

VERMONT DAIRY

Delivers



 VERMONT
AGENCY OF AGRICULTURE, FOOD AND MARKETS


VERMONT
- DAIRY FARMERS -

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Vermont dairy delivers. We are encouraged to present this comprehensive data-driven analysis, illustrating that over the past decade, dairy, like our farmers and processors themselves, has been on the move. We hope you will take a closer look at how dairy is supporting the Vermont economy with nutritious products, employing thousands of people, and keeping our land working and productive.

Americans’ appetite for dairy products has increased. According to USDA’s Economic Research Service, dairy consumption reached record levels in 2023 when the average American consumed 661 pounds of dairy products. That is up more than 40 pounds from the prior decade, and the highest rate of consumption in the United States since the late 1950s.

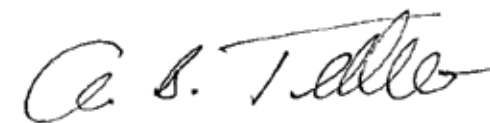
This report shows us that our tastes have changed over the years. Americans are not drinking as much milk, and they are embracing value-added products like cheese, butter, yogurt, cottage cheese, whey powder, and ice cream. This trend is reflected in Vermont’s dairy economy. **A decade ago, Vermont had 95 processors; in 2023 Vermont had 158 dairy processors—gaining 63 processors in ten years.** More are on the way. Vermont is now exporting dairy products to Canada, Europe, Australia, and other people around the world.

You will also see that despite our small size, Vermont continues to be a national leader in dairy production. **We are consistently among the top 20 milk producers in the country, producing two-thirds of the milk in New England,** and supplying dairy to populated markets in New England and New York. Vermont farmers are also milking more goats, with some converting cow dairies to goat operations.

Ten years ago, Vermont’s farmers renewed their commitment to complying with new environmental regulations. As you will see in this report, those investments are working. **Required agricultural practices that were put in place up to ten years ago have earned the Vermont dairy sector the distinction of being the number one catalyst for improving water quality in Vermont.**

It is clear that Vermont farmers are dedicated to environmental quality, first-class production facilities, care for people, animals, the land, and premium products—even while navigating a world pandemic and two major floods in the Green Mountains.

We are grateful for all the contributions of our farmers and all those who support dairy. This report tells the story: the work is rugged but rewarding. Our suppliers, our fertilizer and feed companies, our veterinarians, our truck drivers, our dairy processors, and all those who support a working landscape are vital to Vermont’s farm economy. We hope you enjoy this deep dive into dairy and conclude, like we have, that “Vermont dairy delivers.”



Anson Tebbets
 Secretary





The State of Dairy

Dairy is the backbone of Vermont's agriculture industry. Resilient and dynamic, dairy has long defined our state, and it continues to innovate and evolve.

Over the past decade, dairy farmers have weathered volatile milk prices, flooding, and a global pandemic. But the future looks brighter for dairy farmers, thanks to strengthening milk prices and increased dairy consumption.

Vermont dairy farm sizes at a glance

73%

Of Vermont dairy farms are small (<200 cows)

18%

Of Vermont dairy farms are medium (<700 cows)

9%

Of Vermont dairy farms are large (+700 cows)



Molly Brook Farm, a seventh-generation farm in Cabot, Vermont, was named 2023 Dairy Farm of the Year.

Dairy is an ever-evolving industry.

Farmers are using technology, sustainable practices, and consolidation to tackle challenges and embrace opportunities. Whether it's by using health monitoring collars, manure injection technology or combining dairy operations, farmers are savvy and adaptive.

Over the past decade, the narrative around dairy farming often painted an uncertain picture. But there are many reasons to feel optimistic moving forward.

Long-term trends are favoring the production of processed dairy products, such as cheese, yogurt, and butter.¹ Consumption of dairy products is up, and cheese saw a record year in 2022. Farmers are also working with reduced feed prices while milk supply is lower than before, leading to stronger pricing.

Consumer retail dollar spending and volume sales for dairy is also on the rise, signaling a shift in consumer sentiment. The millennial generation is at the forefront of this growth, driven by fresh perceptions of dairy as “real food.”²

At the time of this writing in 2025, there is an unprecedented investment in dairy processing plants across the Northeast region, with hundreds of millions of dollars of public and private funds supporting this growth. This includes a brand new Fairlife fluid milk bottling facility in New York, which will impact milk production volumes across the region. Processing plants at all scales are investing in production efficiencies, packaging improvements, and new products in ways that will positively impact regional dairy for years to come.



“For generations, Vermont has been defined by dairy...Wherever you are in the state, and whomever you meet, you are not far removed from the dairy sector. Many farm families have been on the same piece of land for over 100 years and hold deep-seated knowledge and a connection to a specific place across time.”

**Vermont Farm to Plate 2.0:
2020–2030**

National Trends in Dairy Farming

Milk production is also gradually increasing in the Northeast, Arizona, New Mexico, and Idaho.³ That's in sharp contrast to some Southeastern states, like Alabama and Louisiana, where milk production is drastically down.⁴

Here in Vermont, the dairy industry is competitive and a major player in New England.

Over 73% of all Vermont dairy farms milk fewer than 200 cows.⁵ The small, localized nature of the dairy sector gives it greater capacity to evolve and be nimble, producing two-thirds of the milk in the region.

According to the 2022 Vermont agricultural census, 9.5% of Vermont's 6,537 farms are dairy farms, but their impact on Vermont's agriculture is much greater.⁶

Dairy remains at the heart of the Vermont economy—generating \$5.4 billion annually, accounting for some 58% of all agricultural sales, providing thousands of jobs, and contributing to a vital working landscape.⁷



9.5%

Of all farms in Vermont are dairy farms⁸

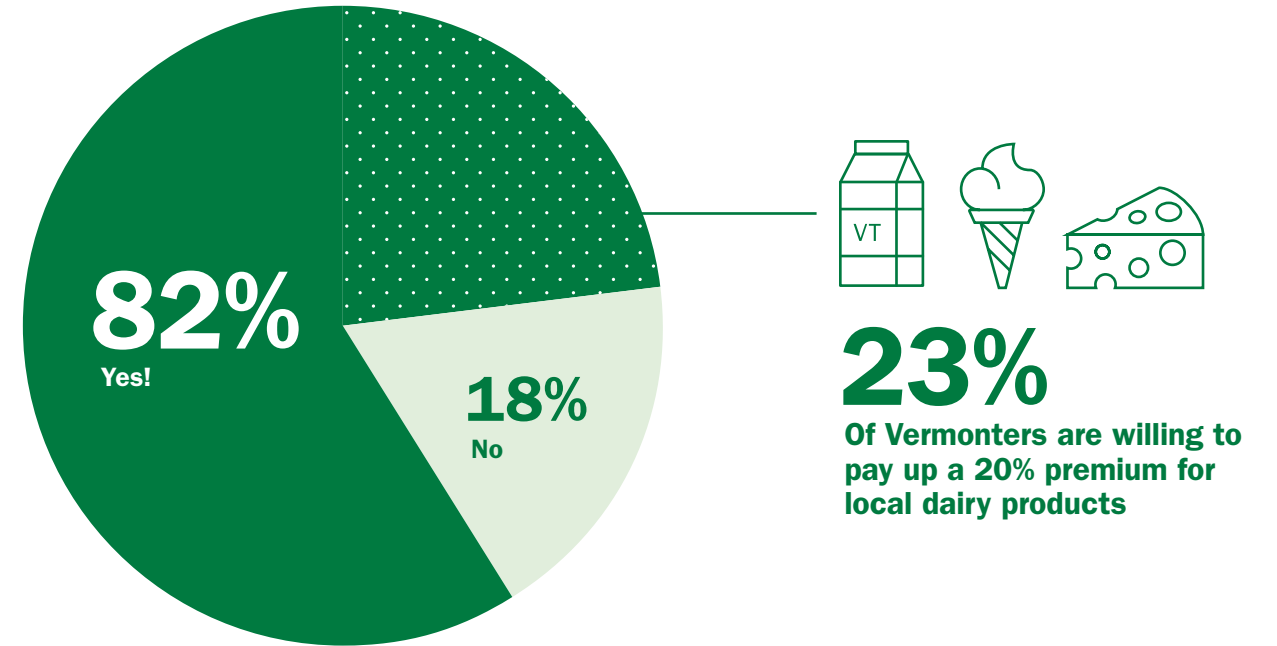
52%

Of all Vermont's farmland is devoted to dairy and crops for dairy feed⁹

The Public Perception of Vermont Dairy



Would you be willing to pay more for local dairy products?



Vermont Public 2022 Poll

Vermonters are deeply connected to dairy farms and view them as vital to the state's heritage and rural identity. Dairy farms evoke pride and nostalgia, symbolizing hard work, self-reliance, and the beauty of Vermont's landscape.

“For me, the most important part of dairy farming is the love, care, commitment, and dedication of our lives to producing food and feeding people.”

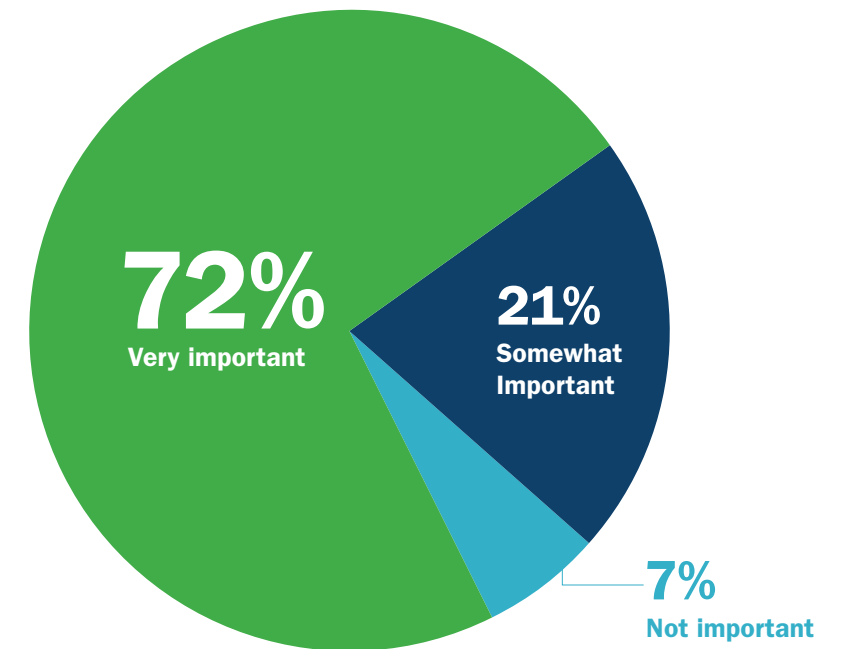
Beth Kennett
Liberty Hill Farm
Rochester

Dairy is integral to the Vermont brand and a key contributor to the state's reputation for quality, locally produced foods.

Residents value dairy's role in maintaining Vermont's rural character and working landscapes, as the industry supports local communities and preserves open farmland. Public support for sustainable and ethical dairy practices reflects broader trends among consumers who prioritize transparency and environmental stewardship.

As a result of this public support, 82% of Vermonters would be willing to pay more for local dairy products “in order to support Vermont's dairy industry,” with 23% willing to pay a 20% or greater premium for those products.¹⁰

How important do you think the dairy industry is to Vermont's sense of itself?

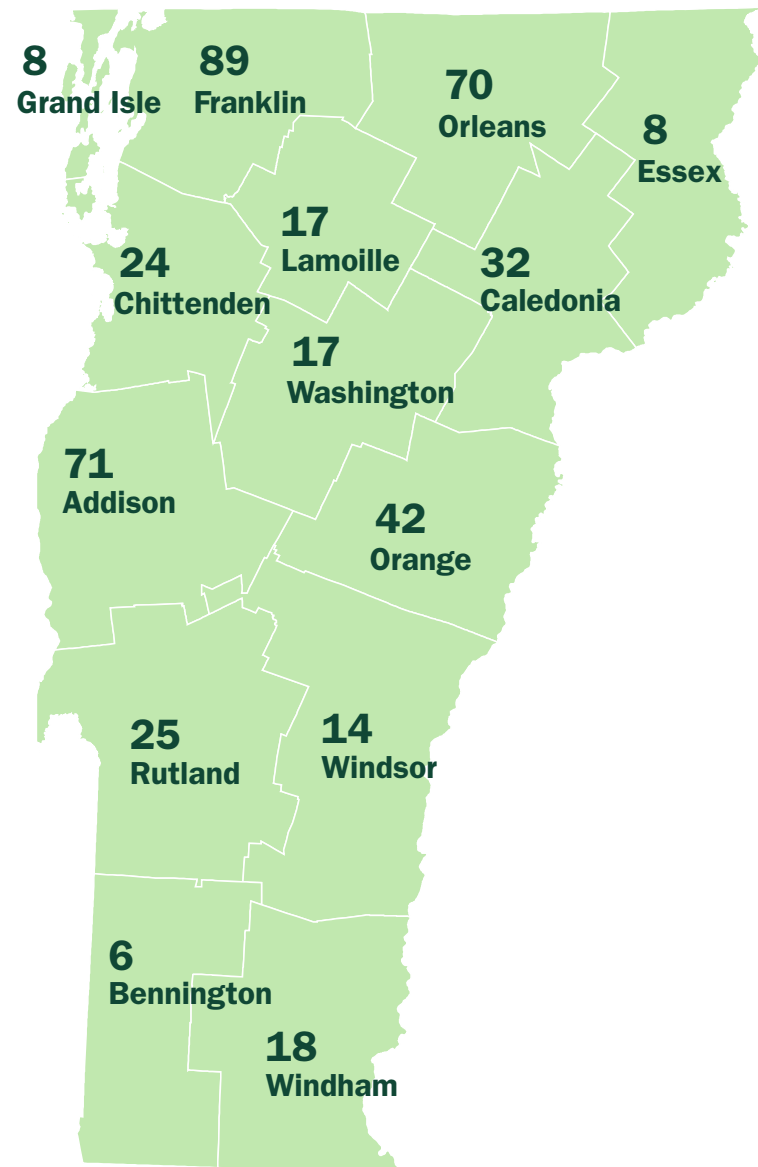


A 2019 independent poll by Vermont Public Radio (VPR) and Vermont PBS (VTPBS) found tremendous public support for dairy in Vermont.¹¹



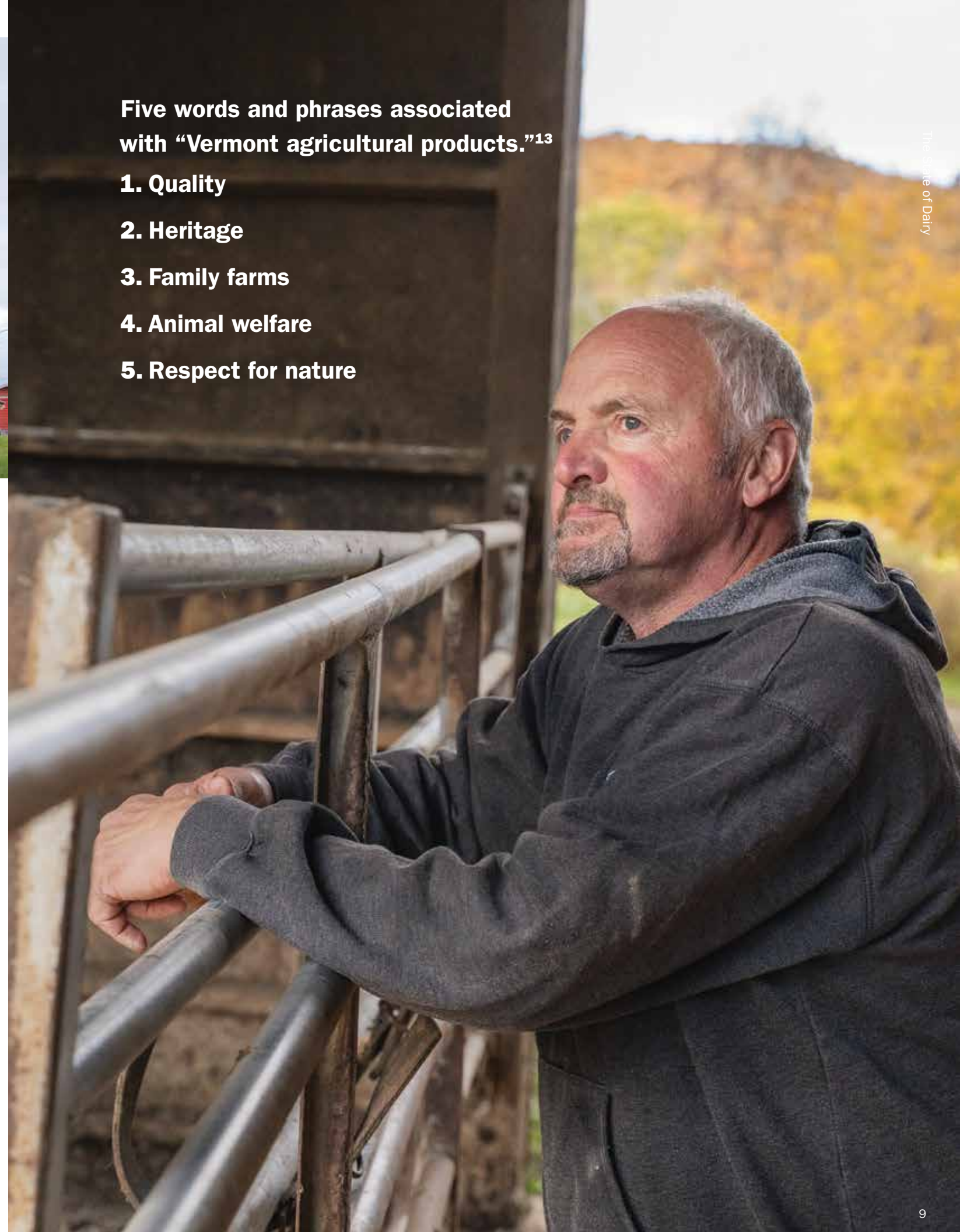
Five words and phrases associated with “Vermont agricultural products.”¹³

- 1. Quality
- 2. Heritage
- 3. Family farms
- 4. Animal welfare
- 5. Respect for nature



Dairy Farms by County in 2024

Dairy farms in Vermont are primarily located in the northern and central regions of the state. Franklin County, often referred to as Vermont’s dairy capital, has the highest concentration of dairy farms. It’s also the largest dairy producing county in New England.¹²

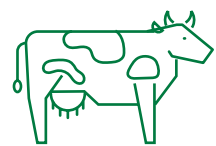


Vermont Dairy by the Numbers 2024



480
Dairy farms in Vermont¹⁵

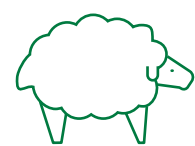
254
Dairy cows per farm in Vermont¹⁸



113,000
Dairy cows in Vermont¹⁴



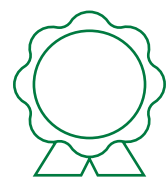
7,349
Dairy goats in Vermont (2022)¹⁹



<500
Dairy sheep in Vermont



58%
Of all farm sales in Vermont were dairy related¹⁷



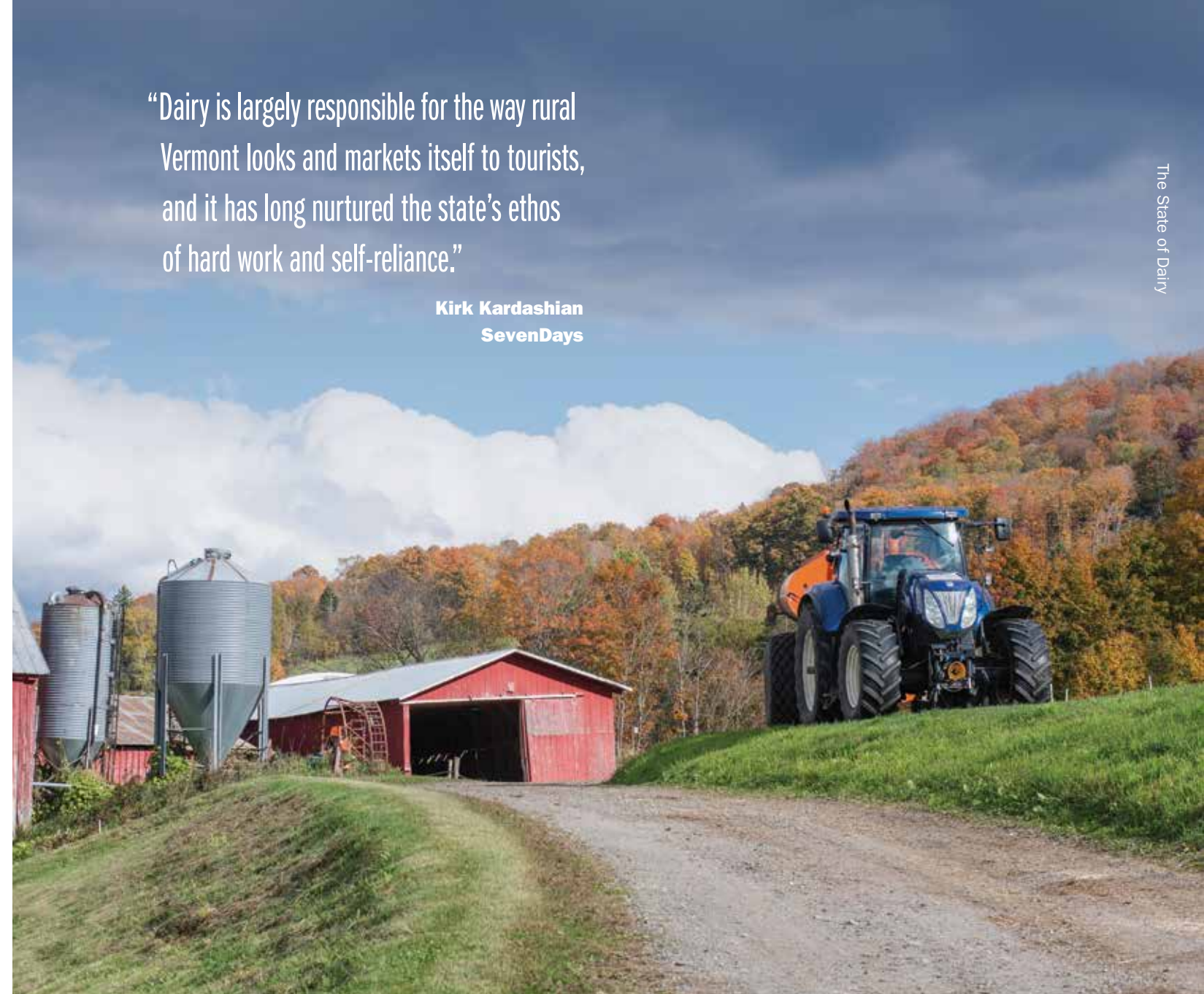
142
Awards for Vermont cheese in 2023¹⁶



2.15B
Pounds of milk produced in Vermont²⁰

“Dairy is largely responsible for the way rural Vermont looks and markets itself to tourists, and it has long nurtured the state’s ethos of hard work and self-reliance.”

Kirk Kardashian
SevenDays



Increase of Vermont dairy cows per farm

+79%
Since 2013
(142 cows per farm)

+46%
Since 2018
(175 cows per farm)

Decrease of Vermont dairy farms

-49%
Since 2013
(939 dairy farms)

-34%
Since 2018
(725 dairy farms)

American farms are getting bigger. The U.S. Department of Agriculture’s latest Census report found that in 2022, the average farm was 463 acres—up from 441 acres in 2017. Meanwhile, the total number of farms nationwide decreased by more than 7% during the same time period, down to 1.9 million.



The Diversification of Vermont Dairy Farms

Despite sharing similarities, every dairy farm is different. Vermont dairy farms offer diversity in production practices, herd size, and acreage.

While cows dominate our dairy landscape, Vermont also has 33 dairy goat farms and three dairy sheep farms producing milk, cheese, and other products.

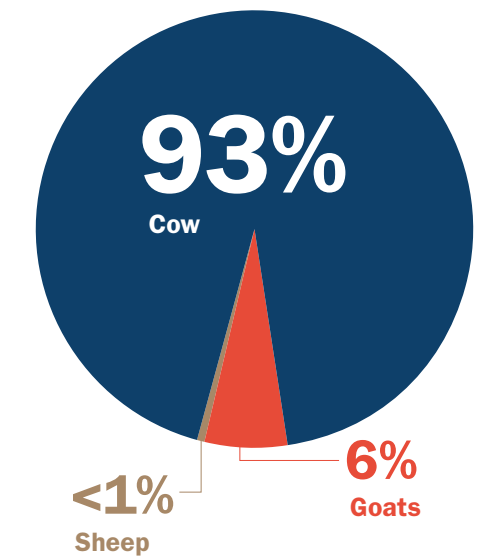
In addition, a quarter of our dairy farms in Vermont are certified organic, meaning they adhere to specific guidelines on livestock care, feed, and environmental practices.



51,078

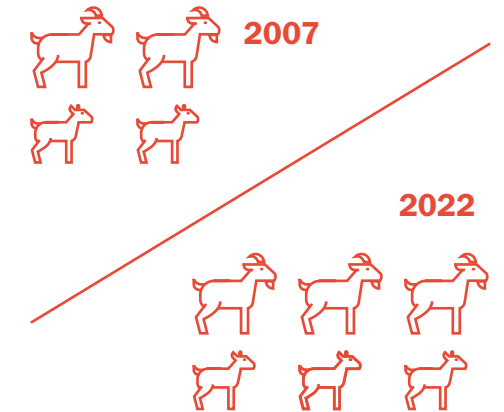
Acres of hay, pasture, and crops managed by organic producers in Vermont

Diversity of livestock in Vermont



Blue Ledge Farm is a family-owned goat dairy and creamery in Leicester, known for its artisanal cheeses, sustainable farming practices, and commitment to local food traditions.

Goat and Sheep Farming



Goat milk producers in Vermont fall into two categories:

1. Producers who primarily or exclusively ship fluid milk.
2. Producers who primarily or exclusively process their milk into value-added products (such as cheese, caramel, and soap) on-site—known as farmstead creameries.

Vermont Creamery is the largest buyer of goat milk in the state. It offers farmers a set base price for their milk and premiums based on the milk’s protein content.

Additionally, goats usually give birth to at least two kids, a rare occurrence among dairy cows. Goats also require fewer resources than cows, specifically less feed and less land.

Sheep farming

Despite the high demand for sheep-milk cheeses, the U.S. sheep dairy industry is less developed than the goat dairy industry.

Vermont has three sheep dairy farms, and there are only 200 sheep dairies nationwide.

Still, there are success stories right here in the Green Mountains. Vermont Shepherd, a family-owned and operated 250-acre sheep farm in Westminster West, is one of the oldest sheep dairies in the country.

64%

Increase in the number of milk goats and kids in Vermont from 2007 to 2022²⁴

“You can set up a goat dairy operation with a fraction of the cash outlay that it takes to set up a cow dairy. I lease one new tractor and own one skid steer. You don’t have to be encumbered by really complicated systems.”

**Miles Hooper
Ayers Brook Goat Dairy
via VT Digger**

Cows are the primary producers of milk in the Northeast, but goats and sheep also play a vital role in the dairy industry.

Nationally, markets for goat and sheep dairy products are expanding, presenting a potential alternative for dairy farmers in Vermont.

Consumers ages 18 to 44 years, particularly those with children under 18 in their households, are more likely to consume sheep and goat dairy and more willing to pay for it.²¹

The Vermont dairy goat industry is the most successful in New England and has experienced significant growth in recent years.

Vermont is home to 33 goat dairy operations, and the number of milk goats in the state nearly quadrupled from 1997 to 2017. The goat dairy industry in Vermont encompasses various scales and products.²²



25%

Of consumers in North America purchase goat milk products weekly²³

Benefits of Goat Dairy:

- **Goat milk fetches a higher market price but maintenance costs for goats are lower.**
- **Dairy goats may generate financial return quicker than cows. Goats are ready to milk at 12–15 months, whereas cows aren’t ready until 23–24 months.**
- **Their small size can make goats easier and safer as livestock.**

Organic Dairy Farms

In Vermont, 25% of our dairy farms are certified organic, compared to the national average of 11%.²⁵

In 1992, Vermont didn't have a single certified organic dairy farm. By 2007, there were 204. As of 2024, there are 123.²⁶

In the early 2000s, organic dairy offered an alternative to low milk prices in the conventional market. Organic companies paid higher milk prices and provided stable contracts.



1 out of 4

Dairy farms is organic in Vermont



1 out of 9

Dairy farms is organic nationally

\$51M

Annual gross from organic dairies²⁸

140M

Pounds of organic milk production in 2022²⁹



Consumer Perceptions about Organic Milk

Consumers are increasingly aware of how their food choices impact the environment and are making decisions based on information regarding animal welfare, eco-friendliness, and local sourcing.

Consumers also consider sustainability in dairy products and are willing to pay more for farms using environmentally friendly practices.

A McKinsey survey found that over half of U.S. dairy consumers might consider purchasing more dairy products from a company that has made environmental sustainability part of its mission.

Consumers were willing to pay more for organic milk in 2024²⁷



+35.4%

 Organic cow milk

+31.6%

 Organic goat milk

+27.8%

 Organic sheep milk



The Economic Impact of Vermont Dairy

The dairy industry is a cornerstone of Vermont's economy, contributing significantly to employment and producing high-quality dairy products, delivering an economic impact of over \$5 billion³⁰.

Dairy farms, mostly small and family-owned, generate a substantial portion of the state's agricultural revenue, with dairy being Vermont's most valuable agricultural product.

What do dairy products and processing bring to the state of Vermont?³¹



\$980.4M

From dairy production

\$3.634B

From milk, yogurt, butter, and cheese manufacturing

\$787.6M

In animal feed manufacturing



lu·lu Ice Cream, located in Vergennes, Vermont, crafts 100% from scratch ice cream and goat milk gelato, emphasizing local ingredients and unique flavors.



There are over 480 dairy farms in Vermont milking cows, sheep, and/or goats, and over 156 processors turning that milk into a variety of dairy products.³²

Vermont had 95 processors in 2014. Those numbers continue to rise. In 2023 Vermont had 158 dairy processors—gaining 63 processors in ten years.

Vermont's dairy farmers have invested in sustainable practices and expanded into high-value markets, like butter and cheese, to support growth and contribute to Vermont's economy.

More than 60% of all milk produced in New England comes from Vermont.³³ Each Vermont dairy cow provides \$8,676 in economic activity to the state annually.³⁴

Agriculture in Vermont depends on exports. Forty-four percent of Vermont's overseas agricultural exports are dairy products, and in 2022 the state shipped \$113 million in dairy abroad.³⁵ Vermont exports dairy products to Canada, Europe, Australia, and other countries around the world.



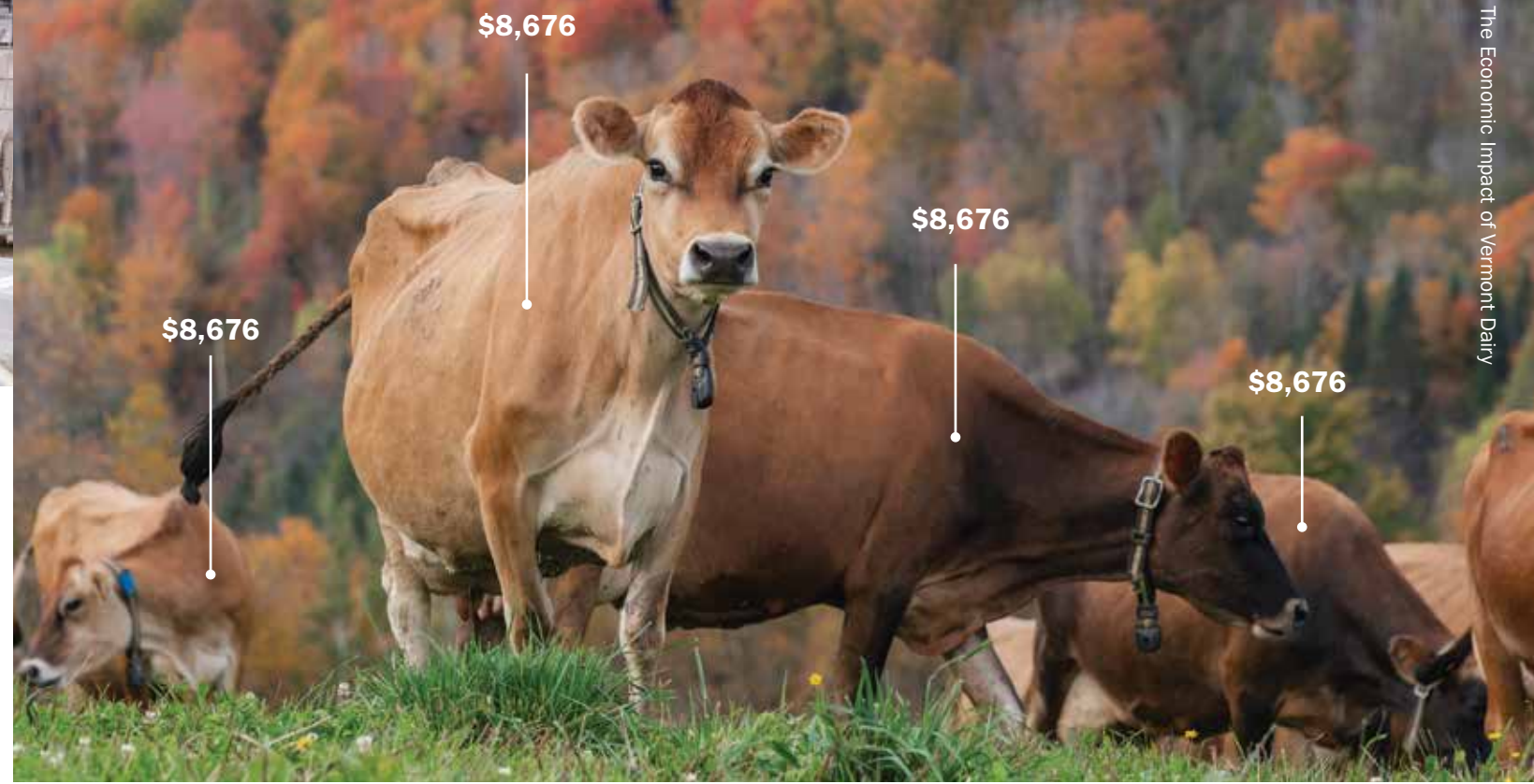
What does dairy bring to the state of Vermont?³⁶

\$5.4B

In economic activity to the state of Vermont each year

\$8,676

Each Vermont dairy cow provides economic activity to the state annually.



Northeast Dairy Business Innovation Center

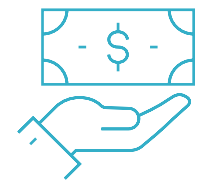
The Northeast Dairy Business Innovation Center (NE-DBIC) was established as part of the 2018 Farm Bill to support dairy businesses in the development, production, marketing, and distribution of dairy products. Based at the Vermont Agency of Agriculture, Food and Markets, the Center supports dairy farmers and processors through grants, access to technical services, education, and events.

Its main priorities are:

- Connection to consumers
- Business management
- Support for rural communities
- Leadership in climate-forward strategies

Over 75% of NE-DBIC funds go directly to dairy businesses through grants and contracts. By the end of 2024, the Center awarded a total of 367 projects across the region. Vermont was awarded 125 projects, representing an investment of \$11,609,411 into the state.

Past and current projects include health and safety training, marketing strategies, grazing transition support, technical assistance, processor expansion, and farm modernization.



\$53M

In grant funding has been earmarked for projects in the Northeast through 2027

Dairy Products and Byproducts



63%

Of all milk produced in New England comes from Vermont



The USDA reported that per capita consumption of dairy products reached 661 pounds per person in 2023, an increase of 7 pounds per person over the previous year, matching the all-time record set in 2021.⁴⁰

At the same time, butter and cheese consumption each surpassed all previous records, reaching all-time highs of 6.5 pounds (butter) and 42.3 pounds (cheese) per person in 2023.

Cheese remains a flagship Vermont dairy product, with brands like Cabot Creamery and Vermont Creamery as well as several award-winning, small-scale cheesemakers leading the way.⁴¹

Cheese is the single largest category of specialty foods in the nation, and its market value continues to grow each year.⁴² Vermont is home to more than 45 cheesemakers, including Jasper Hill Farm, Parish Hill Creamery, and Blue Ledge Farm. These farms use milk from sheep, goats, and cows to make more than 150 varieties of cheese.

Over the last decade, Vermont cheesemakers have consistently earned top honors at national and international competitions. In 2024, cheesemakers won 34 ribbons—including 10 first-place awards—at the American Cheese Society’s annual competition. Vermont cheesemakers were also recognized at the World Cheese Awards, which included a #5 finish by Bayley Hazen Blue of Jasper Hill Farm.

Byproducts of dairy farms also contribute to the economy, including compost and manure. Whey powder, a byproduct of cheesemaking, is often used as an ingredient in other manufactured foods.

Vermont dairy products generate an impressive \$3.634 billion in direct sales. Vermont produced 2.15 billion pounds of milk in 2022, about 250 million gallons.³⁷

Milk is Vermont’s primary dairy product, with dairy farms producing about 63% of all milk in New England.

Every month, the dollar value of milk can fluctuate drastically. Over the past five years, it has swung between \$11.66 and \$25.46 per 100 pounds.³⁸ The price peaked at \$25.70 in September 2014.³⁹

Milk is a government-regulated commodity. With volatile prices, some farmers have opted to add enterprises, making value-added products from their milk, such as cheese, butter, ice cream, and yogurt.

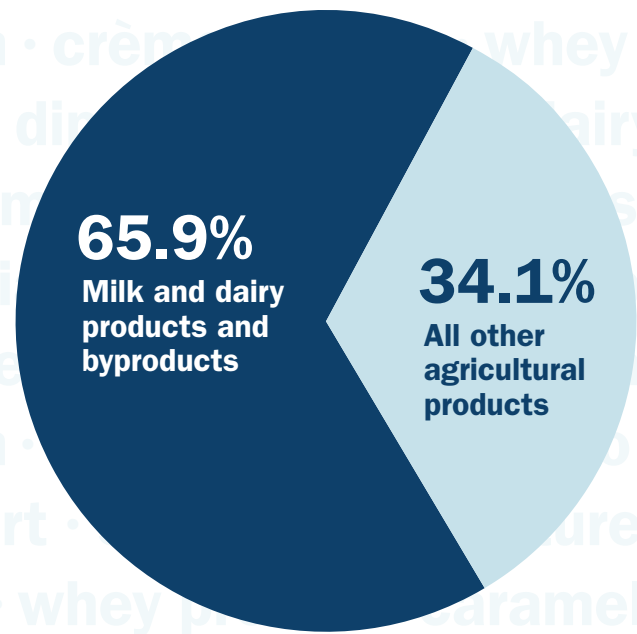


58%

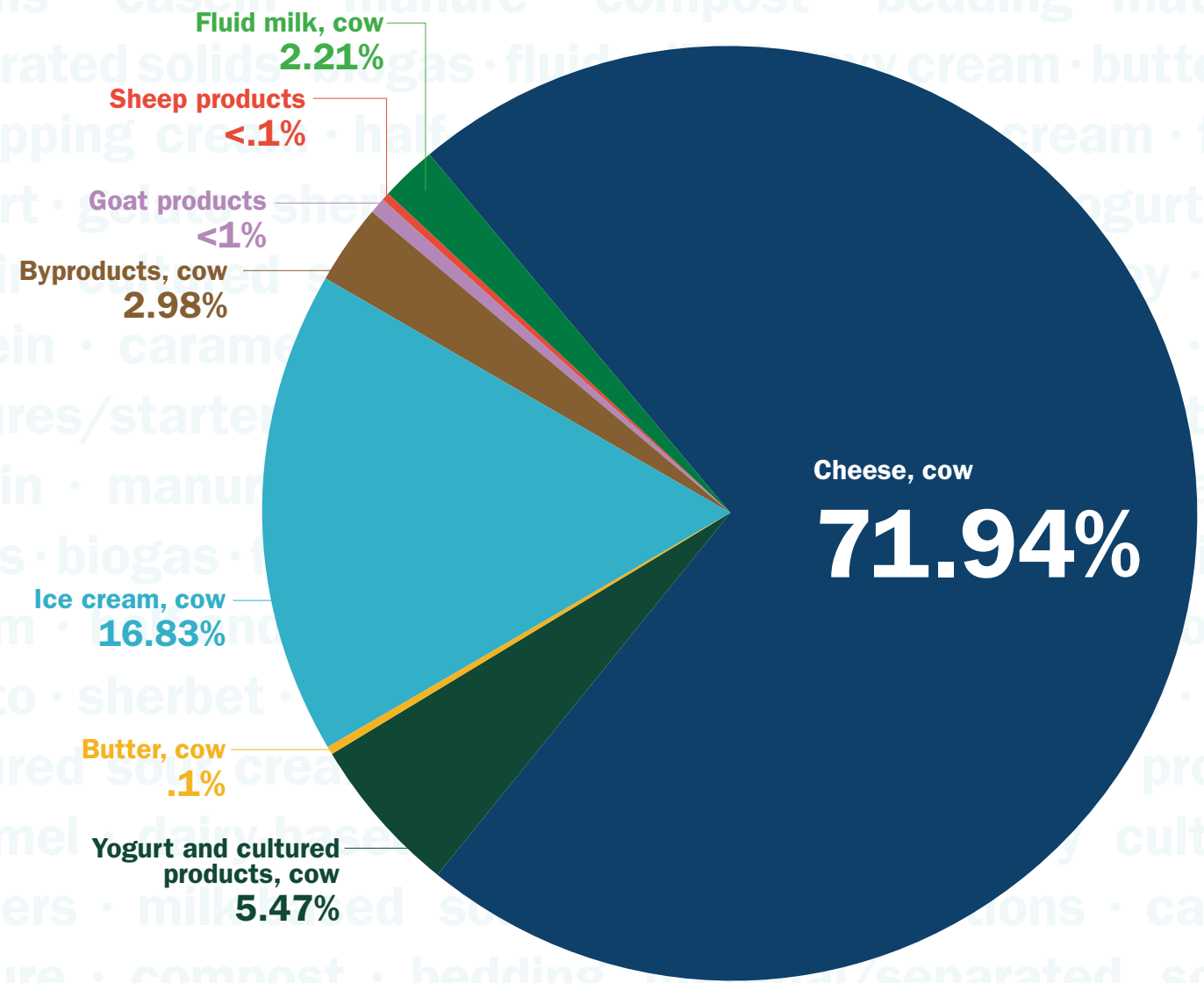
Of consumers said buying agricultural products grown in Vermont is “very important”⁴³



Share of agricultural products sold in Vermont⁴⁴



What products is Vermont milk made into?



\$3.6B

Annual sales of Vermont dairy products & byproducts



Dairy Employment

17,318

Vermont jobs related to Vermont dairy⁴⁵

Dairy is one of Vermont's top private employers, supporting approximately 17,318 jobs and \$812 million in wages and salaries.

Vermont dairy farms employ nearly half of all hired agricultural workers in the state.

Jobs include milking, herd management, and equipment operation, with additional jobs in processing and distribution. As farms consolidate, there has been a move toward larger operations requiring skilled labor and advanced technological knowledge.

Efforts to retain workers include adopting labor-saving technologies and offering housing and competitive wages.



\$812M

In wages and salaries⁴⁶

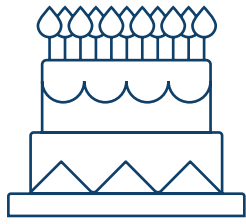
“Our commitment to mentoring, apprenticing and training new cheesemakers has attracted talented, ambitious and committed young people to the Northeast Kingdom. Many have been with us for years as we have built the opportunity for lifelong learning. But beyond the opportunity to grow professionally and build new skills, it is the chance to be part of a community with purpose and vision that keeps great people here.”

Mateo Kehler
Jasper Hill Farm

The Breadth of Dairy Jobs

The Vermont dairy industry provides a large number of jobs well beyond the traditional roles of farmers and farm workers.

- Farmer
- Sales representative
- Retail clerk
- Delivery driver
- Packaging designer
- Forklift operator
- Production operator
- Nutrition consultant
- Dietitian
- Mechanic
- Electrician
- Quality assurance manager
- Accountant
- Sanitation worker
- Lab technician
- Veterinarian
- Agronomist
- Cheese maker
- Pasteurization technician
- Cheesemonger
- Veterinary technician
- Agricultural educator
- Dairy economist



57.7

Average age of a Vermont farmer⁴⁷



Legacy Planning and Succession

Dairy farming, deeply embedded in Vermont's identity and economy, faces challenges as older generations retire.

The average age of a Vermont farmer is 57.7 years, highlighting the growing concern over farm succession in the state. A farm transfer can take months, even years, to plan and complete.

Younger generations are increasingly turning to other industries due to financial pressures,

such as rising land prices and student debt, as well as the demanding nature of farming.

Legacy planning is crucial for ensuring the sustainability of these farms. Efforts are underway to support new and young farmers through business assistance, financial planning, and educational programs to encourage farm succession and the transfer of knowledge to future generations of dairy farmers.



94%

Of farms surveyed hired migrant workers.

Migrant Farmworkers

Vermont has an estimated 750 to 850 year-round migrant farmworkers, primarily on dairy farms, along with about 150 partners and children.

In contrast, about 500 seasonal farmworkers, mostly from Jamaica, travel to Vermont each year to work through the H2A visa program.

Migrant workers fill essential roles, including milking, herd care, and equipment maintenance to help farms function efficiently. Their contributions help sustain dairy production amidst labor shortages and evolving industry demands.

Nationally, migrant labor accounts for 51 percent of all dairy labor, and dairies that employ migrant workers produce 79 percent of the U.S. milk supply. If the U.S. dairy industry

lost its foreign-born workforce, it would nearly double retail milk prices and cost the total U.S. economy more than \$32 billion.

Advocacy organizations promote a variety of measures to help will improve farmworkers' lives and stabilize the agricultural labor force:



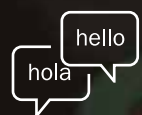
Higher wages



Health initiatives



Better working conditions



Bilingual communication efforts



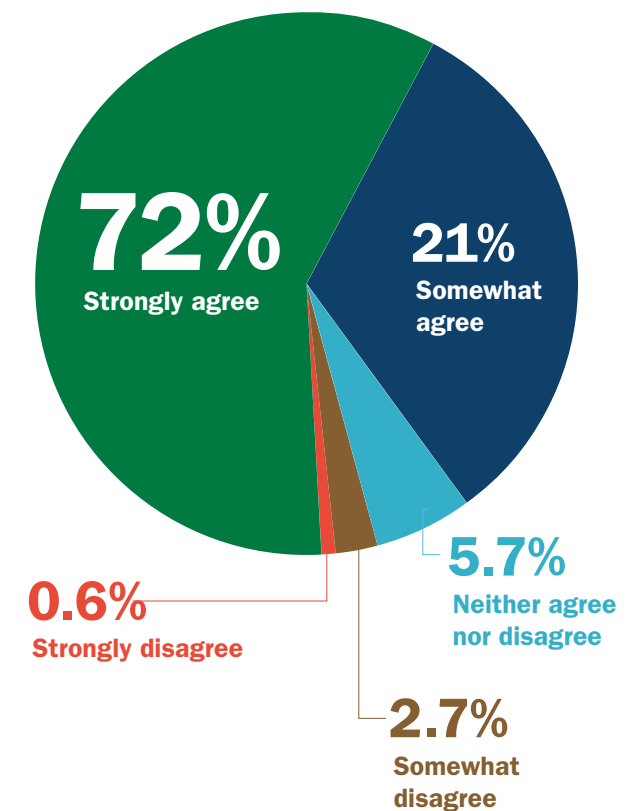
Sustainability & Technology

Vermont farmers are increasingly embracing new technologies to become more efficient stewards of the land.

Methane digesters are turning manure into renewable energy while animal health tracking monitors milk production, health, and feeding patterns for each cow.

Not only does technology help farmers streamline operations, it provides innovative solutions to protect the environment through nutrition management and other sustainable efforts.

Agriculture in Vermont has an overall positive impact on Vermont's environment.

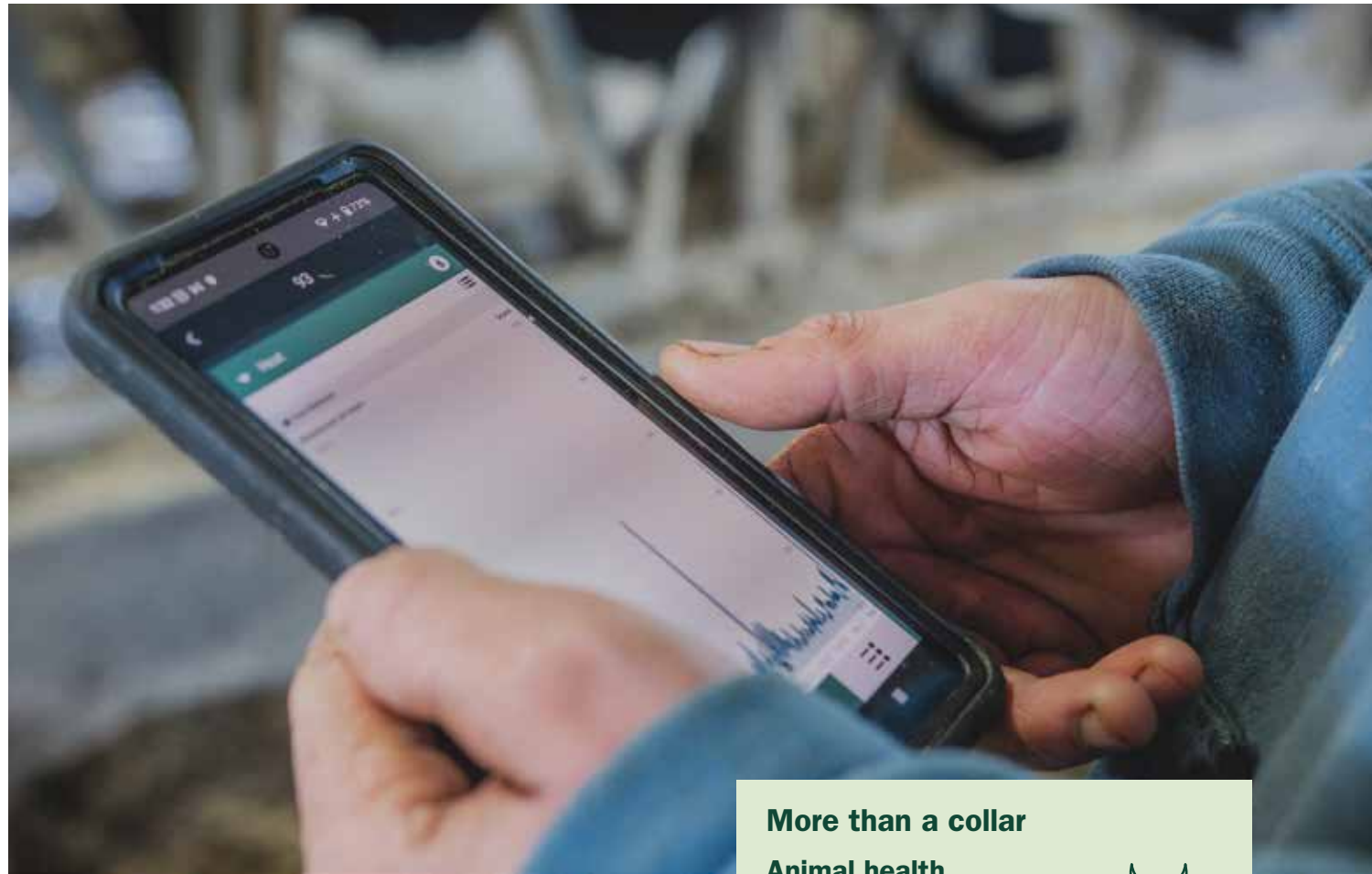


2022 Collected through the Center for Rural Studies annual Vermonter Poll.



Rhonda Goodrich, of Molly Brook Farm in Cabot, checks the herd's condition using cattle tracking technology. Molly Brook Farm, which started in 1835, has produced organic milk since 2018.

Animal Health Tracking Devices



“Our cow monitoring collars provide us with valuable information that we use to monitor cow health, nutrition, heat detection, and the well-being of each cow, including yearlings and heifers. This technology has increased our milk production and improved our pregnancy rate.”

Rhonda Goodrich
Molly Brook Farm

Now more than ever, Vermont dairy farmers are navigating a complex landscape of escalating costs and a rapidly changing climate. These challenges require innovative solutions to ensure long-term sustainability and profitability. One such solution is animal health tracking technology, a powerful tool that empowers farmers to make data-driven decisions and improve their herds’ overall health and productivity.

Animal health tracking devices provide farmers efficient and accurate monitoring through tags attached to a cow’s ear or collar. Dairy farmers scan these tags to collect real-time data on each individual cow, offering farmers an in-depth understanding of their animals’ health and behavior. The technology tracks essential metrics such as milk production, reproductive cycles, feeding patterns, and herd movements. By leveraging this data, farmers can quickly identify and address health concerns before they escalate, ensuring optimal animal welfare and reducing the risk of disease outbreaks within the herd.

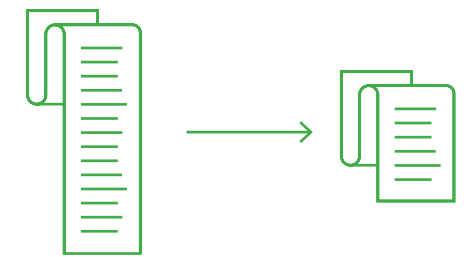
More than a collar
Animal health tracking devices provide efficient and accurate tracking with tags attached to a cow’s ear or collar so farmers can monitor individual cow’s health in real time, including:



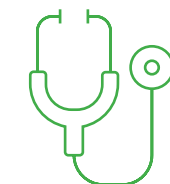
- **GPS location**
- **Illness**
- **Reproductive cycles**
- **Labor and calving**
- **Lameness**
- **Rumination**
- **Mastitis**
- **Milk production**

Beyond improving animal health, these tracking systems offer significant operational benefits. Farmers can reduce labor costs and streamline compliance with regulatory requirements by automating tasks such as record-keeping and inventory tracking. This automation saves time and minimizes the risk of human error in data collection, which is critical for maintaining accurate records. Furthermore, animal health tracking technology enables farmers to make informed decisions about feed management, breeding schedules, and overall herd management, leading to more efficient and sustainable operations.

In the face of rising costs and environmental pressures, Vermont dairy farmers find technology a valuable ally. By adopting animal health tracking systems, farmers can better manage their operations proactively, respond to challenges effectively, and ensure the well-being of their animals. This modern approach to farming allows Vermont’s dairy industry to adapt to changing conditions while maintaining its reputation for high-quality, sustainable dairy products.



Animal health tracking devices reduce the time spent on manual record-keeping by 30–50%



90%

Drop in reproductive drug costs with animal health tracking

“Water quality and soil health are cornerstones of our cropping program. Nutrient management planning, along with progressive conservation practices in the field, helps us keep our waterways clean.”

Ransom Conant
Conant Farm



Waste Management

Vermont dairy farms are practicing innovative waste management practices, emphasizing sustainability, and environmental stewardship.

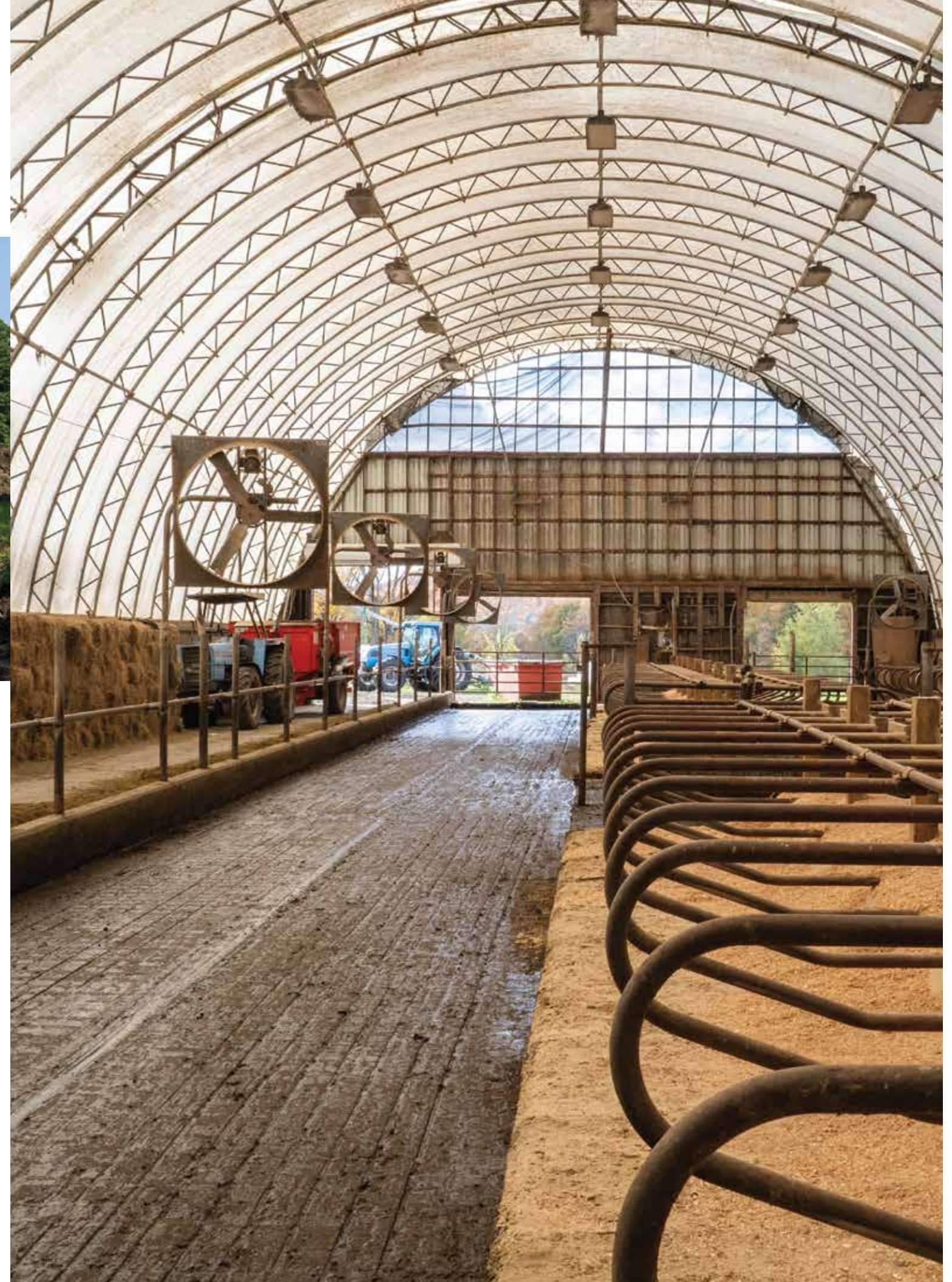
Farmers are minimizing waste and creating valuable byproducts by managing manure, composting, and using renewable energy.

The Vermont Clean Water Act (Act 64), implemented in 2015, established stricter regulations on agricultural runoff to protect water quality, particularly in Lake Champlain. Under the law, farms must implement practices—such as enhanced nutrient management plans, cover cropping, and the establishment of vegetative buffer zones—to reduce the phosphorus and other pollutants entering waterways.

Composting is a widely embraced practice at dairy farms. Farmers mix organic materials—such as bedding, uneaten feed, and barn waste—with manure to produce nutrient-rich compost. The compost can enhance soil health on the farm or be sold to local communities for gardening and landscaping.

Renewable energy solutions, such as using farm waste to generate biogas through anaerobic digestion, reduce waste and produce clean energy helping offset operational costs.

By combining traditional and innovative approaches while adhering to the Vermont Clean Water Act, Vermont dairy farmers showcase how effective waste management can protect the environment, enhance farm sustainability, and support local communities.





Manure Management and Anaerobic Digesters

One cow can produce up to 100 pounds of manure each day. That's why effective manure management is necessary for maintaining environmental sustainability and operational efficiency in dairy farming.

Vermont farmers implement advanced strategies to handle, store, and repurpose manure generated on their farms.

Sustainable practices include Nutrient Management Plans (NMPs) designed to balance soil nutrient requirements and prevent over-application. These plans enhance soil health and reduce dependence on synthetic fertilizers. Meanwhile, using manure solid-liquid separation contribute to methane reduction by preventing the anaerobic decomposition of organic matter in storage lagoons. This helps cut methane emissions by 20–50%.

Anaerobic digesters are becoming more common at dairy farms. An anaerobic digester is an airtight vessel in which bacteria digest—or decompose—organic waste such as manure. The resulting biogas can be used to generate electricity or sold.

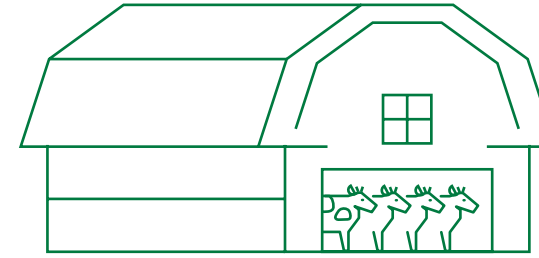
Soil Injection

Soil injection is an innovative manure management technique that directly applies liquid manure below the soil surface.

This method minimizes nutrient runoff, reduces odors, and ensures efficient nutrient absorption by crops. By placing manure at the root zone, soil injection enhances soil fertility and improves water quality by preventing leaching and surface runoff.

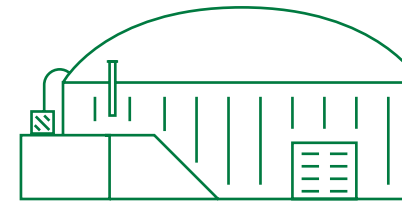
Many farms adopt this practice to comply with environmental regulations, conserve resources, and promote sustainable nutrient cycling in agricultural systems.

How a Digester Works



Inside the Barn

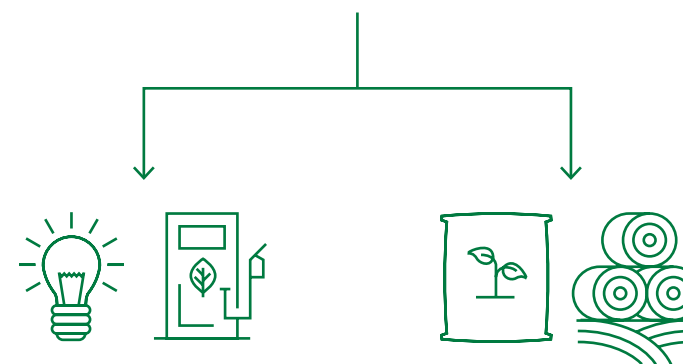
1. Cow manure from a dairy farm is collected and brought to an airtight digester.



Inside the Digester

2. The manure is heated to around 101°F, similar to a cow's stomach, and bacteria ferment the sludge to produce biogas.

3. Carbon dioxide and other contaminants separated from the biogas, leaving behind methane.



Biogas

4. Biogas is converted to renewable electricity and natural gas.

Byproducts

5. Byproducts of the fermentation include fertilizer, soil amendments, and animal bedding.



Cow Power Program

Green Mountain Power Corporation (GMP) offers Vermont farmers a production incentive to generate electricity via anaerobic digestion of cow manure. Its program, Cow Power, allows farms to recycle cow manure into renewable energy—electricity that is sent back into the grid, powering local homes.

As of 2019, fourteen dairy farms in Vermont participate in GMP's renewable energy program, providing power for 3,200 Vermont customers who have chosen to opt into the program.



73,000

Tons of methane removed from the environment via the Cow Power Program



Vermont Dairy and Local Nutrition

Dairy farmers play an important role in the fight against hunger. With New England Feeding New England's goal to produce 30% of Vermont's food locally by 2030, we need sustainably and efficiently produced, nutrient-dense, accessible, and affordable food.

Milk perfectly fits that description, and Vermont dairy farmers are working hard to ensure food security for all Vermonters through innovation and community partnerships, helping to secure Vermont's agricultural future.



1,696%

Increase in local food purchasing by Vermont K-12 schools from 2010-2020



1/7

Vermont children experiences food insecurity⁴⁸



Miller Farm, a multi-generational organic dairy farm in Vernon, partners with Stonyfield to supply milk for organic yogurt, and other dairy products.

Dairy Access in Schools



9,700

More students eating breakfast

7,800

More students eating lunch⁴⁹

Vermont's Universal School Meal program is a ground-breaking initiative that ensures all students, regardless of income, have access to free breakfast and lunch in public schools.

Introduced as a pilot during the COVID-19 pandemic, the program was made permanent in 2023 because of its significant benefits. Eliminating the stigma of free or reduced-price meals fosters a sense of equity and inclusion in schools.

Free meals helps improve student focus, attendance, and overall well-being. Families experience financial relief, too. Educators highlight the program's positive impact on classroom performance, as well-fed students are better learners.

The program—funded through state allocations and federal reimbursements—demonstrates Vermont's commitment to child welfare and education. Its success has inspired discussions in other states, positioning Vermont as a universal school meal advocacy leader.



Food Security in the Pandemic

The Vermont Community Foundation helped support local dairy farmers and address food security during the pandemic. Their initial \$60,000 grant—in collaboration with Dairy Farmers of America and local processors like Commonwealth Dairy and Ploughgate Creamery—led to the transformation of surplus milk into essential dairy products.

The initiative produced an impressive 48,000 cups of yogurt and 11,500 gallons of milk for the Vermont Foodbank.⁵⁰

Additionally, the Vermont Legislature allocated \$25 million in federal COVID-19 relief funds to dairy producers and processors through the Vermont COVID-19 Agriculture Assistance Program.

The funding helped mitigate losses and offset increased operating costs, supporting the production of value-added dairy items, including cheese and butter. It also exemplified Vermont's commitment to sustaining its agricultural sector and addressing community needs during the pandemic.

“This collaboration highlights the integral role of Vermont dairy farms in our state’s food systems.”

Governor Phil Scott



Miller Farm Pilot

Vermont schools are fast becoming a key player in local food purchasing. Between 2010–2020, local food purchasing by Vermont K–12 schools increased 1,696%.⁵¹ Schools have a meaningful role to play in improving the nutritional security in communities, ensuring that students have access to quality, fresh food.

“The value of what we’re trying to do is to create a model that can be scalable to other school districts.”

**Harley Sterling
Windham Northeast
Supervisory Union**

Vermont schools also recognize the importance of supporting local dairy to achieving those goals.

As an example, the Miller Farm Vermont Dairy School pilot program in the Windham Northeast Supervisory Union introduced students to locally sourced, organic milk in 2023.

By August 2023, six schools had transitioned to bulk organic milk dispensers, replacing traditional milk cartons.

This change significantly reduced waste, and the cost savings helped to offset the higher price of organic milk.

The initiative was made possible by the Northeast Organic Family Farm Partnership and NOFA-VT, with funding from the Northeast Dairy Business Innovation Center.

Students, teachers, and administrators have embraced the initiative, which includes educational components like “Dairy in the Classroom” and field trips to Miller Farm.



2,750

Vermont students are drinking Vermont organic milk daily, thanks to the Miller Farm pilot.



Expanding Local Dairy in Other Areas

“A person’s health and wellness is impacted by everything from medical care to the beverage you drink with breakfast each day. Providing fresh, local milk, creates a more dignified dining experience and healthy offering for the individuals in our care and custody while also supporting Vermont’s dairy industry.”

**Nicholas Deml
Commissioner
Department of Corrections**

Vermont dairy has also extended its reach by serving in health care, academic, and correctional facilities.

Correctional Facilities

Local and regional milk is now being served in all six Vermont correctional facilities as part of a new partnership between the Vermont Department of Corrections and the Agency of Agriculture, Food & Markets.

Previously, the Department of Corrections provided powdered milk sourced from Texas.

The initiative has yielded positive results; all facilities have reported a significant increase in meal satisfaction, and the personal dietary needs of incarcerated individuals are being better met.

As a result of this change, milk consumption in the facilities has risen, leading to an annual sales boost of over \$188,000. Additionally, food waste has decreased by more than 64%.

To support this initiative, the Vermont Agency of Agriculture, Food & Markets provided the Department of Corrections with \$15,000 for refrigeration equipment.

Several facilities required additional refrigeration capacity to serve fluid milk. The funding for this equipment was made possible through the dairy promotion checkoff program funded by Vermont dairy farmers.

University of Vermont

The University of Vermont is committed to buying Vermont dairy for dining halls, catering, and the UVM Dairy Bar.

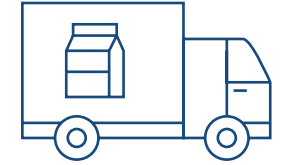
UVM Dining works with dairy farms across the state, including:

- Butterworks Farm Yogurt (used in the dining halls)
- Larson Farm and Creamery Yogurt (used in the dining halls, the UVM Dairy Bar and catering)
- von Trapp Yogurt (available at UVM Central Campus Dining Hall)
- Miller Farm (retail bottled milk)

One of the most recent examples of its commitment is that UVM Dining switched to organic Miller Farm half-and-half to be served campus-wide in November 2024.

UVM Medical Center

UVM Medical Center is committed to working with local food producers to serve patients and visitors. Its partners include Butterworks Farm in Westfield, Kingdom Creamery in Hardwick, Maplebrook Farm in North Bennington, and Cabot Cheese.



40.4%

Of UVM’s dairy purchasing meets the Vermont state definition of local

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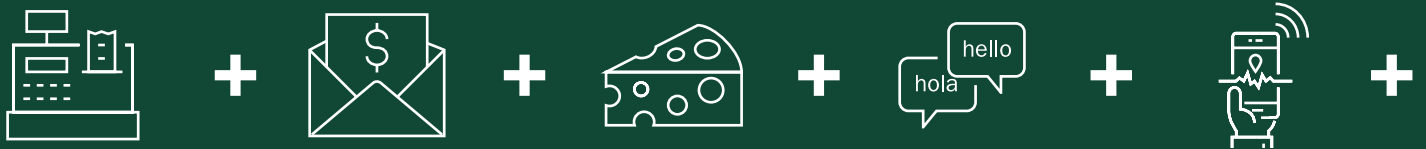
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Vermont Shepherd





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