

ESA Subject Matter Expert Liaison to EPA Office of Pesticide Programs
Report of Activities During February-April 2019
Submitted by Allan Felsot

- On February 25, 2019 I attended via phone conference a meeting of the **National Stakeholder Team for Pesticide Safety Education Program (PSEP) Funding**. The National Stakeholder Team as of Jan 2019 listed 124 members from 100 agencies, universities, companies and other organizations. The ESA is listed as a member with the SME (Felsot) recorded as the contact person. These meetings typically involve several presentations by principals at land grant institutions who are directors of their universities' Pesticide Safety Education Programs. The selected presentations review how their programs function from a business perspective (e.g., funding sources, staffing, major activities, etc.). The selected programs have typically been awarded some funding through a granting program organized and managed by the National Stakeholder Team.
 - The team is already planning for the Year 2020 Pesticide Safety Education Month. The February 2019 safety education website is located at URL <https://pesticidestewardship.org/national-pesticide-safety-education-month/>. The website has a plethora of topics covering a broad range of issues for pesticide users of all backgrounds.
 - Although information about the next round of PSEP funding was not mentioned at this meeting, based on the previous RFP in July 2018, the next date will likely be during the summer. The RFP will be open to EPA-recognized land-grant university Pesticide Safety Education Programs. As an example of funding objectives, during the 2018 cycle the following topical areas were supported: "Understanding the Science Behind Safety"; "Resistance Management"; "Treated Seed"; "Focus on Safety".
- **Trip to EPA OPP Headquarters in Crystal City, VA, March 14, 2019.**
 - My new contact person at EPA OPP is Kelly Tindall, who has a doctorate in entomology from LSU. She arranged meetings throughout the day between me and principle staff from the various OPP divisions throughout the day. She also communicated to me particular areas of inquiry some staff were interested in (simply stated, 'ant baits' and 'resistance ratios'). This trip to EPA OPP headquarters was the fifth one since I was appointed to the SME position.
 - ✓ **BEAD (Biological Economic Analysis Division):** Following introductions and background information with about five staff, we had approximately 30 minutes of discussion. The staff were curious about the fate of the Arthropod Resistance Database following the retirement of Mark Whalen. Because of my interactions with IRAC (Insecticide Resistance Action Committee) I was able to inform them that industry is still funding the Michigan State University database with co-directors who are now listed on the website (<https://www.pesticideresistance.org>). The contacts listed are David Mota-Sanchez and John Wise, both faculty in the MSU Dept of Entomology
 - A second topic that came up was a discussion of the new (promulgated Nov 2018) California regulations (i.e, further restrictions) on chlorpyrifos use. The highlights of the new restrictions can be found on the CA DPR (Dept of Pesticide Regulations) website (<https://www.cdpr.ca.gov/docs/pressrls/2018/111518.htm>). Staff were curious about my opinion. I offered my observation that analysis of the USDA PDP (Pesticide Data Program) residue analysis in fresh market and processed commodities showed very low percentages of chlorpyrifos residues are now detected, and indeed, few OP resides are actually found. Thus, these data suggested much less use of chlorpyrifos than a decade ago, prompted by differences in permissible uses after the 2006 reregistration eligibility decisions (which will be

supplanted following decisions based on more recent risk assessments) and substitution with a variety of active ingredients that conform better to the “reduced risk” pesticide initiative. Thus, without knowing specifically how chlorpyrifos might be used in California, I proffered the idea that the new restrictions may not have much impact.

- ✓ **EFED (Environmental Fate & Effects Division):** I met with staff in the EFED division that were working on pollinator protection issues. After meeting staff with a very wide diversity of backgrounds (mostly ecologists, fishery biologists, botanists, avian biologists, and an invertebrate toxicologist), the discussion ended up focusing on recruiting new staff for the future. They sought my opinion as an academic on how best to recruit staff, especially from academic institutions, because they are trying to fill open positions. I discussed the current state of training in land grant universities and how the science disciplines have been balkanized into narrower areas. I talked about the kinds of skills I was seeing among students and their strengths and weaknesses.
- ✓ **BPPD (Biopesticides & Pollution Prevention Division):** Most of the staff I met with in this meeting were focused partly on emerging technologies. The staff were interested in the idea of crops as an ecosystem and sources of information that looked at cropping systems from a more meta level. We talked about risk assessment and how BPPD guidelines for risk assessment of biopesticides were more flexible than EFED, the division that handled synthetics.
- ✓ **HED (Health Effects Division):** I met with a special committee organized by this division which is titled, the “Exposure Assessment Science Advisory Committee” (ExpoSac). The issues we discussed were residential and occupational exposure assessment and the SOPs (standard operating practices) for conducting these studies. This division relies on the Agricultural Re-entry Task Force and Residential Task force databases. The ExpoSac particularly needs “real world” data on how pesticides are actually used during occupational and residential use. The committee desires to move exposure assessment beyond the information contained in the aforementioned task force databases. This type of use information is difficult to find because it is not published but relies on person to person (or association to person) contacts.
 - In particular two issues came up regarding the need for real world exposure information. How are ant baits actually used by PCTs (pest control technicians); need for label language for optimal placement of the baits. Another issue involved the use of pyrethroids for livestock protection...how are these compounds actually used. The committee feels risk assessments will improve and be more realistic if actual use information was more readily available.
 - Most of the rest of my time with ExpoSac was “eavesdropping” as they began to carry out the agenda of the regularly scheduled meeting. However, I was able to ask about whether they thought that future updates of pyrethroid risk assessments for human health protection would use physiologically based pharmacokinetic (PBPK) modeling to determine exposure in combination with epidemiologically derived endpoints as was conducted for the revised HED assessment of chlorpyrifos. I was told that the limitation was development of a PBPK model which they were not going to develop.
- ✓ **PRD (Pesticide Re-evaluation Division):** I met with staff from this division for a discussion about SOPs for placement of baits in or around structures. The division is looking for information on what the industry is doing. They are familiar with the primary research literature but it doesn’t address what the best practices are, such as application rates, or optimal spacing of baits. Prior to my trip I did a literature search to

determine what the “state-of-the-art” was. I pointed out that literature on bait placement seemed to be focused on building perimeters and surprising use of ant baits in cropping situations (such as in vineyards). Residential bait placement information was sparse. However, I informed PRD staff that I reached out to two private companies to determine their practices for baiting structures. I did not have all the information in hand but have committed to summarizing for them my findings. I also made contact at the recent Pacific Branch ESA meeting in San Diego with a Univ of Calif researcher studying control of Argentine ants, so I can follow up with some academic expertise.

- ✓ My final meeting of the day was a discussion with the Acting Director of BEAD. I was able to inform the Acting Director of the role of ESA and my particular role as a liaison and how we desired to have open two-way communication. Also, following my earlier meetings and the discussions, I was able to express my hope that we could be more interactive with the EPA.
- ✓ As an example of such interaction beyond simply sharing information, I had been invited by EPA to give a seminar about modern pesticide application technology. I was told before hand that a number of EPA staff did not have any hands-on experience in agriculture and seminars such as the one I would prepare would be very helpful in “educating” those without ag backgrounds. Serendipitously, over many years I had been either assembling extension presentations or teaching about application technology, taking pictures of actual spray operations, and conducting drift research, so I was able to create a dynamic as well as informative seminar to fulfill the education needs of newer staff. My presentation (in compressed PDF format) accompanies this report.