

**Maryland Pesticide Reporting and Information Workgroup  
MINUTES (Final)**

**Thursday, September 26, 2013**

**House Environmental Matters Committee Room**

**(all presentations can be found at:**

**[http://mda.maryland.gov/about\\_mda/Pages/Pesticide-Information-and-Reporting-Workgroup.aspx](http://mda.maryland.gov/about_mda/Pages/Pesticide-Information-and-Reporting-Workgroup.aspx))**

Members in Attendance: The Honorable Stephen Lafferty, The Honorable Roger Manno, Ruth Berlin, Dr. William Bowerman, Andy Fellows, Sherm Garrison, Carol Holko, Dr. Rick Kutz, Dr. Judy LaKind, Dr. Clifford Mitchell, Dr. Jed Miller, Doug Myers, The Honorable Charles Otto, Brian Schoonmaker, Julie Spagnoli, Dr. Andrea Kidd Taylor, Steve Weber

Staff: Dennis Howard, Joanna Kille

Members absent: The Honorable Joe Bartenfelder, The Honorable J.B. Jennings, Dr. Ronald Ritter (Lynne Hoot attended in his place)

The meeting was brought to order at 1:00pm. Senator Manno asked for approval of the minutes. Minutes were approved. The co-chairs asked workgroup members to talk about any research needs. Ms. Berlin handed out a newspaper article about pregnant women and pesticides as well as a letter from a researcher regarding pesticide data needs.

Dr. Miller said that from MDE's perspective, surface water is an issue. There are established water quality standards for some pesticides. If surface water is monitored and standards are exceeded this triggers an "impaired waterway." Focused monitoring efforts could be one benefit of a database. MDE also looks at fish tissue as a route of exposure. Water can be considered a medium of convergence. MDE currently has fish consumption advisories, most of which are based on methyl mercury and PCBs. Prior evaluation of pesticides in fish tissue did not generally prompt advisories. In terms of the value of a database, while usage data on current-use pesticides may be of relatively limited value at present, such data could be of value in the future, depending on the status of our knowledge about current-use pesticides. We cannot assess endocrine disruptors in fish tissues now but there could be some value in the future, as our knowledge progresses about endocrine disruptors. Most standards set today are for legacy pesticides. There are limited water quality standards for current pesticides.

There is also a big discrepancy with well water, which is unregulated. It is up to the individual homeowner to get it tested. If we had a database we could try to identify areas where wells could be vulnerable to impacts from pesticides. The potential use of database could be looking at the health of families who live on farms. We could focus on outreach. Senator Manno said is well water more susceptible? If you did by zip code in an area would that work? Dr. Miller said it would depend on other factors too. Mr. Fellows said that for the large utilities and any issues pertaining to surface waters, utilities have to notify customers. There is an extreme value to looking at utilities as a source in the watershed. Baystat is also good. It has quantitative elements for cleaning up the Chesapeake Bay.

Dr. Bowerman said that he is a member of the Great Lakes Science Advisory Board. They have monitoring and surveillance systems for all kinds of health issues. What is the objective of a database? Is it human health, everyone from any pesticide? What is the objective of the creation of a database? Bioavailability is the key. If the goal is to protect wildlife, then we need to understand what it is we are looking at. If you are just developing a database with concentrations, where does it go? More than likely goal is to protect the public. Dr. Bowerman said he doesn't want just data. He wants concentrations that make sense for a monitoring program. Then you would archive the samples. When we started seeing fire brominates in the great lakes the government banned it. Human systems are more complex. They have a complex food web. Designing something cost effective is important. Models are ok if you don't have data. The University of MD is the research branch for state government. If the objectives for research are outlined then it is easier to figure out what to look for.

Dr. Kutz said that the American Association for the Advancement of Science's most recent issue contained an series of articles devoted to the future of pesticides. Delegate Lafferty said at the last meeting he asked some of the speakers to submit reprints of studies how they used pesticide use data. Ms Berlin will send that information to Ms. Kille.

#### **Roger Williams – Maryland beekeeper (Handout available on Website)**

Mr. Williams said he was speaking on behalf of Maryland beekeepers, honeybees and other pollinators. He is concerned and farmers should be concerned about the impact on businesses and the food supply. Research is ongoing at the University of Maryland, Penn State, University of Delaware and the Beltsville Laboratory. – UMD, Penn state, UD, Beltsville. All lack specific data to determine what is happening. Research is pointing to four areas of major concern for honeybees. The first three areas of concern are genetics, habitat loss and the diseases and pests of bees. The fourth and most important area of concerns for beekeepers is pesticides. By regulation these are not supposed to be applied when bees are foraging. However, application technology often allows pesticide drift, and that has been shown to contaminate non-crop forage areas or even neighboring crops when bees are foraging on them. Secondly, the introduction of systemic pesticides such as the neonicotinoids, and GMA pesticides such as BT (*Bacillus Thuringiensis*), allows Sub-lethal but potentially cumulative pesticide dosage in pollen and nectar.

Mr. Williams said that laboratory and certification testing is often done using a single chemical to find the dosage that proves lethal to 50% of the population tested over a relatively short time. This is called the "LD-50" dose. But this testing does not show the longer term effect on the lives of bees, or the effect of usage where multiple chemicals are often applied together. This can be 7000 times as effective at killing bees as any one of the individual chemicals. These sub-lethal effects have recently been highlighted by a UMD study showing the deleterious effect of a fungicide on the bees' ability to navigate and to fight off parasites. Fungicides are a class of chemicals that was supposed to have no effect on bees at all when they were certified. Certification is not a final judgment – just what the European Union is questioning in the recent banning of two certified pesticides for two years, while new testing goes forward. But any testing becomes moot if the data is not available for study. This point is exactly why we need the database of chemicals as applied.

Beekeepers are not looking to ban the chemicals used in agriculture or the lawn care and pest control industry. However, what we don't know is, in fact, killing our bees and hurting all of us when it impacts the future of our food supply. The comprehensive information that is legally required is not currently available to guide research. Data on what is being used needs to be both complete and specific, the more specific the location the more useful the data. We need this database.

Lafferty noted that the University of Maryland study which observes bees exposed to or the study of fungicides seems to mean that data is available. The data is generated by the study itself and must have already been available. Mr. Williams said the cost of testing precludes beekeepers from doing anything. He has to look for studies himself. Delegate Lafferty asked what geographic range would have to be available. Mr. Williams said the furthest would be three miles. Reporting at a zip code level wouldn't be enough. Exposure is based on pollen. Having the right data there along the road helps.

Mr. Schoonmaker said his concerns are the bees and parasites. EPA is doing labels dealing with bees also. Ms. Holko showed the workgroup EPA's new Bee Advisory Box label and said beekeepers who suspect an adverse impact of pesticide on their bees should call Dennis Howard. His staff will investigate and appropriate sampling and testing will be done at no cost to the beekeeper. She also said that all colonies have to be registered and inspected every three years.

**Pesticide Usage Data in Other States – Dennis Howard and Carol Holko, MDA (PowerPoint available on Website)**

Mr. Howard did a review of pesticide use data programs in other states. Information is part of his PowerPoint presentation. The District of Columbia has a law but is limited to certain areas of DC. Ms. Berlin said all commercial applicators have to report usage data. Mr. Schoonmaker said it is limited to certain areas of D.C.

**California Pesticide Database , Nan Gordner, PhD, Larry Wilhoit, Pest Management and Licensing Branch, California Department of Pesticide Regulation (DPR) (PowerPoint available on Website)**

There are 2.5 million records that are imputed annually by production agriculture and pest control businesses. There is no information reported on home and garden applications or institutional. For urban use there is just summary information for a particular company.

It is difficult to determine costs. The regulatory program is complex. Each county agricultural commissioner's offices are fully staffed with investigators and biologists. Counties receive \$22 million out of a \$81 million annual budget. This allows counties to conduct a full regulatory program. Training and other services are offered to growers. This agency also oversees pesticide use reporting in partnership with the counties. Some money from DPR is used. There is a budget of \$1.64 million budget for the pesticide use reporting system. DPR contracts with counties to obtain data. Larry oversees report. DPR summarize the data for counties. Trends analysis is the highest use of the information. People dig in and try to understand why uses are going up or down. Counties supplement the cost they receive from the state.

Delegate Lafferty asked if the system had uniform standards and requirements in place. Dr. Gordner said they had a new statewide system (farm management system) that all of the counties are using. Information is entered through the website and the software company transmits the information to the state. Delegate Lafferty asked how much of the data is maintained in a confidential way. Dr. Gordner said that the information is considered public information but that the State only has id numbers. Different counties have different types of policies about releasing public information. Delegate Lafferty asked how many requests does the state get from researchers for information? Dr. Gordner said that they do not have the information. Anyone can go to their website and download the database. The database is used by different researchers, individuals, in California and in other states from researchers. Sen Manno asked if any money goes to individuals to subsidize their costs and whether the cost of the program is prohibitive. Dr. Gordner said she didn't know. She indicated the costs were large but not prohibitive. Overall it is a regulatory program. The State doesn't have numbers on costs to individuals but it is an ongoing business process. Smaller growers have more of an issue. She was not sure about cost and time involved.

Ms. Berlin asked about whether you have a choice of getting something monthly as opposed to annually. Can anyone access the information? Dr. Gordner said that the state has id numbers but the actual data is available. Ms. Berlin asked why the information is collected monthly. Dr. Gordner said so that they can get data throughout the year and it doesn't come in all at once. The information goes through an error checking process. If errors are identified they go back to the counties to investigate. This is done continuously throughout the year and then is released annually. Some researchers may need data early but it is not complete data. If there is a pesticide misuse reported the state can get any real time data. Mr. Schoonmaker asked if homeowner data is collected. It is not. California reports on sales of pesticides in the state based on production agriculture but not non-agriculture.

Ms. Spagnoli asked what the cost was of the database. The Mill assessment fund is integrally tied to the pesticide label database and is comprised of fees collected at the retail level for pesticides. The fees cover the cost of the reporting system. Dr. Kutz indicated that a modern GIS system would make it easy to identify property owners. Dr. Gordner agreed saying that when a grower goes into get a permit they have to identify their fields. Dr Taylor – has your system been effective in protecting people and the environment. Use database to guide their programs. Guide where they conduct different kinds of monitoring. Use to understand incidents in the field. Use database to help conduct research to prioritize.

Mr. Howard mentioned a couple of other states, like Arizona which has a groundwater protection list and has had some Carol Holko spoke briefly about New York State's program. There is a Health Science Research Board with the New York State Department of Health that has a legislative mandate to do a biennial report evaluating the "basis, efficiency and scientific utility of the information derived from pesticide reporting". In Appendix IX (handed out) of the 2011-2012 report, the Department of Environmental Conservation indicates that the program has cost \$42M since its inception in 1996. They describe ongoing problems with the data, reduced resources and they haven't released a report since 2005. Appendix XIII of the report shows publications using (4) or referring to (13) the sales and reporting use database. Appendix XII shows recommendations that the HRSB has made on pesticide reporting and status of agency

actions taken. The NY report, and the PowerPoint of other state programs, will be useful resources for our workgroup.

**Overview of Risk Assessment Requirements -- the EPA Pesticide Registration Process – Tom Harris, Office of Pesticide Programs, Environmental Protection Agency (PowerPoint found on website)**

Mr. Harris gave his PowerPoint presentation and said the key element is the label itself – it determines what kind of data are needed. They are trying to get pollinator labels out in the next two-three months. He talked about the registration process and how EPA comes up with a risk assessment decision. The public process for registrations changed in 2009 because of the concern about transparency. Risk assessment is based on the label itself. They refine the risk assessment based on usage data. EPA tries to understand what is actually going on in the field, i.e. typical use rates, etc with applications. Try to get what is going on in the field – no longer just the label. What are the typical use rates, dietary exposure, screening level usage analysis, such as dietary exposure. Most of this is done at the national level. Most are going on at the national level. Mr. Myers asked about risk assessment and sharing the information with other countries. Mr. Harris said they are trying to move towards work sharing because so many chemicals are used around the world. They do not use residue information. Mr. Berlin mentioned a 1996 GAO study which stated that “conditional approval” is bad. Mr. Harris said that conditional registrations are not done any more. If data is required EPA should have it. Data examine by BEAD, EFED, HED. Mr. Harris talked about an EPA group which is just focused on Inerts. There is currently a huge backlog. This is very detailed information. Mixtures are screened the same way inerts are which often means reformulating products.

**United States Department of Agriculture – Chris Pappas (PowerPoint available on Website)**

USDA usually looks at the national level. This chemical used on these crops and this percentage crop treated and where. Mr. Pappas said that Mr. Harris alluded to tiered risk assessments. USDA monitors data and real world data. EPA is the main user of the data. USDA is required to provide data to EPA. Maryland is one of the states that USDA collects samples from. USDA has does some sampling from wells. Unfortunately, groundwater and drinking water programs have been terminated because they couldn't get assurances that data were being used for risk assessment. The focus is on fruits and vegetables. Only 2 percent of fruits and vegetables they tested exceed the established tolerance. This reinforces that the food supply is safe. USDA is looking more and more at international products.

Dr. Mitchell asked if USDA looks at metals as part of its screening process. Mr. Pappas said no but they have offered. They are currently looking at arsenic in rice and are looking at salmon. Dr. Mitchell asked if they looked at spices. Mr. Pappas said that spices keep coming up in internal deliberations but kids are not using spices. Cilantro has been an issue but more of a Public Relations perception problem.

**USGS, Pesticides in Streams and Groundwater -- Scott Ator**

Data is available through the National Water Quality Assessment Program. The program is designed to assess residues In the 1980s programs were conducted on the Delmarva Peninsula. USGS had cooperative agreements with some state agencies including the Maryland Department

of Agriculture. The analytical methods are sensitive. Most compounds found are at the level of fractions of parts per billion. This is a dissolved fraction. They attach to sediment and biological tissues. They look at a broad range of compounds and do an assessment in agricultural and urban. They also looked at undeveloped (forested) and mixed use. If a pesticide is not soluble, you will not see it in groundwater. However, you can still see legacy pesticides such as dieldrin in the water even though it was banned in 1987. In the 1990s USGS detected dieldrin. The registration was changed and it was phased out. Researchers saw an immediate decrease in evidence of it in streams.

Ms. Berlin asked if USGS still thinks a database is needed and what would be most useful. Mr. Ator said that USGS doesn't have a set policy. If use data were available you could target monitoring more efficiently. These issues are complicated because there are so many different factors, including information on degradates. Dr. LaKind said that it is important to at least consider information on breakdown products as well as parent products, especially when breakdown products are more toxic or the toxicity is not known. Delegate Otto said information is already compiled from multiple studies. For example, pesticides such as atrazine and metolacor would spike in April and May because of planting. However, practices have changed quite a bit since then.

Dr. Kutz said that he had heard from USGS officials that its funding had been flat for the last year. He asked Mr. Ator how water and groundwater monitoring budgets had been impacted. Mr. Ator said that NAWQA funding had been fairly flat. Mr. Fellows asked about federal agency research needs regarding chronic acute exposure for workers. Mr. Howard said he was on the Maryland Occupational, Safety and Health board. If it is pesticide-related it gets passed on to MDA. Worker protection standards are covered by inspections by MDA at farms and grower sites. Dr. Mitchell said there is no systematic approach. Nothing in the state deals with this issue.

Delegate Lafferty said that an interim report is due by the end of the calendar year. Now is the time to begin thinking about changes in the law and possible findings and ways to address them, i.e. how data can be used, etc, and address concerns regarding time sequencing. Products have changed and we need to focus on how to address these issues. We still need to look at a number of items over the next week including home applications and the retail market. Please look at the statute and if you have particular suggestions that have come up please email them to Ms. Kille with cc to Delegate Lafferty and Senator Manno.

Senator Manno identified four requirements for making recommendations:

- Privacy Issues – arose out of concern from the agricultural community.
- Best method for assembling data
- Regulations and guidelines for a consistent and unified database.
- Whether legislation is necessary.

MDA will develop a spreadsheet for workgroup members to enter comments on specific duties.

The meeting adjourned at 4pm.