (Carbine) cotton**
- **Fenpyroximate (Akira, miticide)**
corn
- **Mandipropamid (Revus, fungicide)**
- **Myclobutanil (Rally, fungicide)**
melon
- **Metolachlor (Dual Magnum, herbicide)**

Jan 17: Proposed Interim Decisions

- **Azadirachtin (AZA-Direct) lettuce, vegetables, lemons**
- **Chloropicrin (Telone, Tri-Chlor) melons, cotton**
- **Cyazofamid (Ranman) lettuce, spinach, other vegetables**
- **Reynoutria sachalinensis (Regalia) lettuce, cabbage**
- **Metam Sodium (Vapam) melons**
- **Sethoxydim (Poast)**

If you have concerns about any of these, please get in touch with me. Lets talk



Thank You!



- **Pest Control advisors**
- **Specialty Crop Block Grant program**
- **Madison Hampton**
- **Peter Ellsworth**
- **Wayne Dixon**
- **Alexa Brown**
- **Zach Thompson**

Al Fournier
fournier@cals.Arizona.edu
520-705-9903



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Thank you to my sponsors and colleagues; contact information.