FY 2016

DAIRY DEVELOPMENT AND PROFITABILITY ENHANCEMENT LEGISLATIVE REPORT

DEPARTMENT OF AGRICULTURE

David Weinand
651-201-6646
625 Robert Street North
St. Paul, MN 55155

www.mda.state.mn.us

CONTENTS

Pursuant to Minn. Stat. § 3.197, the cost of preparing this report was approximately $1,000

EXECUTIVE SUMMARY

Since 1996, the Dairy Development and Profitability Enhancement Program (DDPEP) has helped Minnesota dairy farms lower costs and improve quality and profits. In Fiscal Year 2016, its programs and services reached an estimated 307 dairy farms. According to farm financial records, DDPEP efforts generated as much as $18.2 million in FY 16, a $39 return on every dollar invested. The program also generated in-kind contributions worth at least $659,000.

Dairy Profit Teams worked with 307 producers across the state, helping them reduce costs, adjust herd size, improve safety by building or redesigning milking facilities, and make other improvements. The teams also helped producers increase their profitability by improving milk production and quality, enhancing animal health and comfort, or pursuing value added dairy opportunities.

Dairy Business Planning Grants helped 2 Minnesota producers hire professional advisors to help them develop business plans and strategies in fiscal year 2016. Some producers were thinking about expanding their herds, others investigated ways to transfer operation to a new generation, manage debt, or invest in improvements to protect water, soil, and other natural resources.

Most dairy farms experienced severe financial challenges in 2016, due in large part to low milk prices. Experts believe these stresses will continue in 2017, making this program as relevant and helpful to the dairy community as it has ever been.

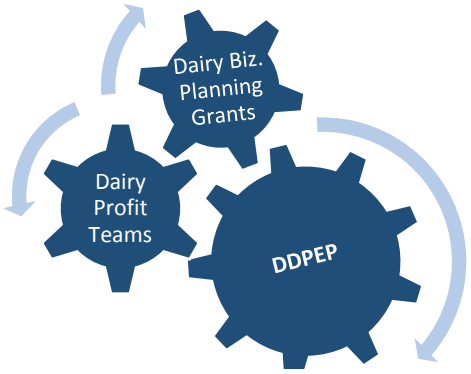
INTRODUCTION

The Minnesota Department of Agriculture (MDA) prepared this report to meet its statutory obligation in Laws 2015, First Special Session, Chapter 5, Subd. 3.

The Minnesota Legislature appropriated $634,000 per year for the 2015/16 biennium to continue *the dairy development and profitability enhancement and dairy business planning grant programs established under Laws 1997, chapter 216, section 7, subdivision 2, and Laws 2001, First Special Session chapter 2, section 9, subdivision 2.*

The Legislature specified that *The commissioner may allocate the available sums among permissible activities, including efforts to improve the quality of milk produced in the state, in the proportions that the commissioner deems most beneficial to Minnesota's dairy farmers.*

BACKGROUND



The Dairy Development and Profitability Enhancement Program (DDPEP) funds two primary components to serve dairy farmers in Minnesota: 1) dairy profit advisory teams and 2) dairy business planning grants.

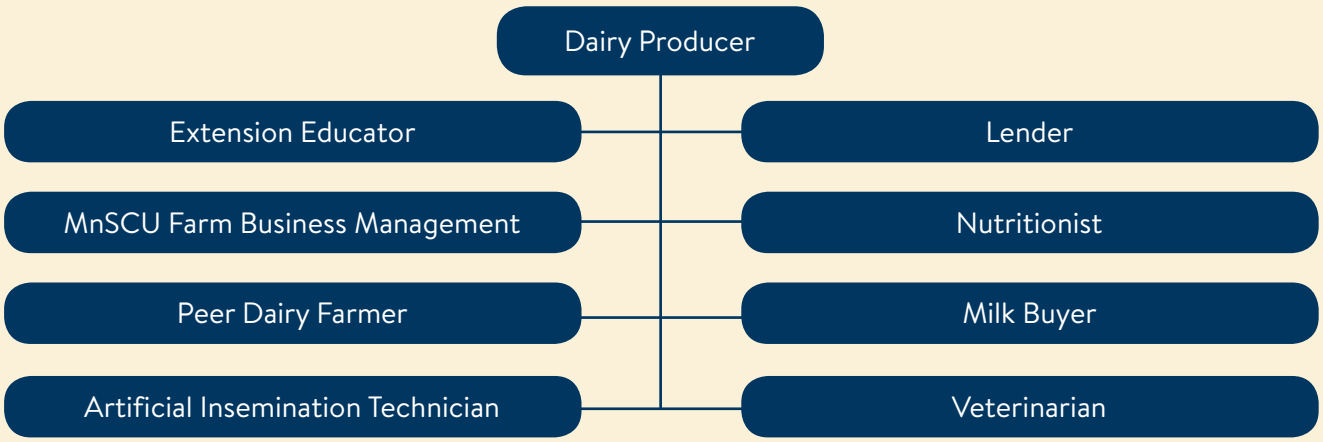
The DDPEP is administered by the Minnesota Department of Agriculture, with input from the Minnesota Dairy Initiative (MDI). MDI partner organizations coordinate dairy profit advisory teams on a regional or, in one case, statewide basis. The partners include the Sustainable Farming Association (SFA), Minnesota Milk Producers Association (MMPA), the University of Minnesota, University of Minnesota Extension, Minnesota State Colleges and Universities (MnSCU) Farm Business Management (FBM), and other industry groups.

The DDPEP began as a pilot program with a single team in 1996; the Minnesota Legislature funded the program at $1M for the biennium. In 1997, the program expanded to support five regionally-based teams and one statewide team, which specialize in management practices like organic production and grazing, and in alternative dairy species like sheep and goats. The Legislature appropriated $2 million for the 2004/05 biennium to expand advisory team activity and begin a grant program to encourage individual farmers to invest in dairy business planning.

Dairy Profit Teams

Figure 1 shows an example of a Dairy Profit Team. Each team is comprised of people who bring varying backgrounds and expertise tailored to an individual farm's needs. The team works with the farmer and partners and/or family members to evaluate how the current farm operation is performing and discuss objectives for the future. The team makes recommendations, not decisions. It identifies priorities and suggests changes that could help the farmer/family meet those objectives. No two teams' recommendations are exactly the same – just as no two farms are exactly the same. The issues may be similar, but the means for resolving them are often very different. Farmers don't receive this service for free they pay $200/farm and then are eligible for up to $600 of funds to address issues on their farms. Farmers can work with "their" dairy profit team for three years. They can reapply for the program if they want to continue working with the team. The average team will cost between $2000 – $2500 per farm to facilitate and provide the services.

Figure 1. Members on a Typical Dairy Profit Team.

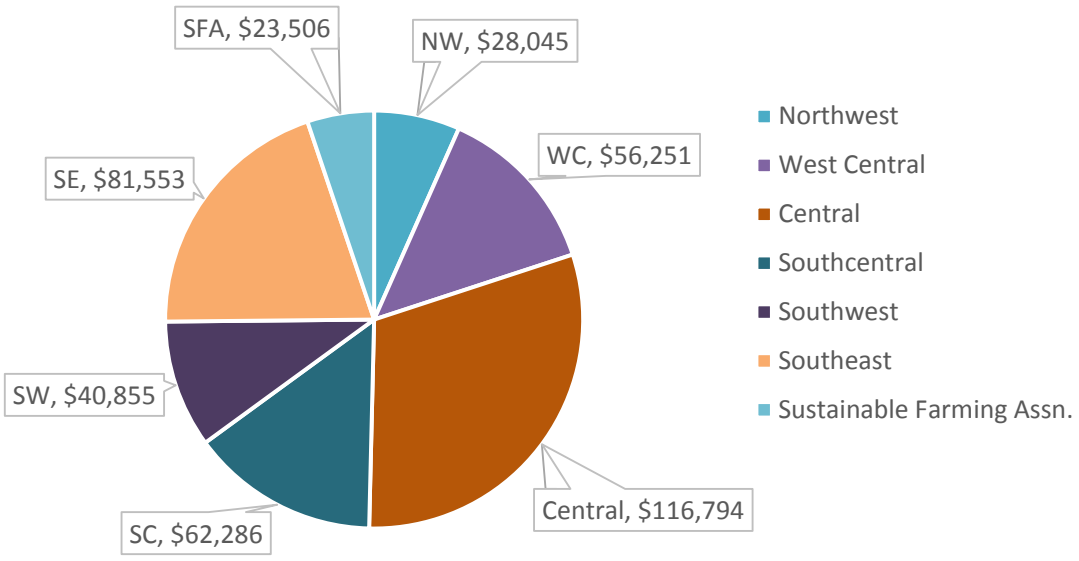


In FY 2016, 307 dairy farms milking a total of 62,957 cows participated in the program (Appendix A). These figures represent nine percent of the dairy farms and 14 percent of the dairy cows in the state. Of the 307 farms involved, 286 worked with one of the six regional teams; the other 21 worked with the "alternatives" team coordinated by the Sustainable Farming Association.

In addition to the farms that were directly served by Dairy Profit Teams, 4,785 people attended other educational programs offered at MDI-sponsored events. These programs included organic transition workshops, milker trainings, barn tours, and more.

In FY 2016 the DDPEP awarded a total of $460,000 to support advisory teams fielded by the six MDI programs across the state (Figure 2).

Figure 2. Distribution of FY 2016 MDA Dairy Profit Team Funds Dairy



Business Planning Grants

The Dairy Business Planning Grant Program helps dairy farmers position themselves for the future. Grants cover 50 percent of the cost of developing a business plan. The end result of the Dairy Business Planning Grant must be a professional business plan that thoroughly explores making changes to a dairy operation. Applicants must provide a 1:1 match, and the grants are capped at $3,000 per farm to work with a third party to help them with their business plan.

FISCAL YEAR 2016 ACTIVITIES AND ACCOMPLISHMENTS

This section summarizes the activities and accomplishments reported by the six MDI Dairy Profitability Teams. They all worked directly with farmers and farm families. They also coordinated or co-sponsored other dairy education events during the year.

Team Activities and Accomplishments

MDI - West Central

West Central teams worked with 54 herds (5,084 cows) in FY 2016. In addition, 88 farms besides those working with a Dairy Profit team attended workshops and seminars offered by this team and other MDI partners in the area.

The MDI West Central effort reported that many farms their teams worked with benefitted from refinancing their short term debt. They also observed that farms in the region are increasingly interested in cover cropping, because it can increase soil organic matter, boost crop yields, and improve soil fertility, water infiltration and nutrient-holding capacity. Cover crops can also decrease weed pressure and provide forage for haying or grazing. Many farmers in the region remain concerned about stray voltage and are continuing to monitor for and mitigate stray voltage problems. MDI West Central reports it is seeing more and more demand for help to transition dairy farms in the region to a new generation and/or new owner.

MDI - Northwest

Dairy Profit Teams in this region worked with 17 farms (1,967 cows) in FY 2016. The MDI-Northwest estimates $21,920 of in-kind contributions (typically from Dairy Profit Team members who provide their services at no charge).

When this region reviewed farm financial data for dairy farms, they saw a net worth increase of $214,403, compared to dairy farms that did not work with a Dairy Profit Team.

The Dairy Initiative program helps us to understand our farm's financial position and to know our cost of production for milk. Our lender really appreciates getting this information. Also, getting ideas on farm transition planning has been very beneficial.

David Schafer, Roseau County

In addition to the teams' work with 17 individual farms, the Northwest region sponsored several educational events including multiple workshops focusing on forage quality, annual pasture mixes, dairy facilities and fly management, heifer raising, and managing a dairy farm during periods of low milk prices. Other meetings dealt with financial management, crops and forages, and there was also an organic dairy farm tour and pasture walk. An additional 121 farms participated in these educational events.

MDI - South Central

South Central teams worked with 37 farms (15,552 cows and dairy goats) in FY 2016. A total of 124 industry professionals who served on Dairy Profit Teams donated time equivalent to $143,693. The majority of these advisors serve on multiple teams and average 3.4 meetings per farm per year.

This region focused on helping dairy farm families sustain their farms during 2016, a year of low milk prices. In addition to the Dairy Profit Teams' work with 37 farms, the MDI South sponsored a number of educational opportunities for dairy producers. They estimate they reached more than 475 farms (and 31,000 cows).

The South Central program estimates the economic impact of the MDI effort in their region was approximately $1 million in FY 2016.

I have been working with MDI – South Central … for about two years now. The program brings my farm advisors together to give me new ideas and to solve current issues. The team helped me apply for and implement grant funds from the Minnesota Livestock Investment Grant Program. I have recommended [them] to help other dairy farms.

Eric Hoese, Carver County

MDI - Central

Dairy Profit Teams in this region worked with 101 farms (11,462 cows and dairy goats) in FY 2016. Two of the farms were new start-up dairies. Participating farms added a total of 629 new cows during the program year.

The MDI Central region estimates the time donated by Dairy Profit Team advisor members was 6,060 hours, worth $363,600.

Teams focused on milking parlors (constructing new low-cost parlors and expanding existing facilities), advising new farm start-ups, improving recordkeeping skills, increasing milk production, lowering somatic cell counts to 199,000 or under, farm transfers and estate planning, partnership agreements, cow comfort, robots, automated calf feeders, stray voltage, water issues, and Minnesota Milk Producers Association.

MDI Central estimates the changes participating farms made as a result of working with Dairy Profit Teams had an economic impact of $18,890,690. This amount includes added cows, reduced feed costs, and increases in net returns per cow.

The MDI Central region also teamed up with University of Minnesota Extension and agri-business professionals to offer field days on current topics of interest. Roughly 1,450 producers attended these events. In addition, 4,850 people with non-farm backgrounds learned more about agriculture through "Breakfast on the Farm" events, which MDI helps sponsor.

These past two years, the dairy profit team has been used to assist in the beginning phases of the farm succession planning and a major expansion to a robotic milking system. Taking a team approach to planning for the future and problem solving has only bettered our chances for future generations to continue on in production agriculture.

Craig Roerick, Stearns County

MDI – Sustainable Farming Association

Sustainable Farming Association (SFA) teams worked with 21 producers (915 cattle) throughout Minnesota in FY 2016. Their teams recruit members who have experience in grass-based dairying, organic production, and developing additional value-added options. Advisors frequently help participating dairy farmers network with other innovative farmers so they can learn from "peer-to-peer." The SFA also sponsored educational workshops, seminars, and field tours reaching an estimated 573 people across the state.

The SFA teams worked with a variety of dairy topics during the 2016 year, including new dairy start-ups, homestead cheese production, grazing management, wintering cattle outside, forages, soil health, and cover crops. Interest in new dairy start-ups still exists. Most have the organic market in mind, due to higher and more stable pay price.

SFA estimates their teams generated $8,700 of in-kind contributions and $230,050 in economic impact ¬-- based on new farms they have helped to get started, as well as savings that existing dairies realized when switching to grazing.

In addition to convening Dairy Profit Teams and providing educational opportunities for producers, the MDI - SFA coordinator serves as a resource for the five regionally based MDI teams for issues like strategic and holistic planning, grazing management, integrated crop and livestock systems, low-cost parlor design, new farm start-ups, alternative forages, and cover crops.

MDI - Southwest

Southwest Dairy Profit teams worked with 30 farms (4,058 cows and dairy goats) in FY 2016. They estimate in-kind contributions from team members at $56,700, and estimate their economic impact at $585,204.

MDI Southwest worked closely with the multi-state I-29 Moo University effort, coordinating workshops (including "What's Your Pregnant Cow Worth?") and tours. The event reached an additional 15-20 farms from the Southwest region.

Group meetings are beneficial because it puts everyone on the team (dairymen, veterinarian, banker, agronomist, nutritionist, extension educator, etc.) around the table to help us all get on the same page. At the same time, each team member can offer insight to help address issues and/or opportunities that may be occurring on the farm.

Brian Miller, Nutritionist, Hubbard Feeds

In the spring, I-29 Moo University held a dairy beef tour at the Central Plains Dairy Expo and several farms from the Southwest region participated. The group toured a hoop barn cattle confinement structure and learned about the building process.

MDI - Southeast

Southeast teams worked with 49 farms (18,714 cows) in FY 2016. They estimate in-kind contributions for this region are $78,750 and the economic impact of MDI-Southeast efforts at $384,503.

This region reported that 2,711 people also participated in educational dairy workshops and events within the region. In addition, by co-sponsoring events like "Breakfast on the Farm," they helped expose 5,000 non-farm individuals to dairy farming.

In the coming year, MDI-Southeast Minnesota is going to develop a web site for the statewide dairy initiatives group.

We have been a member of the MDI program since my wife and I began operating the family farm in 2012. My MDI team continues to be a major contributor in the development of our farm, especially this year with my stray voltage issues.

Robert Kreidermacher

Dairy Business Planning Grants

In fiscal year 2016, the Dairy Business Planning Grants Program awarded $6,000 to two producers who are considering making significant changes to their operations. The average grant was $3000. The total amount granted was $6000, with recipients contributing a match of $6000.

Some applicants were considering expansion, while others were improving environmental stewardship, refinancing debt, or transferring the operation to the next generation.

COMPLIMENTARY EFFORTS

Benchmarking

Despite the belief that the size of a herd and milk production predicts the profitability of a dairy enterprise, farm financial data collected from 2012-2016 indicate that a well-managed small farm carrying a small debt load can provide a satisfactory level of income for a family (**www.finbin.umn.edu**). Using resources efficiently, maintaining a healthy herd, a base level of $17/cwt of milk, and monitoring milk production and quality through the use of milk testing programs such as the ones offered by Dairy Herd Improvement Association (DHIA) can all return profits to a dairy enterprise.

While we can use benchmarks to compare the performance of different enterprises to an average, many variables can affect performance and profits in any given year -- including weather, herd health, interest rates, debt load, milk marketing conditions, the availability and cost of labor, and the

Table 1. 2016 Dairy Enterprise Data

Hired labor	$240/cow
Total interest expense	$96/cow
Total direct expenses	$17/cwt
Milk produced (pounds)	22,000 lb/cow
Cull rate	30%
Turnover rate	36%
Percent of barn capacity	110%
Feed cost	$10 /cwt
Milk price and government support	$17.60/cwt
Total debt to asset ratio	<50%
Debt per cow	<$3,000
Labor hours per cow	<41
Average somatic cell count	<300,000

Source: **www.finbin.umn.edu**

cost of feed and supplements (Table 1). Milk price in particular has had a strong effect on dairy profitability recently. In 2014, Minnesota dairies reported receiving an average milk price of $24.45/cwt.[1] That year, they saw an average profit of $1,000/cow. By 2016, milk prices had plummeted to an average of $16.58/cwt, and the average dairy cow lost $92 during the year.

Most experts predict that dairy farms will continue to experience financial challenges in 2017.

Quality Count$

Quality Count$ is a statewide campaign to improve milk quality in Minnesota. Quality Count$ is led by the University of Minnesota with help from the University of Minnesota Extension, the MDA, regional MDI teams, FBM instructors, and Minnesota's dairy processors.

One key measure of milk quality is somatic cell count (SCC). Partner organizations worked together to help farmers reduce herds' SCC to below 300,000. Since the Quality Count$ program began in 2003, the average SCC on Minnesota dairies has fallen by 40% (Table 2).

Table 2. Average SCC of Minnesota Herds Enrolled in DHIA Milk Quality Testing

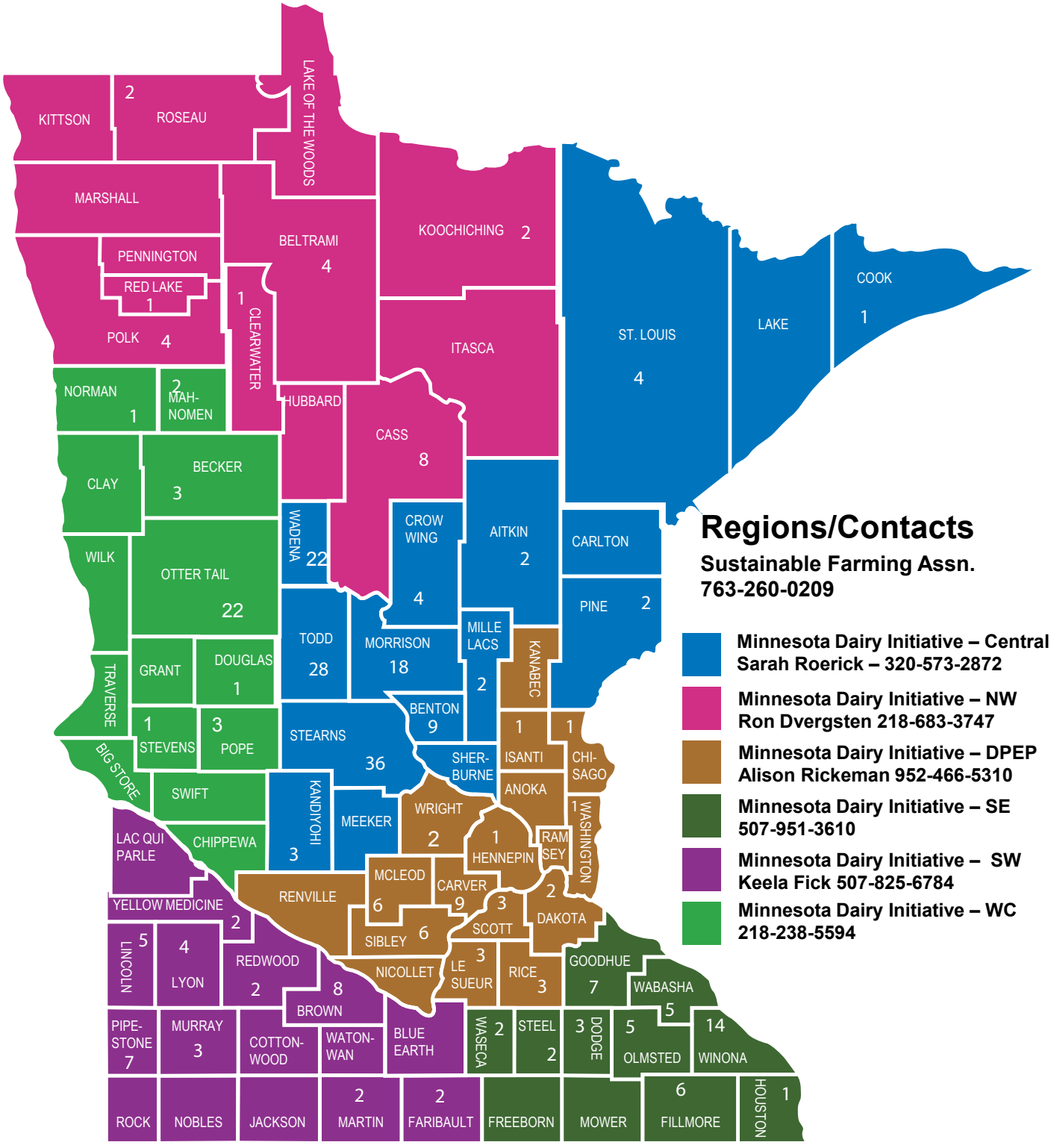
Calendar Year	Average SCC (x1,000)
2002	420
2003	397
2004	362
2005	366
2006	357
2007	347
2008	321
2009	297
2010	294
2010	294
2011	266
2012	240
2013	234
2014	245
2015	251
2016	250

Source: MN DHIA

[1] Milk is priced per 100 pounds, a hundredweight (CWT)

APPENDIX A

Dairy Development Profitability and Enhancement Teams and Regions



APPENDIX B

Laws 1997, Chapter 216, Section 7, Subdivision 2

1999 Minn. Stat. Chapter 231, Section 11, Subd.2

MN Session Laws 2001, 1st Special Session, Chapter 2, Section 9, Subdivision 2

MN Session Laws of Minnesota 2003, Chapter 128

2005 First Special Session Ch. 1 Article 1 Sec. 3 Subdivision 5

2007 Ch. 45 Article 1 Sec. 3 Subdivision 5

MN Laws 2009, Chapter 94, Article 1

MN Laws 2011, Chapter 14, Section 3, Subdivision 5

MN Session Laws, 2013, Chapter 114, Subdivision 5,

MN Session Laws, 2015 Chapter 17 Subdivision 3

MN Session Laws, 2017 Chapter 88 Subdivision 3C