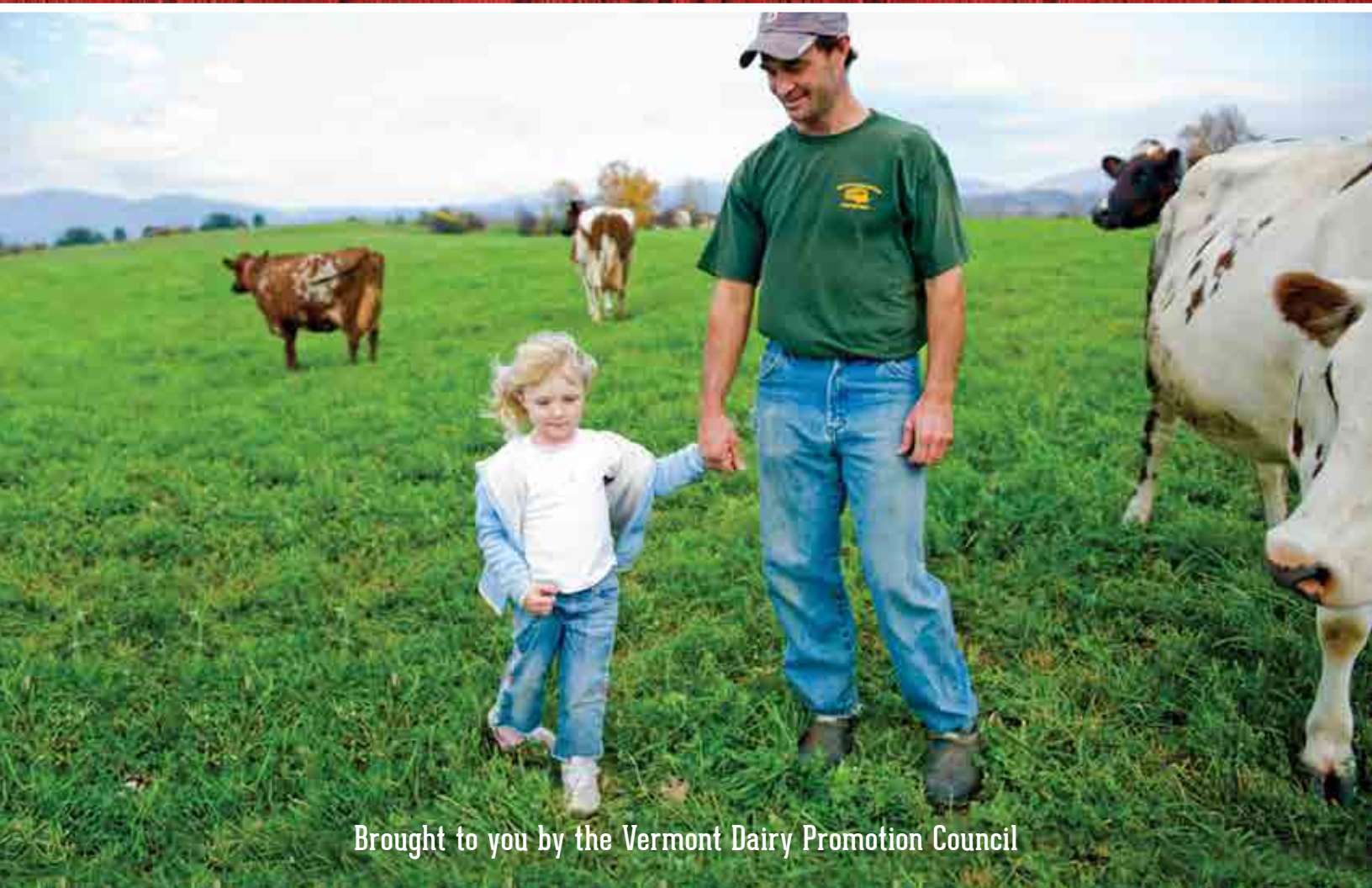
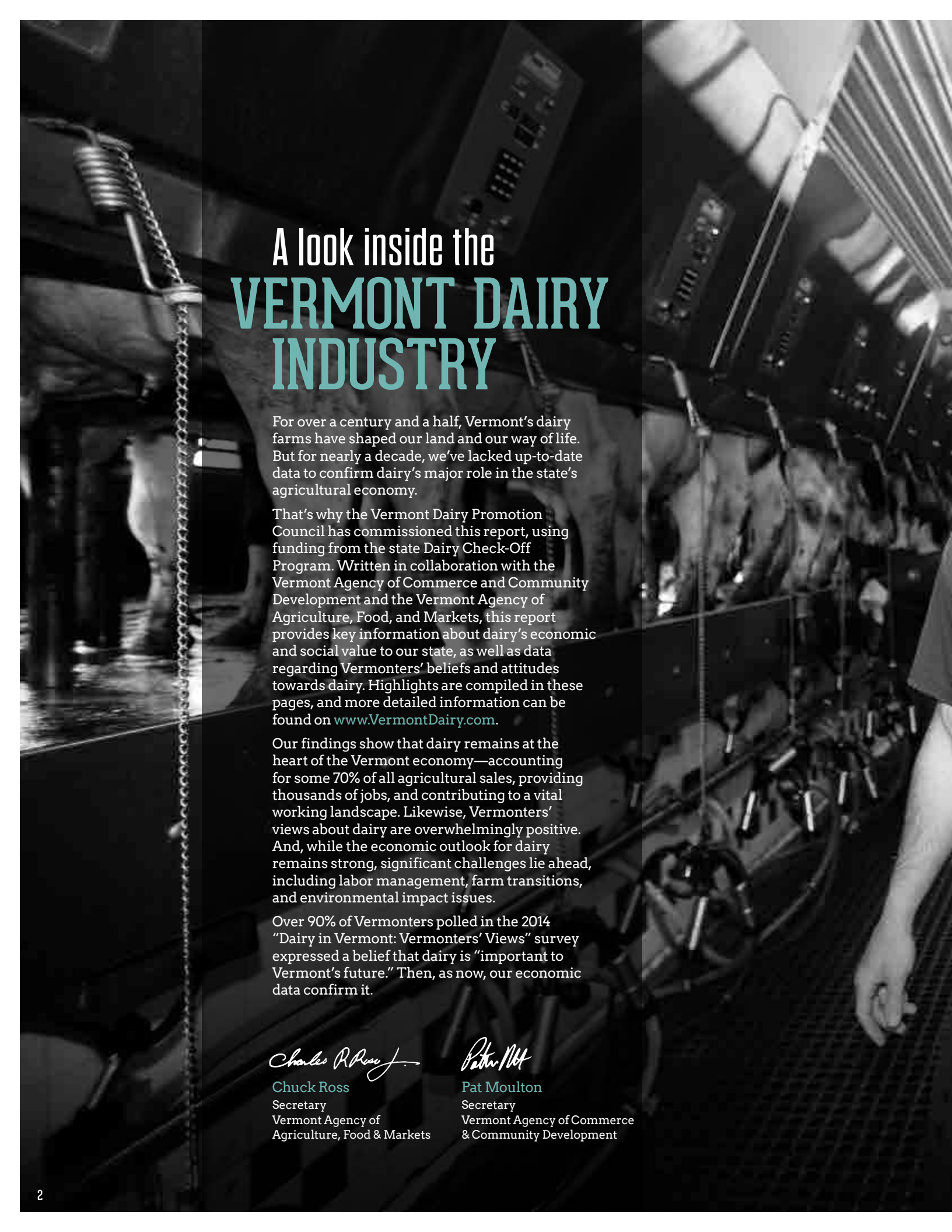


AN ECONOMIC ASSESSMENT



Brought to you by the Vermont Dairy Promotion Council



A look inside the VERMONT DAIRY INDUSTRY

For over a century and a half, Vermont's dairy farms have shaped our land and our way of life. But for nearly a decade, we've lacked up-to-date data to confirm dairy's major role in the state's agricultural economy.

That's why the Vermont Dairy Promotion Council has commissioned this report, using funding from the state Dairy Check-Off Program. Written in collaboration with the Vermont Agency of Commerce and Community Development and the Vermont Agency of Agriculture, Food, and Markets, this report provides key information about dairy's economic and social value to our state, as well as data regarding Vermonters' beliefs and attitudes towards dairy. Highlights are compiled in these pages, and more detailed information can be found on www.VermontDairy.com.

Our findings show that dairy remains at the heart of the Vermont economy—accounting for some 70% of all agricultural sales, providing thousands of jobs, and contributing to a vital working landscape. Likewise, Vermonters' views about dairy are overwhelmingly positive. And, while the economic outlook for dairy remains strong, significant challenges lie ahead, including labor management, farm transitions, and environmental impact issues.

Over 90% of Vermonters polled in the 2014 "Dairy in Vermont: Vermonters' Views" survey expressed a belief that dairy is "important to Vermont's future." Then, as now, our economic data confirm it.



Chuck Ross
Secretary
Vermont Agency of
Agriculture, Food & Markets



Pat Moulton
Secretary
Vermont Agency of Commerce
& Community Development



advisory team:

Tom Bivins,
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Foster Brothers Dairy

Tom Gates
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Jim Harrison
Vermont Retail & Grocers Association

Bob Parsons
University of Vermont

Bob Wellington
Agrimark

data cited in this report are drawn from:

Jones, K. *The Value of Dairy in Vermont: An Economic Assessment*, Vermont Agency of Commerce and Community Development, December, 2014.

"Dairy in Vermont: Vermonters' Views" a survey conducted by the Castleton Polling Institute on behalf of the Vermont Dairy Promotion Council in 2014. Data were collected on interviews drawn from a random sample of 271 registered voters in Vermont. Interviews were conducted by phone from November 5 through 12, 2014.

Other data are compiled from the following sources: Vermont Sustainable Jobs Fund: *Farm to Plate Strategic Plan, Executive Summary* (2009) and *Farm to Plate Atlas* (2014); USDA Census of Agriculture, *2012 Census Volume 1, Chapter 1 State Level Data/Vermont*; US Census data, *Profile of General Population and Housing Characteristics: 2010*; US Census data, *State and County QuickFacts: Vermont*; Vermont Tourism Research Center: *The Vermont Travel and Tourism Industry—2011*, Vermont Business Magazine: *Largest Employers—2014*; Vermont Agency of Agriculture, Food & Markets 2014 Data.

Photo: Cabot Creamery Cooperative

What Vermont Dairy LOOKS LIKE TODAY



134,132

Dairy Cows
in Vermont¹

[mostly Holstein & Jerseys]



868

Dairy Farms²
in Vermont



321.25
MILLION

gallons of Vermont
milk sold each year

[or 2.57 billion pounds]



5%

of milk produced
in Vermont is
Certified Organic



< 1%

of Vermont dairy
farms produce
non-bovine milk³

[goat, sheep]

Data compiled from the 2012 Census of Agriculture, with 1/2015 updates from the Vermont Agency of Agriculture, Food, and Markets

Meet our dairy farmers

Almost all of Vermont's dairy farms are family owned. Of the state's 868 dairy farms:⁴

749 [82%]
ARE SMALL [<200 cows]



Farr Family Farm | Richmond

Ashley Farr, a third-generation farmer, and his wife Erin, milk 60 cows at their farm in Richmond. The Farris are one of a growing number of Vermont farms to embrace new robotic milking technology. In 2012, they purchased a Lely A3 Robotic Milker, which allows their cows to determine their own milking schedules. The robots are fully automated. Cows walk into the machine on their own, and once inside lasers guide the suction apparatus to their teats. Each cow wears a transponder around its neck, which syncs with the robot and monitors the cow's milk production.

The Farris say the robot has provided them with a more flexible schedule, which is helpful because their growing family keeps them very busy with 4-H, school sports, and activities.

130 [15.1%]
ARE MEDIUM [200-699 cows]



Gingue Brothers Dairy | Fairfax & Westford

Working with their father Paul, brothers Dan, Shawn, Jeff and James Gingue currently milk 550 dairy cows, raise 450 replacement heifers, and crop-farm 1,100 acres of land. Recently they received the "Top Quality Award" from their milk cooperative, Dairy Farmers of America.

As the Gingues grow and harvest high-quality feed for their herd in two counties, they've adapted many conservation practices to better ensure the long-term health of the Lake Champlain and Connecticut River watersheds near their farms. They use cover cropping strategies on all corn fields and no-till planting practices to reduce soil erosion, as well as manure injection applications that greatly reduce the chance of phosphorus runoff.

25 [2.8%]
ARE LARGE [700+ cows]



Blue Spruce Farm | Bridport

Blue Spruce Farm is the Audet family's third generation dairy farm whose herd of 1,500 cows (mostly registered Holsteins) produced over 4.3 million gallons of milk in 2014. The family is one of the 1,200 dairy farm owners of the Agri-mark Cooperative, makers of internationally recognized Cabot cheddar cheese. Blue Spruce was the first Green Mountain Power Cow Power farm project in Vermont, and currently turns manure and other agricultural products into methane gas to produce enough renewable electricity to power more than 400 homes.

Recently the Audets worked with GMP to add a 100-kilowatt wind turbine to their renewable energy portfolio. The turbine, manufactured in Vermont by Northern Power Systems, generates enough electricity to power more than 20 homes.



Each year, Vermont dairy cows supply enough
milk to fill **16,000** standard size swimming pools



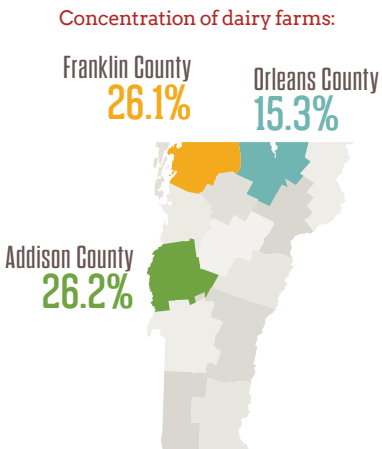
"Dairy farming is the only kind of farming in Vermont in which the majority of farmers generated most of their income from farming."

Vermont Sustainable Jobs Fund: Farm to Plate Strategic Plan, Executive Summary

Vermont's Dairy Farms in a snapshot

Dairy farms touch every county in the state—at least 10 farms in every county. Most (2/3) are concentrated in Addison, Franklin and Orleans counties.

	# of farms	# of dairy cows	% of dairy cows	milk sales (\$ millions)	% of milk sales
Addison	124	32,498	24.2%	132.1	26.2%
Bennington	16	1,429	1.1%	5.3	1.0%
Caledonia	73	6,739	5.0%	25.7	5.1%
Chittenden	39	5,065	3.8%	18.1	3.6%
Essex	11	1,841	1.4%	6.7	1.3%
Franklin	184	35,736	26.6%	132.0	26.1%
Grand Isle	14	3,330	2.5%	11.5	2.3%
Lamoille	34	2,856	2.1%	9.2	1.8%
Orange	84	8,618	6.4%	33.6	6.7%
Orleans	131	21,081	15.7%	77.5	15.3%
Rutland	67	4,687	3.5%	15.3	3.0%
Washington	35	4,368	3.3%	15.9	3.1%
Windham	20	3,069	2.3%	12.7	2.5%
Windsor	36	2,826	2.1%	9.1	1.8%
State Total:	868	134,132	100%	\$504.9	100%





"No other state
has a single
commodity that
accounts for
such a high
percentage of its
agricultural sales."

Vermont Council on Rural Development:
"Vermont in Transition" report⁵

THE ROLE OF DAIRY

in Vermont Agriculture

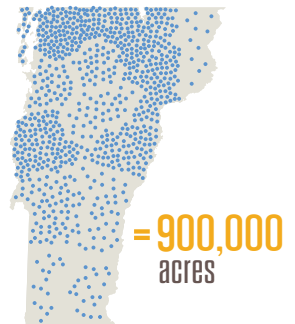
According to the 2012 agricultural census, 12% of Vermont's 7,338 farms are dairy farms,⁶ but their impact on Vermont's agriculture is much greater. Roughly 80% of Vermont's farmland is devoted to supporting milk production, as farmers use their land to grow corn as grain and silage, and to grow grass for pasturing. This keeps feed purchasing dollars local, and reduces transportation costs and energy associated with purchasing feed elsewhere.

Small State, Big Impact³

63% of milk produced
in New England
COMES FROM VERMONT⁷

15%
OF THE STATE

is covered by dairy
farms and the fields that
provide their feed



OVER 80%
of Vermont's farmland is devoted
to dairy and crops for dairy feed

DAIRY IS
70% of Vermont's
Agricultural Sales

*this figure is based on direct sales from farms,
including milk and (partially) cattle and calves.*

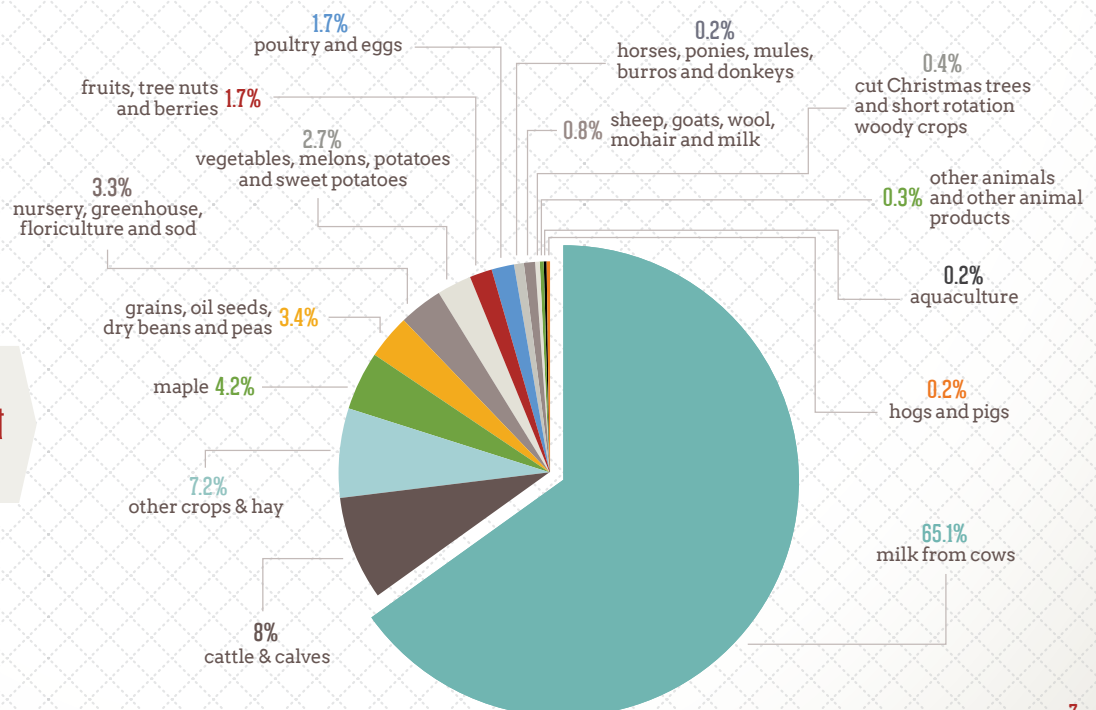
Vermont's economy is small—just 0.2%
of the US economy. But we produce more
than 1% of the nation's dairy products.

that's **5x** our
"economic share"

Share of Agricultural Products Sold in Vermont

[based on market value]

**Milk generates more
sales than any other Vermont
agricultural product...**



AT THE HEART of the Vermont Economy³

Dairy helps keep our dollars local. Dairy provides “working land” jobs that keep families here in Vermont, supporting our uniquely rural way of life and contributing to local tax bases. Much of dairy-related wages and salaries help support the local economy, as dairy employees buy local goods and services and pay taxes.

Dairy businesses invest \$500 million+ to support Vermont’s agricultural economy every year

Dairy helps provide the infrastructure other Vermont farms rely on. Dairy businesses spend some **\$500 million** to support Vermont’s “agricultural web” of goods and services needed for all types of farming—like competitive pricing for farming equipment and machinery, hay and feed, veterinarians, etc.

Each year

VERMONT DAIRY BRINGS \$2.2 BILLION

in economic activity to the
state of Vermont

\$2.2 Billion in economic activity includes:

- **VALUE OF PRODUCTS SOLD**
- **INDUCED IMPACTS**
[dairy business’ wages and profits effects
on the local economy]
- **SECONDARY IMPACTS**
[benefits to local agriculture, tourism,
real estate, and more]



For more information and to read the full economic report,
please visit www.vermontdairy.com

Every day:



Dairy brings approximately

\$3 MILLION

in circulating cash to the
state of Vermont

It’s not just cows:

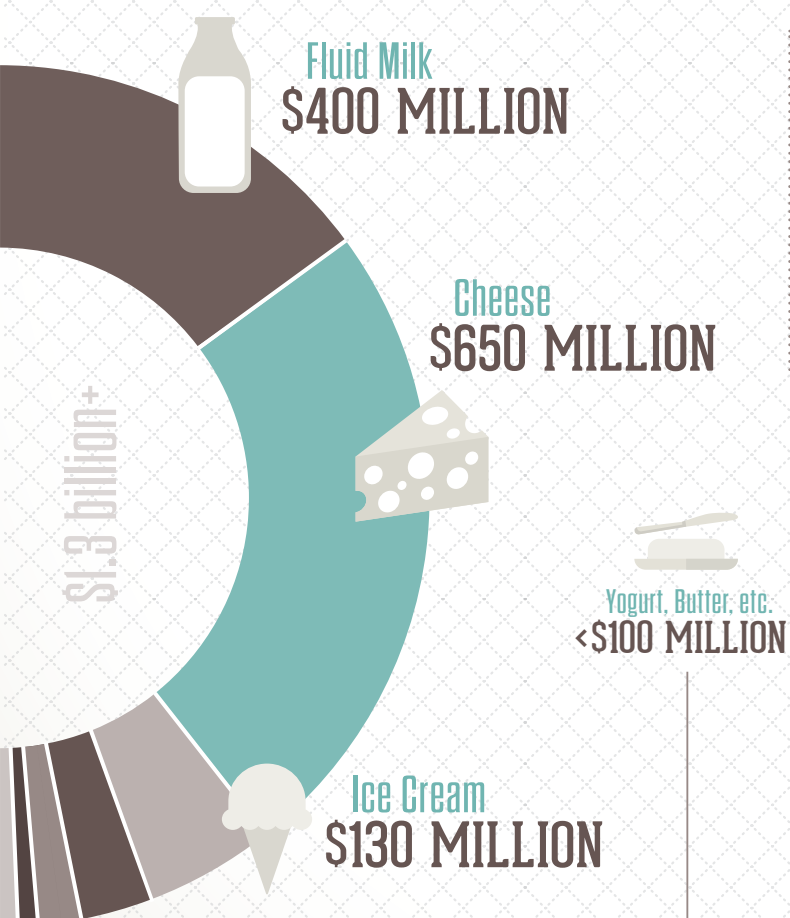
The Vermont sheep and goat-based dairy
business is small but growing steadily.




In 2012, the revenue from sheep
& goat farming (including wool
and mohair production) was

\$5 MILLION+

Every Vermont dairy cow provides **\$12,500**
in economic activity to the state annually⁸




Annual Sales of Vermont Dairy Products
& By-Products = **\$1.3 BILLION+**



Byproducts
[whey concentrate, lactose]
>\$50 MILLION



Manure as soil amendment
\$2 MILLION



**Manure for bio-solid
electricity generation**
\$2 MILLION



Photo: Cabot Creamery Cooperative

dairy =
6,000-7,000
VERMONT JOBS

PROVIDES
\$360 MILLION
in wages & salaries



A GOOD LIVING

Quality jobs with a sense of place³

From yogurt makers to farmers to ice cream scoopers to dairy equipment purveyors, some 6,000- 7,000 jobs—a **full 2.5% of the state's workforce**—are connected to Vermont dairy. This figure, based on Department of Labor and Census of Agriculture reports, includes approximately 1,400–3,200 people employed by dairies, 1,700 employees in dairy food production, 1,700 dairy operators, and 1,000 employees in indirect, supporting occupations.

Dairy is one of the state's top job providers and produces some \$360 million in Vermont wages and salaries each year

This estimate compiles wage and salary income from dairy farmers, dairy farm workers, contract labor, food production workers, professional and technical support, agricultural supply retailers, machinery, equipment and supplies, and transportation workers.

Vermont's dairy industry employs a diverse workforce with a broad range of skills, providing opportunities for individuals with varied backgrounds and experiences.

Vermont's Dairy Workforce vs Other Vermont Industries

INDUSTRY	NUMBER OF JOBS
Dairy	6,000–7,000
Machinery Manufacturing	2,761
Computer & Electronics Manufacturing	6,849
Grocery Stores	8,055

Vermont's Key Private Employers: [a sample]

employer	employees
University of Vermont Health Center <i>(formerly Fletcher Allen Health Care)</i>	5,383
UVM	3,446
Keurig Green Mountain	2,196
Shaw's Supermarket	1,600
Dealer.com	817
Burton Snowboards	375

*Vermont Business Magazine,
November 2014⁹*



"The dairy industry is integral to our way of life in Vermont—it is essential to our economy, our landscape, and our identity. **I am proud of the hard working farmers who make this possible.**"

Governor Peter Shumlin

Dairy is vital to the VERMONT WAY OF LIFE...

What do Vermonters think about dairy?

In November 2014, the Vermont Agency of Agriculture, Food, and Markets and the Castleton Polling Institute conducted a telephone poll of a representative sample of 271 Vermonters. The resulting report, *Dairy in Vermont: Vermonters' Views*, provides a fascinating snapshot of how Vermonters view the dairy business that so defines our state.

A polling of Vermonters shows that:



For more information and to read the full
"Dairy in Vermont: Vermonters' Views" Poll,
please visit www.vermontdairy.com



66% of Vermonters use
farmland for recreation





Orb Weaver Farm | New Haven

Pioneering artisan cheesemakers and organic farmers Marjorie Susman and Marian Pollack have been producing outstanding farmhouse cheeses from their herd of seven Jersey cows since 1982. They produce just 7,000 pounds of their hand-crafted waxed and cave-aged cheeses each winter, and run a thriving organic vegetable farm every summer.

Recently, they worked with the Vermont Land Trust to sell a conservation easement that permanently protected their land from development and enabled them to conserve their 19th-century barn—a decision they believe will “make sure future generations are able to farm here too.”

...and essential to “THE VERMONT BRAND”

Dairy farms are key to attracting over 13.5 million visitors¹⁰ to Vermont every year

The physical beauty of Vermont is, in part, defined by its farms. Vermont’s landscape is a distinctive mix of farms and forests, with rolling hills and open spaces. Our statewide patchwork of dairy farms helps make that possible, and provides a powerful draw for tourism.

Vermont is a food destination

Reflecting the nation’s growing appreciation for locally produced, high-quality food, more and more visitors are coming to Vermont to sample Vermont fare, whether it’s visiting artisanal cheesemaking facilities along the Vermont Cheese Trail, attending dozens of nationally-acclaimed food festivals, or enjoying a maple creemee at our ever-popular dairy bars. This, along with Vermont’s growing reputation as a center for agritourism, is bringing more and more dairy-related tourism dollars to our state.

The Vermont restaurant business accounted for more than \$800 million in taxable sales in 2012. Dairy currently represents 11% of food dollars spent for in-home consumption. If milk, cheese, yogurt and ice cream play the same role in restaurant food preparation as in home food use, then some **\$100 million in restaurant activity can be attributed to dairy production.**³



84%

of Vermonters agree Dairy is important to Vermont’s Tourism Industry

from the “Vermonters’ Views on Dairy” poll



Vermont Cheesemakers Festival

Fodor’s Travel called the Vermont Cheesemakers Festival one of the “Top 10 Summer Food Festivals in the Nation.”

Each year, more than 2,000 visitors from across the country descend on Shelburne Farms to enjoy the event, which has also been featured in the *New York Times*, *The Boston Globe*, and *USA Today*.

vtcheesefest.com



Ben & Jerry’s

The Ben & Jerry’s Ice Cream Factory is the #1 Tourist Destination in Vermont. The world-famous ice cream, which originated in Vermont, is sold in more than 30 countries across the globe.

benjerry.com

LOOKING FORWARD

The future of Vermont dairy

Technology & Sustainability

Vermont farmers are increasingly embracing new technologies to become more efficient and sustainable. These innovations are creating new opportunities for the next generation. Methane digesters, for example, are turning manure into renewable energy. At last count, there were 16 operational digesters in the state, generating 18,000 MWh of “cow power” in 2013, with a retail value of more than \$2 million. Interest in wind and solar energy also continues to grow.

A small but growing number of farmers across the state are using robotic milkers, which allow cows to milk “on-demand.” These automatic milkers replace the farmer’s daily milking routine, allowing unprecedented schedule flexibility. Farms are also adopting energy-efficient technologies to conserve resources and improve their operations, from LED lighting, to energy-efficient fans, to variable speed milk pumps, and more.

Challenges & Opportunities

Vermont’s dairy industry faces formidable challenges. Although many farmers are working hard to minimize their environmental impact, significant water quality challenges remain. Farmers need to increase their efforts and work with state, federal, and non-profit partners in order to protect our waterways. The Ag community has a big role to play in restoring the health of Lake Champlain.

Generational farm transitions also present challenges. The average age Vermont farmer is 55 years old, so engaging the next generation is imperative. Some farms are also navigating complex labor and immigration issues. Vermont’s congressional delegates have been working with the dairy industry to advocate for sensible immigration reform at the Federal level, but progress is slow. And the price of milk continues to be volatile. New tools, like the Margin Protection Program, are enabling farmers to mitigate their risk, but uncertainty remains.

Worth the Effort

There’s hard work ahead. But in light of the many ways dairy enriches our state, working together to find solutions is clearly worth the effort.



Photo: Aegis Renewable Energy



Photo: Blue Spruce Farm

Today more than ever MILK MATTERS

As an important supplier of milk to New England and a key economic engine in the Vermont economy, dairy supplies thousands of jobs and significant income from wages and salaries—along with secondary benefits to local agriculture, real estate, and tourism.

Just as the open pastures and rolling hills of Vermont's dairy farms help define its landscape, dairy remains inextricably tied to Vermonters' image of their state.

Vermont certainly would look very different without it.

KEY FACTS & FIGURES DAIRY AT A GLANCE:

▶ **63%** of milk produced in New England comes from Vermont.

▶ Dairy brings **\$2.2 BILLION** in economic activity each year.

▶ Dairy represents **70%** of the state's agricultural sales.

▶ Over **80%** of Vermont farmland is devoted to dairy and crops for dairy feed.

▶ Dairy is one of Vermont's top private employers, providing **6,000–7,000** jobs (and \$360 million in wages and salaries).

▶ Every Vermont dairy cow provides **\$12,500** in economic activity to the state annually.

▶ Dairy helps shape Vermont's unique landscape, which attracts more than **13.5 MILLION** visitors each year.

▶ Vermonters are positive about dairy: **91%** say dairy is "important to our state's future."

▶ Every day, dairy brings in approximately **\$3 MILLION** in circulating cash to the state of Vermont.



Photo: Cabot Creamery Cooperative

endnotes:

¹ US Census of Agriculture Table 12. Cattle and Calves – Inventory: 2012 and 2007. http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_1_State_Level/Vermont/st50_1_012_013.pdf

² Vermont Agency of Agriculture 2014 updates to the US Census of Agriculture Table 17. Milk Cow Herd Size by Inventory and Sales: 2012. http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_1_State_Level/Vermont/st50_1_017_019.pdf

³ Jones, K. The Value of Dairy in Vermont: An Economic Assessment. Vermont Agency of Commerce and Community Development, December, 2014.

⁴ Vermont Agency of Agriculture 2014 updates to the US Census of Agriculture Table 17, op.cit. Farm size categorizations (Small, Medium, and Large) as defined by the Vermont Agency of Agriculture Food and Markets.

⁵ Vermont in Transition: A Summary of Social Economic and Environmental Trends, Chapter 6: Agriculture. Vermont Council on Rural Development, 2008. http://vtrural.org/sites/default/files/content/futureofvermont/documents/VTTransitions_Ch6.pdf

⁶ US Census of Agriculture Table 9. Land in Farms, Harvested Cropland, and Irrigated Land. http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_1_State_Level/Vermont/st50_1_009_010.pdf

⁷ O'Hara JK, Parsons, RL. The economic value of organic dairy farms in Vermont and Minnesota. Journal of Dairy Science 2014; 96: 6117–6126. <http://www.journalofdairyscience.org/article/S0022-0302%2813%2900494-3/pdf>

⁸ K. Jones, op.cit. Calculated as value of goods sold (including indirect impacts related to producing those goods), and the induced effects resulting from worker payrolls, totaling over \$1.7 billion. This was divided by the number of cows (135,000) to arrive at the 12,500 figure.

⁹ "Largest Employers Ranking," Vermont Business Magazine 2014: 42(13):53-59.

¹⁰ Vermont Tourism Data Research Center, "The Vermont Travel and Tourism Industry—2011." http://www.uvm.edu/tourismresearch/publications/Tourism_Industry_Fact_Sheet_2011.pdf

== Produced in collaboration with ==



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