NOFA Vermont 2/11/2020
Testimony to Senate Agriculture Committee re: S.180, S.192, S.266, S.272
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NOFA-VT's mission is to promote organic practices to build an economically viable, ecologically sound, and socially just Vermont agricultural system that benefits all living things. While we strongly support efforts to phase out the most harmful agricultural chemicals in the near term, our work and our vision is in service to a long-term transition that changes agriculture's impact on human and ecological health from negative to positive.

We believe this transition is not only possible but a necessary antidote to our most pressing ecological and public health challenges.

Organic production continues to grow year after year, both nationally and here in Vermont. In 2019, Vermont Organic Farmers (the USDA accredited certification program of NOFA-VT) certified:

- 150,654 acres
- 682 farms & 93 processors (total of 775 operations)
- $354,456,974 gross sales of organic products

These figures represent certified organic production and sales, but we also acknowledge the many producers who are using organic practices in Vermont who may not be certified.

Long term field trials in the U.S. (not to mention the thousands of smallholder farmers feeding the majority of people throughout the world) have shown the potential for organic practices to not only match but in some cases exceed the yield and profitability of conventional, while consistently leading to improved environmental outcomes. Rodale Institute's nearly 40-year Farming Systems Trial (FST) has shown that organic systems:

- are competitive with conventional yields after a 5-year transition period
- produce yields up to 40% higher in times of drought
- earn 3-6 times greater profits for farmers
- leach no toxic chemicals into waterways
- use 45% less energy
- release 40% fewer carbon emissions[1]

All of this is to say that we view organic agriculture as the viable long-term solution to our human health and ecological challenges. To quote from one of many studies of the deleterious impacts of neonicotinoids on pollinator populations, "As long as field-applied acute toxins remain the basis of agricultural pest control practices, society will repeatedly be forced to weigh the benefits of pesticides against their collateral environmental damage."[2]

S. 180

We strongly support an immediate ban on chlorpyrifos in Vermont, based on evidence of human health impacts and lack of proven need. Chlorpyrifos is a commonly used

organophosphate insecticide (though not currently approved for use in Vermont) whose documented neurotoxic effects are particularly dangerous for children and farmworkers.

In a 2006 paper, a team of researchers at Columbia University found that when children were exposed to chlorpyrifos in the womb, they tended to be smaller, have poorer reflexes, and show higher risks of having ADHD and other developmental disorders years after being exposed. Another team of researchers in Berkeley made similar findings. Since then, peer-reviewed publications have provided strong evidence for the neurodevelopmental toxicity of chlorpyrifos.[3]

Corteva, the largest manufacturer of Chlorpyrifos, is phasing out its production by the end of the year. It has also been banned in Hawaii, California, the European Union, and soon to be New York.

We specifically support a ban on chlorpyrifos by the legislature rather than leaving the decision in the hands of the agency of agriculture. We don't want to see a situation here in Vermont that mirrors the federal scenario, where a change in administration led to the allowance of a pesticide with documented negative health impacts that the previous administration had outlawed.

S.192

We strongly support transitioning away from glyphosate based on evidence of widespread environmental contamination and health impacts. Glyphosate is consistently found in urine, breast milk, and many food products.

We also understand the widespread use of glyphosate currently poses challenges to a swift change in practices.

In order to protect the most vulnerable populations, one approach to consider is a targeted approach that could restrict the use of glyphosate, for example:

- by homeowners (in a similar way neonics were restricted by the legislature last year)
- on school grounds, public parks and playgrounds, and
- on public land in general.

Massachusetts currently has bills moving through its legislature to address two of these specific applications., including:

- H.791, "An Act relative to improving pesticide protections for Massachusetts schoolchildren" and
- S.499, "An Act relative to the use of glyphosate on public lands."

S.266

We strongly support phasing out the use of neonicotinoid treated seeds in Vermont based on substantial body of evidence linking neonicotinoids to pollinator declines, as well as harm to other non-target species such as birds and aquatic life. Contrary to previous belief that neonics

posed limited risk to mammals, increasing evidence is linking neonicotinoids to human health impacts and impacts on wildlife.

We further support phasing out the use of neonicotinoid seed treatments as they are applied prophylactically and without proven need to nearly all conventional corn seed planted in the United States.

Finally, a literature review by the Center for Food Safety in 2014 documented the ineffectiveness of neonicotinoid seed treatments to improve yields in corn and soy crops.

Human health

In a recent letter from a group of environmental health scientists and health professionals to EPA administrator Andrew Wheeler, a literature review has found a link between unintentional human exposures to neonics and elevated risk of developmental or neurological damage. The letter states,

> Effects linked to neonic exposures include malformations of the developing heart and brain, autism spectrum disorder, and a cluster of symptoms including memory loss and finger tremors. While the authors note that the studies to date have limitations, they warn that, "[g]iven the widespread use of neonicotinoids in agriculture and household products and its increasing detection in U.S. food and water, more studies on the human health effects of chronic (non-acute) neonicotinoids exposure are needed."[4]

Lack of proven need & availability of alternatives

One criterion in the Organic Foods Production Act (OFPA) by which materials are reviewed for use in organic production is essentiality. A material may be added to the national list of allowed substances in cases where that material is deemed essential (for example, yeast in bread or bacterial cultures in yogurt). We support this approach generally with respect to Vermont's approval of various agricultural chemicals and in particular with regard to neonic treated seeds.

As mentioned, neonic seed treatments are applied prophylactically on nearly all conventional corn seed across the United States. In conversations I've had with seed dealers, there are alternative, non-neonic chemical seed treatments that are in increasing demand by conventional producers. While this may be a positive development, we are concerned by the overall reliance on this type of chemical treatments and support a transition toward farming practices such as those used in organic production that avoid pest pressure for example through diverse crop rotations and other non-chemical means.

There are also wholly non-GMO, untreated OR organic seed options available. Understanding that one of the concerns about banning neonic seed treatments is their ability, along with widely applied fungicide treatments, to allow producers to plant earlier in the spring when conditions for germination are otherwise challenging. However, there are breeders working on

developing more resilient organic varieties to withstand these pressures. There are also biologic treatments – some currently available and some in development – that are approved for organic use and would provide a better alternative to producers while longer term breeding projects are in process.

Ineffectiveness

I'd like to share a brief quote from Center for Food Safety's 2014 report on the ineffectiveness of neonic seed treatments. The report states,

> Neonic seed treatments – which account for over 90 percent of neonics in agriculture – are largely ineffective and lead to significant pollution. Typically, about 1 to 10 percent (and often no more than 2 percent) of the neonic treatment enters the target plant, leaving the remainder to contaminate soil, water, and nearby plants. …
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> EPA concluded in a 2014 report "that these seed treatments provide little or no overall benefits to soybean production in most situations. Published data indicate that in most cases there is no difference in soybean yield when soybean seed was treated with neonicotinoids versus not receiving any insect control treatment." Similar reports are emerging on the ineffectiveness of corn seed treatments. Yet, neonic seed treatments are on almost all corn seeds, most soybean seeds, and most other grain and oilseed crops in the U.S.[5]

S.272

While we support eliminating the use of individual or classes of pesticides with known negative impacts on human and environmental health, as the above bills propose, we recognize this as a short-term solution likely to perpetuate the chemical treadmill that leaves farmers perpetually reliant on one chemical input or another.

Reforming and strengthening the mandate of the Vermont Pesticide Advisory Council (VPAC) is one way to address the current failures of our regulatory system to reduce pesticide use and exposure in our state.

In reforming VPAC and other regulatory approaches to managing pesticide use, the consideration of essentiality should be asserted as a primary test prior to any pesticides' approval and use.

References

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