

## Vermont not victim of GMO ‘pollution,’ as organic activist claims

Vermont agriculture is under an unfair attack from organic activists. The source of concern is what many farmers here believe is a misleading report, “[Vermont’s GMO Legacy](#): Pesticides, Polluted Water and Climate Destruction,” written by Will Allen.

The author, along with his wife, co-owns an organic farm in East Thetford and has been a long-time critic of what he, and many organic activists, claim is the “destructive” impact of conventional dairy farming, which is the economic heart of Vermont.

His 24-page report was published in June by Regeneration Vermont—a [self-proclaimed “advocacy organization”](#) ... working to halt the catastrophic consequences of Vermont’s adoption of degenerative, toxic and climate-threatening agricultural techniques, particularly within the dominant dairy sector.”

The report itself looks impressive, filled with charts and quotes whose sole purpose, it appears, is to link conventional farmers in Vermont to genetically modified crops. Allen graphed herbicide and nitrogen fertilizer use over 10 years, from 2002-2012, using data he culled from reports from the Vermont Agency of Agriculture. His headline-grabbing conclusion: farmers 3.01 pounds per acre of pesticide use in n 2012 is almost double the amount of herbicides used, 1.54 pounds per acre, 10 years earlier.

GMO fed corn, he maintains, is “by far—the state’s number one crop”—92,000 acres, he claimed in the executive summary. The increase in herbicide use coupled with genetically engineered seeds treated with pesticides “that are not even used to control pests, is irresponsible,” he added. “There is no reason to use GMO corn.”

### Vermont farming facts

But, like in many places throughout this impressive-looking report, Allen gets the facts wrong or twists them to fit his ideological perspective. According to USDA statistics grass and alfalfa forages are planted on more than 330,000 acres of Vermont land. Corn silage yields far more feed per acre of land than grass or alfalfa, and provides large amounts of the always needed energy dense nutrients to support milk production-but Allen statement about the corn acreage in Vermont is not true, according to the most reliable statistics available.

[According to Cary Giguere](#), pesticide program section chief of the Agriculture Resource Management Division in the Vermont Agency of Agriculture, the narrative Allen constructs to characterize the information from the state agency “represents one perspective, which adds to an anti-conventional agriculture sentiment.” Giguere told VTDigger:

He uses a limited selected subset of data to tell a story. He may have some valid points, however we respectfully feel that it does *not* capture and present the entire story. The piece is among the many the agency sees advocating that current agricultural practices are somehow not adequately protective. The dataset could also be cherry picked to support the opposing

argument.

State officials and farmers point out that choosing 2002 as the start date of his 10-year review appears ideologically calculated as well. In 2002, farmers were reeling from historically low milk prices. In years of low income, one of the first costs to be cut by economically savvy farmers is fertilizer use—which were artificially depressed below more normal application rates. Use a different starting year, such as 2006, when milk prices received by farmers were more typical, and his entire thesis falls apart.

### **Long standing attacks on conventional farming**

No surprise that Allen's report would mimic that company line. He is the author of a book that slashingly attacks conventional agriculture, "The War on Bugs," and is a well-known anti-GMO activist. His report, which is being echoed across the Internet by other anti-GMO groups, if believed by credulous consumers would further inflate the profits of his organic farm and the organic sector in Vermont.

Organic farmers already benefit at the expense of consumers by charging a 50-100 percent price premium on many products despite the fact that independent scientists have concluded that organic products offer no clear health or environmental benefits. Allen is of course welcomed to his ideological viewpoint. But mainstream farmers, who are victimized by his caricatures, strongly challenge him for his many misstatements and manipulations of data—claims now echoed by some mainstream media outlets who have picked up on his report.

Vermont farmers have found numerous other statements by Allen that do not align with common practices used by farmers throughout the state. Reg Chaput, who along with his brother Mike owns Chaput Family Farms in North Troy, was the first permitted Large Farm Operation (LFO) in Vermont.

"We feel that the conclusions printed in the report don't accurately reflect how we manage our farm and I don't think they give a complete picture about how and why other Vermont farmers use fertilizers and pesticides."

The Chaputs follow a crop nutrient plan, developed by an independent crop management company, to sensibly manage their use of pesticides, fertilizer and manure in the production of nutritious crops to feed to the 1,700 cows, heifers and calves under their care.

### **Soil health and farming**

To fully understand changes in the use of nitrogen fertilizer and pesticides for forage crop production by Vermont farmers it is necessary to understand the recent advances made by farmers to enhance soil health, protect water quality and provide high quality feed to their cows.

Over the last two decades, farmers have increasingly adopted the use of soil and forage tests to help them fine-tune the use of fertilizers. Nitrogen is side dressed to corn and broadcast on grass to boost yields and increase protein in the feed. Facing high chemicals costs—\$400 per ton of nitrogen fertilizer—farmers apply only the amounts needed in carefully managed windows of weather to optimize plants use of the nutrient.

The Vermont Agency of Agriculture collects information on *total* nitrogen fertilizer sold to Vermont farms—it does not compile fertilizer use by crop type. Allen attempts to correlate nitrogen use to adoption of GMO corn, writing, “Nitrogen fertilizer use did not drop with GMO adoption, as promised in the ads and editorials.”

YEAR	NITROGEN FERTILIZER	PERCENT GMO CORN*
2002	8,924,000	8
2003	14,864,000	16
2004	14,170,000	19
2005	12,362,000	28
2006	16,188,000	37
2007	21,436,000	46
2008	12,048,000	67
2009	16,928,000	77
2010	no Agency data	89
2011	17,072,000	109
2012	16,538,000	90

Adapted from Allen: Vermont’s GMO Addiction. \*No explanation provided by the original author for 109 percent GMO corn planted in Vermont in 2011.

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### **Why fertilizer inputs increased**

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In 2007, dairy farmers were enjoying record high income from the sale of milk coupled with moderate costs for nitrogen fertilizer-use of the input rose steeply to a ten year high. In 2008 and 2009 low milk prices coupled with high fertilizer prices moderated farmers use of nitrogen. There is no agronomic cause and effect linkage between GMO corn and nitrogen fertilizer use despite Allen's best efforts to lead the readers to this conclusion. There is, however, a clear economic correlation between farmers' use of fertilizer and the income they are receiving from milk sales.

Dairy farmer Chaput also questioned Allen's assertion that increased pounds of nitrogen fertilizer used in Vermont are a result of increased adoption of GMO corn. "We've been required to keep detailed crop records since becoming an LFO in 1997 and we can attest to the fact that we apply nitrogen fertilizer to corn ground at about the same rate we did nearly 20 years ago, long before we used GMO corn," he noted.

Chaput said that the use of nitrogen for grass production has increased on his farm in recent years. "We know that applying nitrogen to grass, in accordance with soil test recommendations, increases the nutrient density of the crop and the yield per acre. This allows us to grow the crops we require on less acres, thereby decreasing our environmental footprint," Chaput said. He explained that feeding high quality grass improves cow health and reduces the need to import grain (and the phosphorus it contains) from the mid-west. Chaput also pointed out that using nitrogen fertilizer allows them to expand the width of buffers around streams and the increased grass yields reduces their dependence on corn as a forage crop.

### **Misreporting on pesticides**

Allen's review of pesticide use by Vermont farms contains several misleading graphs displaying the total

pounds of EPA approved herbicides used in accordance with label recommendations on Vermont corn crops between 2002 and 2012. Unlike fertilizers, the agency does track pesticide use by specific crops. Allen recognized that farmers use carefully formulated blends of pesticides to precisely address specific weed species and minimize development of weed varieties resistant to pesticides. But this practice was common long before the adoption of GMO corn and would continue today even if GMO cultivation was banned in Vermont, which is Allen's goal. His conclusion that pesticides are used just for weed control and that accounts for the increased pounds of product applied to Vermont farms demonstrates his limited knowledge of emerging agricultural practices on Vermont dairy farms.

The likely reason for the judiciously targeted increased use of approved pesticides is to support "cover cropping," or the planting of seed mixtures into corn fields to grow from fall to early spring—a practice widely supported by the organic industry because it represents progressive sustainable farming techniques.

Allen's own Cedar Circle Farm website explains the value of cover crops, stating they "are grown simply to enhance soil quality.... Cover crops provide food for the living soil." Conventional dairy farmers also employ the practice to minimize erosion of soil into waterways.

The irony contained in Allen's attack, and after reviewing the data, is that the increased use of herbicides over the decade corresponds closely to increased adoption of cover cropping by Vermont farmers.

"We use cover crops to improve soil health and address water quality," Chaput stated. "We apply approved herbicides in carefully determined amounts to support our use of cover crops." The ingredients listed in Allen's report are common tools used to manage cover crops. Most conventional farmers would use cover cropping even if they didn't grow GMO corn because they feel this practice greatly improves soil health. This year, Chaput's farm is using the practice on 100 percent of his 700-acre corn crop.

Allen's compilation of raw data from many sources into a single document provides a useful starting point for a thoughtful reader to develop assessments on trends in the use of nitrogen fertilizer and pesticides on Vermont farms. The author's effort to link the information to adoption of GMO corn, while failing to recognize concomitant changes in agricultural production practices and farm economics, diminishes the value of the report as a tool from which to draw conclusions.

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