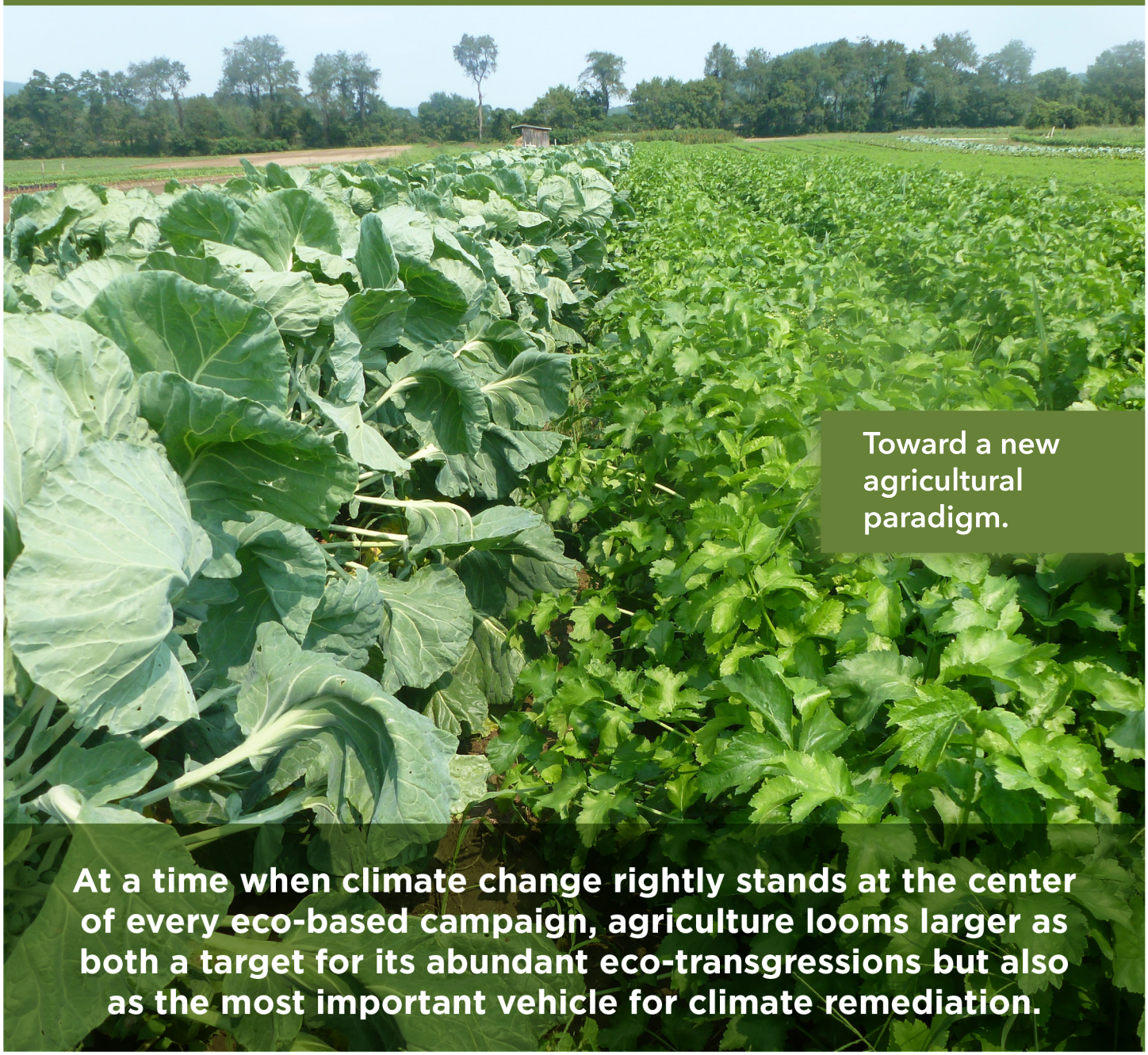
HEALTHY FARMS, LIVABLE PLANET

OUR MISSION | MARCH 2017



Toward a new agricultural paradigm.

At a time when climate change rightly stands at the center of every eco-based campaign, agriculture looms larger as both a target for its abundant eco-transgressions but also as the most important vehicle for climate remediation.

REGENERATION VERMONT

Executive Summary

Regeneration Vermont is a nonprofit educational and advocacy organization that is working to halt the catastrophic consequences of Vermont's adoption of degenerative, toxic and climate-threatening agricultural techniques, particularly within the dominant dairy sector. We are affiliated with Regeneration International, a bold new organization working to educate, unify and mobilize movements around agricultural-based solutions to the world's climate, hunger and environmental crises.

Our goal is to redirect Vermont agriculture toward regenerative methods that protect and enhance the natural environment, produce healthy food products, provide economic justice to farmers and farm workers, promote animal welfare, and implement climate change remediation through an understanding of -- and commitment to – healthy, living soils. The regeneration movement is especially concerned with educating citizens about the high greenhouse gas emissions from the current, industrial style of agriculture, but more importantly, showing how changes in farming, ranching, and forestry are the most significant vehicles for sequestering carbon and reversing climate change.

To accomplish our goals, Regeneration Vermont is coordinating an extensive public education effort followed by - if necessary - creative, grassroots campaigns that take direct aim at corporations profiting from toxic, climate-threatening agriculture. We are telling the tragic story of degenerative agriculture, identify its corporate enablers, and then putting them in the spotlight of marketplace activism. In Vermont, that means the dairy corporations. And that means Ben & Jerry's, Cabot Creamery, and Green Mountain Greek Yogurt.

But it's about more than targeting and putting a stop to toxic, climate-threatening agriculture. The regenerative agriculture that will replace it will not only put a halt to GMOs, toxic pesticides and factory animal production, but also employ practices that enhance soil quality and, as a result, sequester more and more carbon from the atmosphere. We are seeking to hasten the necessary transition that puts agriculture in its rightful place as a solution to many of our ecological woes, rather than the cause.

Regeneration Vermont's founding team has extensive experience in the theory and practice of agriculture, forestry and ecology, living on the cutting-edge of regenerative change for decades. More than running successful organic farms, maple sugaring operations and practicing restorative forestry, we have also built and led grassroots movements, published books, magazines and articles, and designed and implemented educational and activist campaigns that have changed both culture and agriculture. We live and speak regeneration, bringing a reverence and understanding for what's necessary and possible for our planet's survival.

The Problem, Big Picture

The history of Vermont's heavy adoption of industrial – or degenerative – forms of agriculture is also the history of its failure and decline. At every stage, beginning with the full-scale adoption of chemical agriculture in the post-WWII era, the new techniques being promoted by the increasingly corporate and industrial agriculture came with mighty promises: labor would be saved, yields would be increased, bugs and insects would be eliminated, and profits would soar. As if that's not enough, the corporate benefactors and their tethered regulators also added that whatever it is they're selling would also solve the world's hunger problem.

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But the promises were and are almost always false or short lived, while the damage is deep, most notably in the way further industrialization all but mandated the consolidation and elimination of Vermont's farms and rural culture. The legacy of industrial, commodity-based farming has dramatically damaged and changed Vermont, its people and its land. Consider the facts.

- Currently, Vermont's non-organic dairy farmers are getting about $15 per hundredweight, which translates to 11.6 gallons of milk. According to U.S. Department of Agriculture (USDA) data, the cost of production on Vermont dairy farms is more than $22 per hundredweight. So, at current pricing levels, it's costing a farmer around $7 to sell each 11.6 gallons of milk they produce. Thus, they are literally paying to sell their milk.
- Thousands of dairy farmers have been chased off the land. The total number of dairy farms went from 6,000 in 1965 to just 820 in 2017, leaving our once-thriving rural communities reeling from the dramatic decline of jobs, opportunities and dignity. The increased concentration of dairy herds, where many are merely "concrete grazers," rarely if ever stepping on grasslands, have led to severe water quality and animal welfare issues.
- The inequitable concentration of wealth within Vermont agriculture, monopolized by a handful of large dairy-based corporations, is the result of a commodity-based pricing system that economically exploits both the farmers and the increasing number of migrant workers who are filling Vermont's farm labor jobs. It's a downward economic spiral that not only drives continued rural poverty, but also leads to farmers trying to cut costs in other areas like environmental remediation, animal welfare, farm maintenance, and labor.
- There's money being made in the Vermont dairy industry, but not on the farms. Cabot Creamery's corporate owner, Agri-Mark, has been reporting revenues approaching the billion-dollar mark for the last several years, representing a steady growth in profit. "Our Cabot brand continued to grow in sales and profits," reports a recent Agri-Mark press release, promising "to continue our record of innovative marketing and profitability."
- Likewise, Ben & Jerry's is experiencing record growth, nearing the $600 million a year in revenues, according to the most recent annual report published by Unilever, Ben & Jerry's corporate owner.
- There are 26 CAFOs (Concentrated Animal Feeding Operations with 700+ dairy cows) in Vermont and 185 AFOs (Animal Feeding Operations with 200-699 dairy cows). That means that about 90,000 of the 134,000 cows in the state are in animal feeding operations, on concrete. It's exactly the opposite image that Vermont seeks to present when marketing our agriculture as bucolic, small-scale and healthy.

- Per cow milk production on conventional farms has risen by over 300 percent in the last several decades. The result is excessive cow burnout, requiring increased use of pharmaceuticals and sending them to slaughter, on average, by the age of five.
- Reliance on industrial, commodity-based agricultural techniques like GMOs (Vermont corn was 96% GMO in 2013) has meant a steady increase in the use of toxic pesticides, herbicides and fungicides, as well as synthetic nitrogen fertilizers. This all results in denuded soils, contaminated – even dead -- waterways, and food products that may contain carcinogenic and otherwise health-threatening additives.
- As early as 2009, World Bank Group scientists concluded that animal agriculture was responsible for 51% of greenhouse gas (GHG) emissions. Other scientific studies have also concluded that agriculture's GHG emissions are from 30-50%. This makes agriculture the most GHG polluting sector. In spite of these reputable, peer reviewed studies, agriculture emissions are not even part of the current international agreements on limiting emissions.
- Vermont's industrial dairies are literally killing our waterways and watersheds, including our beloved Lake Champlain. Hundreds of millions of dollars have been spent over the last few decades on trying to clean up the mess that is largely the result of large, confinement dairies, including all the phosphorus run-off from the continuous corn that is grown to feed the industrial cow. In spite of those initial clean-up efforts, estimates are that dairy is responsible for 40% to 79% of water pollution statewide. Currently, 13 lakes and 68 streams in the state and large areas of northern Lake Champlain have been deemed "impaired" by the U.S. EPA.
- Agriculture's current industrial mindset continues to see farmland as a dumping ground rather than a treasured resource, evidenced most crudely by the spreading of municipal sewage sludge on Vermont's fields and pastures. According to the Vermont Department of Environmental Conservation, more than one thousand acres of Vermont's farmland are currently approved to receive tens of thousands of tons of toxic sludge, giving rise to a host of health and ecological threats as a result of the likely presence of heavy metals and other toxins in the waste material.
- Vermont dairy's increased reliance on migrant farm workers, mostly from Mexico, is creating serious social and economic justice issues. Recent work to bring these issues to light have uncovered unconscionable living conditions and abuse, not to mention low pay and long hours, all without the workers having the ability to move around freely in the community due to their illegal status or deficient language skills.
- And then there's world hunger. Not only has it not been solved, it has grown worse, because the causes of hunger are born from the corporate greed endemic to degenerative, monopolistic agriculture, not from a lack of food. Vermont matches the elevated levels of rural hunger and poverty that are seen nationwide, where 17% live under the poverty line. It's harder on the children: 21% of Vermont's youth are considered "food insecure." The sad irony of this kind of hunger existing in an agricultural-based state is not lost on the researchers or the victims. Gone are the kitchen gardens, small farms, replaced with the monocropping of GMO feed corn, all with the promise to address hunger.

It is, indeed, bad news and a sad tale. And, for too long, we've deluded ourselves into thinking it's all a fairytale, where supposedly bucolic Vermont dairy can do no wrong and deserves no blame. Those days and delusions must end. If, that is, Vermont is going to be serious about being a leader in agriculture, social and economic justice, and reversing climate change.

A Way Forward

The battleground over industrial agriculture has often been focused on GMOs over the last two decades. In the U.S., the GMO debate has largely revolved around labeling, both nationally and, more successfully, on a state-by-state basis. Vermont was the first state to pass mandatory GMO labeling requirements, a law that was in effect for 28 days in July 2016. The Vermont statute was pre-empted by a federal law passed in late July of the same year, preventing all states from individually having the ability to call for mandatory GMO labeling.

While the GMO labeling initiatives will continue to raise public awareness about the issue and put pressure on the food industry to respond and conform, Regeneration Vermont has pivoted toward new strategies in the battle against GMOs and industrial agriculture in general: activism based in the media and the marketplace, but also in the legislature, that strives to remove GMOs from the food supply and reshape Vermont's agriculture around regenerative strategies.

Agricultural regeneration must be rooted in the local or regional since soils and climate are so varied (even within Vermont). Regeneration Vermont seeks to create an educational/activist approach that can be helpful to other organizations with similar goals.

The regeneration of agriculture cannot happen without the regeneration of activism. The horrors of industrial agriculture are well documented, from pesticides to GMOs, and from contaminated watersheds to monopolization. Unfortunately, the general public is largely unaware of these practices, so the hue and cry about industrial farming has been weak. But now, at a time when climate change rightly stands at the center of every eco-based campaign, agriculture looms larger as both a target for its abundant eco-transgressions but also as the most important vehicle for climate remediation.

In Vermont, dairy farmers are paying the price of the failed CAFO/AFO experiment in fluctuating milk prices and higher pesticide, seed, and fertilizer cost. And while we lament the trap they seem to be in, it is the public that is burdened with even greater costs from this failed dairy farming experiment. The confined dairy strategy in Vermont and other states has produced unsafe dairy products (from toxic pesticides and

fertilizers), encouraged bad farming practices, caused significant damage to the environment, and increased pollution of our public lakes, rivers, streams, and drinking water.

It doesn't have to be this way. About 200 of the 820 Vermont dairy farms have already adopted sophisticated organic rotational grazing systems, which enhance the quality of the forage, and sequester large amounts of carbon that can help reverse climate change. Vermont's 200 organic dairy farms account for more than 20% of Vermont's dairies, the highest percentage in the U.S. These farm leaders have realized the urgency in rejecting the failed confined dairy farming system that depends on toxic fertilizers and pesticides, pollutes our lakes and waterways, and contributes to global warming. Ironically, while there is a glut of CAFO and AFO milk that is being dumped because of oversupply, there is a projected long-term shortage of organic milk. Regenerative dairy models and technical assistance programs for helping farmers make the transition already exist.

Vermont is blessed with abundant water, lush pastures, and an environment where pastured cows can thrive. All of Vermont's dairies could adopt a more sustainable form of dairy management, and the government and private businesses could help farmers make the transition and curb the pollution. We have the technical knowledge to make these management changes, but we urgently need to accelerate the transition to cleaner, safer, and more environmentally friendly dairy farming systems. Recent research has illustrated that organic land management strategies (cover crops, no till, minimum till, and crop rotation) produce higher yields. An Organic Yield Enhancement and Carbon Sequestration program could help farmers make the transition to higher yields and be a good use of taxpayer subsidies.

The regeneration movement is focused on slowing down and ultimately ending greenhouse gas emissions from all GHG generating practices, but especially targeting both agriculture and urban gardening. Its parallel and equally important focus is on promoting strategies designed to bring the excess carbon in the

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atmosphere back to earth and sequestering those gasses in farm, ranch, and forest soils, where they are beneficial instead of harmful.

Regeneration International is in the process of building a movement that is designed to both research and illustrate how damaging the GHG pollution from chemical-based farming has become and illustrate that shovel-ready regenerative farming practices are being used all around the world right now, even in our own communities. In other words, agriculture, in its current industrial model, is the problem. But we have a solution in regenerative, organic agriculture. And the good news is these methods are already at hand. The practices just need to be greatly expanded throughout the world.

Farm, ranch, and forest soils are currently deficient in carbon because of industrial and other inefficient land management practices. As a result, worldwide, soil carbon losses range from 50% to 70%. That makes these deficient farm and forest soils the most available sink for the excess carbon in the atmosphere and the oceans. How? Plant photosynthesis pulls excess carbon gasses out of the atmosphere and the oceans and uses them to feed soil microorganisms and plants.

By making changes in our agricultural and forestry practices we can pull more carbon out of the atmosphere and improve our soil fertility and help to reverse climate change. Most of our industrialized farmland in the US (and Vermont) lies bare for 8 months every year. Planting a cover crop, like our grandparents did, could triple the amount of sequestered carbon every year.

Our Programs

Regeneration Vermont is engaged in a three-tiered program to educate the public, reach out to the dominant dairy-based corporations that control the way Vermont farms, and, if necessary, to implement creative, grassroots campaigns that will take aim at the corporations through marketplace activism. We intend to create an activist model that can be replicated nationwide, all based on a simple theme: Target locally, change internationally. Our goal is to galvanize the extensive consumer opposition to the techniques of degenerative agriculture, energize it through focused activism, and convince food corporations that it's time for a real change in the way food is produced and processed.

Increasing Public Awareness

First and foremost, the concept and name of Regeneration Vermont needs to be introduced to the Vermont public. We have published a flurry of reports, op/eds and essays that distill the essence of our mission and have been published throughout Vermont's web and print media universe. Most notably, we published an extensive 24-page report, "Vermont's GMO Legacy," that documents the rise of pesticide use since GMO crops were widely adopted in Vermont. We've also published a series of op/eds documenting the totality of degenerative dairy's dirty practices and the devastating impact its had on Vermont – the brand, its land and water, and its people.

All of Regeneration Vermont's public education material – web, print, etc. – is geared toward building a movement for regeneration. We encourage people to get involved with our efforts, to sign our pledge of regeneration, and to help us spread the word. Quite simply, we are preparing the activist soil, all while shining a much-needed spotlight on industrial dairy's dirty habits, GMOs and all.

We have been engaging the existing food, farm and environmental coalitions to build upon consumer support established during Vermont's successful GMO labeling campaign. We are advocating for the adoption of programs and policy solutions to help farmers transition to regenerative, organic farming practices. In December 2016, we authored an "open letter" to Vermont's incoming governor, Phil Scott, that brought our campaign to his attention. The letter was co-signed by more than a dozen of the state's environmental, business, and nonprofit leaders.

Corporate Outreach

We have begun dialogues with the dominant national and international food corporations within Vermont that control the region's agriculture. We have asked them to work with us in helping their farmers transition toward regenerative forms of agriculture, including the adoption of these seven principles:

- Eliminate GMO crops.
- Transition to regenerative organic agricultural methods and terminate the use of toxic pesticides/fertilizers.
- Provide fair wages for farmers, including premiums based on regeneration benchmarks and assistance in the transition toward regenerative methods.
- Ensure economic justice for farm workers, fair and livable wages, decent housing and social and cultural dignity.
- Adopt climate remediation techniques, beginning with an emphasis on healthy soils and cover-cropping for carbon sequestration and erosion control.

- Practice humane treatment of farm animals, a phase-out of confinement dairies and a transition back to grassland grazing and grass-based feed for ruminants.
- Clean up and protect our watersheds, streams, rivers, ponds, lakes, and groundwater.

Marketplace Activism

The elephant in the room when it comes to Vermont's industrial dairying is, quite obviously, Ben & Jerry's. The ice cream and social justice mavens, now wholly-owned by Europe's Unilever Corporation, get their primary ingredient – milk – from the St. Albans Co-op, which buys milk from well over half of Vermont's 620 chemically-managed dairy farms. It's not that much of a stretch to say that how Ben & Jerry's farms is how Vermont farms.

Ben & Jerry's and Unilever have given great lip service to social justice. The social positions of Ben & Jerry's have been turned into a powerful marketing tool, advocating for some essential changes and advancements – except when it comes to how their farmers produce its primary ingredient: milk.

Recently, the CEO of Unilever, in a high-profile article in the *New York Times*, announced the corporation's "sustainability" program, a worldwide effort to begin focusing on how Unilever can affect change in the way its many products are produced, everything from mayonnaise to dish soap. Our campaign aims to guide their program towards regenerative practices that will truly make a difference to farmers and the environment. However, if we are rebuffed, we will begin to put consumer pressure on them, highlighting the disconnect between their words and deeds.

Unfortunately, Ben & Jerry's has rarely flexed its muscles with regard to pushing its farmers to adopt less toxic forms of agriculture. They've been surprisingly mum, for example, on pesticide, herbicide and fertilizer use**.** They have allowed their ice cream to be susceptible to contamination from atrazine and four other herbicides that are carcinogenic, cause birth defects, and/or are endocrine disruptors. Contamination from soil and water polluting nitrogen fertilizers used by Ben & Jerry's chemically-intensive milk supplier (St. Albans) has also increased significantly.

For many years, Ben & Jerry's has steadfastly refused to go organic, claiming that it would not allow them to "maximize profits." But that's an old argument, now widely refuted since organic dairying has gained such a strong position in the marketplace. It's provided the most stable economic platform for producers and manufacturers alike for more than a decade. It's simply laughable to think that Ben & Jerry's couldn't find a way to profit maximally – however they define it – from switching to organic dairy as its primary ingredient. Given the corporation's penchant for wrapping itself in great causes, including its very visible support of GMO labeling in Vermont (as long as their ice cream was exempt), most people probably assume they're already organic.

To be fair, Ben & Jerry's hasn't been completely silent when it comes to how its milk is farmed. They spoke out against the synthetic bovine growth hormone (rBGH) in the 1990s when it was introduced. And, working with their milk supplier, St. Albans dairy Co-op, they secured signed affidavits from their member farmers promising not to use rBGH. It was the right action, and it proved both that they could do it and the tremendous impact it could have not only here in Vermont but across the nation. It was the onslaught of rBGH-free products like Ben & Jerry's ice cream that stigmatized and eventually ruined this early biotech adventure.

The same could happen with GMOs, and degenerative agriculture in general. If Ben & Jerry's doesn't want their farmers to be involved with it, the farmers will abide, since Ben & Jerry's purchases about 35% of St. Alban's milk. The ramifications would be huge, and not just in Vermont, where it would regenerate the state's agriculture by immediately beginning the transition away from toxic methods – dozens of farms at a time.

Conclusion

We are focused on ushering in a new, regenerative era in Vermont agriculture, one that empowers the farmer and farmworker, protects and enriches the soil, emphasizes the well-being of farm animals, and encourages and celebrates citizen involvement in the policies and practices of food production. While based in Vermont and focused on Vermont corporations, our programs have national and international ramifications for the regeneration movement.

Regeneration Vermont was created to promote not just a new way to farm but also a new way to engage in the politics of food and farming. The techniques and ideologies reflected in the industrial agricultural model that has monopolized much of Vermont farming for decades – especially within the dominant dairy sector -- are wreaking havoc on our people, our land and our economy. Worse, it's all happening in a political environment that is all but controlled by agribusiness, where the corporate donor class gets what it pays for: vertically-integrated control of the food supply.

Tragically, the Jeffersonian model of a diversified farming base has given way to an industrialism that by its very design was intended to chase farmers off the land. Big Ag makes no secret about its desire to achieve efficiency and maximize its profits by reducing the number of farms and paying as little as possible for farm products, especially commodities like dairy. It's a paradigm that demands quantity over quality and largely removes farmers from the farming equation by dictating the adoption of a never-ending stream of high-tech, high-priced and often toxic inventions. And it all comes at the expense of the kind of biological and place-based wisdom and discoveries that are central to regenerative agriculture.

But, again, it doesn't have to be this way. Amidst Vermont's rural struggles have blossomed a burgeoning regenerative ideal that seeks to put the farmer back in farming and respond to the growing demands from the public for food and farming policies that solve rather than create economic, ecological and health issues. Out of the ashes of agricultural industrialism have come a new hope, a renewed vision, and an understanding and commitment to a regional and farmer-centric path forward.

Vermont, for example, is seeing a dramatic rise in organic dairying, with more than 20% of our dairy farms being organically certified. Currently, Vermont supplies 64% of New England's milk, but only supplies 5% of its non milk food.

Regeneration Vermont advocates for an increase in non-milk food production. We are encouraged by the explosion of interest in small scale fruit, berry, and vegetable production and by the hundreds of new and young farmers seeking Vermont land to set those dreams in motion.

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Regeneration Vermont, and our national and international colleagues are focused on changing the dominant agricultural paradigm, moving it away from being a source of so many threats and ills, and instead, putting it in its rightful place as a solution rather than a problem. We are seeking to put agriculture front and center in the discussion and activism around climate change, putting a spotlight on its near 50% worldwide contribution to total annual GHG emissions, and demonstrating how agricultural-based solutions could reverse this trend.

Regeneration Vermont is engaging in a new, bold and holistic approach to agriculture and climate-based activism. We're connecting the dots, addressing the problems and providing the solutions. It's all about regeneration, now.