

TO: SENATE AGRICULTURE COMMITTEE.

FROM: NAT SHAMBAUGH

SUBJECT: S. 272. VERMONT PESTICIDE ADVISORY COUNCIL (VPAC) and its role in working to minimizing pesticide use.

Thank you all for allowing me to take a few minutes of your time to discuss pesticide regulations and The Vermont Pesticide Advisory Council (VPAC). My name is Nat Shambaugh and I am a retired chemist who worked for The Vermont Agency of Agriculture, Food and Markets (VAAFAM) for 30 years, retiring in 2016. As senior pesticide chemist at VAAFAM for much of that time, my responsibilities included tracking trends in pesticide use in order to be prepared for new challenges. This included attending VPAC meetings whenever possible to see what issues were of concern to the Council. I also studied the VAAFAM pesticide use data often, in order to determine what trends were appearing.

I have several issues I would like to discuss with you concerning pesticides and pesticide policy in Vermont.

These are:

- 1) **Vermont Pesticide Regulations need to be updated.**
- 2) **Vermont Pesticide Advisory Council should be reinvigorated and expanded**
- 3) **Need for accurate data on ALL pesticide usage in Vermont**
- 4) **VPAC needs a dedicated staff person to be able to do its job.**

PESTICIDE REGULATIONS

The Preamble to Vermont Regulation for the Control of Pesticides:

THE GOAL OF THESE PESTICIDE REGULATIONS IS TO ENCOURAGE THE USE OF THE MOST ENVIRONMENTALLY RESPONSIBLE APPROACH TO EFFECTIVE PEST MANAGEMENT. THE DEPARTMENT OF AGRICULTURE, FOOD AND MARKETS BELIEVES THAT WITH THE KNOWLEDGE AND USE OF INTEGRATED PEST MANAGEMENT (IPM) SKILLS AND SOIL/WATER CONSERVATION TECHNIQUES CURRENTLY AVAILABLE THIS GOAL WILL BE ACHIEVED.

According to EPA: Integrated Pest Management:

- Focuses on pest prevention.
- Uses pesticides only as needed.

Stated policy of VAAFAM is to utilize IPM in order to use pesticides in an environmentally responsible manner.

BUT: VT Pesticide Regulations have not been updated since 1991, and do not define or even mention Integrated Pest Management.

Vermont Pesticide Regulations need to be updated to include the requirement to use IPM, before resorting to use of pesticides.

VERMONT PESTICIDE ADVISORY COUNCIL:

Vermont Statute Title 6, chapter 087, section 1102:

(Italics added)

- The functions of the (Vermont Pesticide Advisory) Council are:

(1) To review insect, plant disease, weed, nematode, rodent, noxious wildlife, and other pest control programs within the State and to assess the effect of such programs on human health and comfort, natural resources, water, wildlife, and food and fiber production and, where necessary, make recommendations for greater safety and efficiency.

(2) To serve as the advisory group to State agencies having responsibilities for the use of pesticides as well as to other State agencies and departments.

(3) To advise the Executive Branch of State government with respect to legislation concerning the use of various pest control measures.

(4) To suggest programs, policies, and legislation for wise and effective pesticide use that lead to an overall reduction in the use of pesticides in Vermont consistent with sound pest or vegetative management practices.

(5) To recommend studies necessary for the performance of its functions as established under this section.

(6) To recommend targets with respect to the State goal of achieving an overall reduction in the use of pesticides consistent with sound pest or vegetative management practices and to measure the State's progress in reaching those targets and attaining that goal. The targets should be designed to enable evaluation of multiple measures of pesticide usage, use patterns, and associated risks. Targets should take into consideration at a minimum the following:

(A) reducing the amount of acreage where pesticides are used;

(B) reducing the risks associated with the use of pesticides;

(C) increasing the acreage managed by means of integrated pest management techniques;

(D) decreasing, within each level of comparable risk, the quantity of pesticides applied per acre; and

(E) making recommendations regarding the implementation of other management practices that result in decreased pesticide use.

(7) To recommend to the Secretary policies, proposed rules, or legislation for the regulation of the use of a treated article when the Council determines that use of the treated article will have a hazardous or long-term deleterious effect on the environment in Vermont, presents a likely risk to human health, or is dangerous. In developing recommendations under this subdivision, the Council shall review:

(A) alternatives available to a user of a treated article; and

(B) the potential effects on the environment or risks to human health from use of the available alternatives to a treated article.

To summarize; the function of VPAC is to advise State Government on using pesticides safely, and recommend policies to reduce the use of pesticides. **It is currently not being used in this capacity.**

Maximizing safety and minimizing use of pesticides is crucial for human and environmental health. This is Vermont state policy, now it is time to create legislation which ensures that this actually happens.

The Vermont Pesticide Advisory Council was established in 1970 to guide the VAAF and state government as a whole in accomplishing these goals. In its advisory role, its' mandate is to review ALL pesticide programs and activities in Vermont and recommend legislation, policies, research, rules, and specific targets to meet the goal of reducing the use and risk of pesticides.

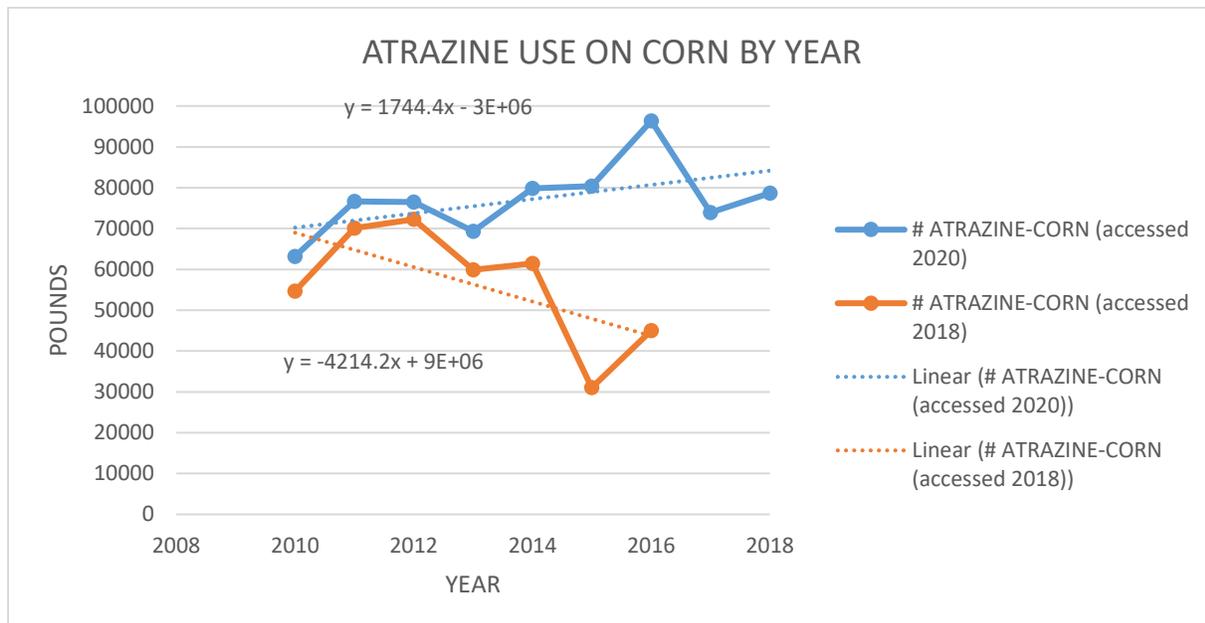
Current VPAC membership is composed of dedicated, knowledgeable professionals and concerned citizens, dominated by representatives of state agencies responsible for some aspect of pesticide use or regulation. Because these members already have full time jobs, they cannot spend large amounts of time on investigating pesticide issues

for VPAC. In practice, they spend the majority of council time and effort on a small list of topics such as: annual Right-of-Way spray permits, mosquito control district activities, and pesticide projects which the individual agencies are involved with. These issues, of course, are very important, but they occupy the majority of meeting time. Therefore, the “big picture” issues such as whether pesticide use is increasing or decreasing, get missed. With an enlargement and restructuring of VPAC the Council needs to be re-invigorated to fulfill its mandate.

PESTICIDE USE DATA

In order for VAAFM and VPAC to make sound policy decisions regarding pesticides, accurate data on what pesticides are used in Vermont is critical.

The VAAFM collects annual information on commercial applicator pesticide use, and has been making this data available to the public online for many years. Unfortunately, this data has not been published in a timely manner, and in recent years it has contained MANY mistakes/errors. As an example, the graph below depicts atrazine use by year from 2010 on, as reported by the VAAFM. In 2018, when I looked at atrazine use on corn (the brown line) I observed a 4000 pound per year decrease in atrazine use. Using the data made available recently, it appears that atrazine use in Vermont is actually INCREASING at upwards of 2000 pounds per year (blue line).



Obviously, VPAC members cannot perform their advisory role with respect to recommending ways to decrease pesticide use if they don't have accurate data to work with. Commercial pesticide applicators are required to submit this information annually, the least the State can do is make use of it.

Not only is VPAC not able to do its job without accurate data, the same is true of VAAFM.

In 2014, VAAFM was asked by the legislature to prepare a risk assessment on neonicotinoid insecticide use in Vermont. The 2015 VAAFM report to the legislature “NEONICOTINOID PESTICIDES; SAFETY AND USE” states:

“The use of imidacloprid has varied over time, but has become more prevalent in the past few years (Figure 2). In 2011, an increase was seen as a result of targeted treatments for gypsy moth. In 2011, the highest reported use year to date for all neonicotinoid pesticides (≈14000 pounds), this class of pesticides was 2.5% of the total commercial use in the state.”

It also estimated neonicotinoid use on treated corn seeds at 8270 pounds in 2011. So seed treatment was about a third of overall commercial use according to that report. Now, the VAAFM reports that commercial use in 2011 was only about 425 pounds rather than 14,000 pounds and therefore seed treatment is about 95% of overall commercial use.

This demonstrates the difficulties inherent with discussing pesticide policy when one doesn't have reliable data.

Even if this data were perfect, it is only a piece of the puzzle of pesticide use in Vermont. The VAAFM does not currently collect information on homeowner pesticide use, or use of pesticide treated seeds. It is not possible to develop a coherent policy on minimizing risks of pesticides without knowing how much pesticides are used in Vermont overall, including by homeowners and on treated seeds.

Below are several recent examples of situations where the Vermont Legislature has been concerned about some aspect of pesticide use, and has asked VAAFM to supply information. These are areas where VPAC, with its mandate to investigate and advise on pesticide issues, could and should have been involved but was not consulted by VAAFM:

- a) Act 159 (2014) Directed VAAFM to assess the safety of Neonicotinoid insecticides. The VAAFM reported on the safety of neonicotinoids without accurate data on commercial pesticide use and no data on homeowner use or treated seed use of neonicotinoids. VPAC was not consulted or involved in producing this report.
- b) Act 99 (2016) Enabled VAAFM to regulate pesticide treated seeds and other articles. This act directs VPAC: *“To recommend to the Secretary policies, proposed rules, or legislation for the regulation of the use of a treated article when the Council determines that use of the treated article will have a hazardous or long-term deleterious effect on the environment in Vermont”*

This act also enables the Secretary of VAAFM to:

“adopt by rule: “best management practices, standards, procedures, and requirements relating to the sale, use, storage, or disposal of treated articles the use of which the Pesticide Advisory Council has determined will have a hazardous or long-term deleterious effect on the environment, presents a likely risk to human health, or is dangerous.”

In practice, the Secretary has not asked VPAC to investigate treated articles, VPAC has not been willing to look into treated articles until requested by the Secretary of VAAFM, and the Secretary of VAAFM cannot develop standards because VPAC has not determined there is a hazard.

Below are several examples where VPAC oversight and review has become more limited in recent years:

- a) One of the major mandated activities of VPAC is the review of Right-of-Way permits annually. VPAC and VAAFM have recently allowed railroads to increase the width of their spray pattern from 20' to 24', **a 20% increase in pesticide spray area.**
- b) A major use of pesticides on golf courses is the use of fungicides to control “snow mold”. Despite the fact that VAAFM monitoring of golf course pesticide runoff from 2004 to 2007 has shown that the fungicide chlorothalonil was exceeding EPA benchmarks routinely, use of this pesticide went from an average of 8824 pounds in 2004-2007, to 13719 pounds in the most recent four years (2014-2018).
- c) Another mandated activity of VPAC has been the annual review of golf course pesticide use permits. VPAC has apparently stopped doing this review completely, and VAAFM review has been streamlined so that golf courses only need to report changes in pesticide use. Golf courses can maintain the status quo of pesticide use indefinitely.

SOLUTIONS:

- 1) Bring Vermont Pesticide regulation into the 21st century by requiring VAAFM to re-write the 1991 pesticide rules within 12 months of enactment of legislation. This must include:
 - a. Require IPM techniques in order to **ONLY** use pesticides when there is a **documented** need.
 - b. Develop a mechanism to collect data on homeowner use of pesticides and amounts of pesticides used on treated seeds.

- c. Require VAAFM to publish accurate annual pesticide use data within 12 months of the end of the calendar year.
- 2) Expand and reinvigorate the Vermont Pesticide Advisory Council. Membership should include, not only individuals knowledgeable in pesticide use, but also individuals knowledgeable in pesticide minimization, and the environmental consequences of pesticide use. **The major duty of VPAC should be to document and interpret pesticide trends, and the meaning and consequences of those changes, with the goal of minimizing use and risks.** Two new members should be added: One individual should be appointed by Northeast Organic Farming Association of Vermont (NOFA-VT) with expertise in organic farming in Vermont. One individual from UVM Rubenstein School with knowledge of environmental contaminants, appointed by the Dean. The individual from the Vermont Ag Experiment station should be knowledgeable in IPM and minimizing pesticide use. The requirement that the UVM Medical School appointee be a physician should be removed so that a public health nurse or other staff member could represent the medical school.
- 3) In order for VAAFM and VPAC to perform their duties, accurate and timely information on pesticide use is absolutely necessary. VAAFM must devote the resources necessary to produce accurate commercial pesticide use data within 12 months of the end of a given year. In addition, the VAAFM should develop, within one year of the enactment of legislation, a mechanism to collect accurate and timely data on homeowner use of pesticides.
 - a. The ACT 154 toxics working group report to the legislature recommended: "Expand pesticide use reporting requirements beyond commercial applications and identify sales to consumers..."
 - a. VPAC, in a letter to the Secretary of VAAFM in 2018 stated: "While the Council is supportive of efforts to in some way capture homeowner usage, how this may be best achieved is not clear."
- 4) Require VAAFM to develop rules within 12 months of enactment of legislation to ensure that ALL users of pesticides in Vermont adhere to Integrated Pest Management (IPM) guidelines. These guideline must be established with the guidance of VPAC. These guidelines must include a requirement eliminating the prophylactic use of pesticides to ensure that pesticides are only used when appropriate and necessary.
- 5) Require that VPAC prepare a biennial report to The Secretary/Governor/Legislature. Make a presentation to the joint Senate/House Agriculture Committees at the beginning of each biennium describing successes in reducing risks to people and the environment, and reducing overall pesticide use. This report must address the targets described in the VPAC enabling legislation as listed above.
- 6) VPAC needs a permanent, dedicated staff member devoted **solely** to support the activities of VPAC and under the direction of the Chair of VPAC. This person, being dedicated to VPAC work, would be responsible for:
 - a. Interpretation of pesticide use, environmental monitoring and other data provided by VAAFM.
 - b. Undertake any literature or other research as required by VPAC, including analyzing trends in pesticide usage and hazards.
 - c. Work with VAAFM to develop IPM rules as described above.
 - d. Ensure that the biennial report to the Secretary/Governor/Legislature is substantive and completed by Dec. 15 each year at the beginning of a biennium.
- 7) In order to ensure ongoing funding for the VPAC staff position and maintenance of the database, the annual pesticide registration fee should be increased. This money must be dedicated solely to use for VPAC staff and VPAC activities.