

NODPA News

Northeast Organic Dairy Producers Alliance

November 2022 Volume 22, Issue 6 WWW.NODPA.COM



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The Sheffer family: Jillian, Eric and their son, Jackson.

FEATURED FARM: SHEFFER'S GRASSLAND DAIRY, HOOSICK FALLS, NY Owned and operated by Eric and Wally Sheffer

Finding Value in Organic Dairy

By Tamara Scully, NODPA News Contributing Writer

Since 1774, the Sheffer family has owned and operated this bucolic farm, which now totals 430 acres, and Eric Sheffer is the sixth generation to do so. While there have been many changes throughout the centuries, the latest has been their 2017

transition to organic certification. They began transitioning to organic in 2014, with full certification in 2017. The farm, which supplies milk for Stonyfield Organic, is certified by Pennsylvania Certified Organic (PCO).

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Field Days Session Summary: Strategies for a Sustainable Pay Price for Organic Dairy

By Tamara Scully, NODPA News Contributing Writer

A panel of industry experts focused on one of the primary concerns organic dairy farmers have today - pay price - at the NODPA 2022 Field Days this past September. The session featured Sharad Mathur, Dairy Farmers of America (DFA); Dan Smith, New England

Dairy Compact; Jim Goodman and Siena Chrisman, National Family Farm Coalition (NFFC); and Tade Sullivan, Maine Dairy Industry Association (MDIA). The following is a transcript from the session's recording.

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Message from NODPA Co-President

It came across my phone screen recently, a picture of Teddy Roosevelt with a quote saying, "In any moment of decision, the best thing to do is the right thing, the next best thing is the wrong thing, and the worst thing you can do is nothing." I smiled because it made me think of an old friend who often started his day saying, "I've got to do something today, even if it's wrong."

All of us are facing more tough decisions on the farm as we struggle with rising costs of grain, fuel, trucking, parts, and labor. We have tried to economize where we can to "do the right thing" like cutting down our bale wrap purchases. We stopped feeding grain. We parked some equipment because it is just too expensive to fix right now. We can't sell hay to customers at a distance because no one can afford the trucking. So we bartered that hay with some neighbors, and now have a winter's worth of potatoes,

apples and root vegetables in the cellar. We are all doing the best we can to stretch the bounty of the harvest season.

We will make some good choices, and we will make some mistakes. But Teddy is right, we can't just do nothing.

Changes are on the horizon in our industry, and farmers' voices are needed. We are needed to tell our story; to tell who we are, what we have and what we need. To each other, to consumers, to decision-makers, and to the government. It doesn't take much time, but it can have lasting ripple effects. If you think you would like to add your voice, please talk with Ed Maltby or myself (Liz Bawden).

From all of us with NODPA, we wish you and your family the happiest of Holidays!

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From the NODPA Desk: Will return in the future to make room for more articles this issue.

Pay and Feed Prices November/December 2022

By Ed Maltby, NODPA Executive Director

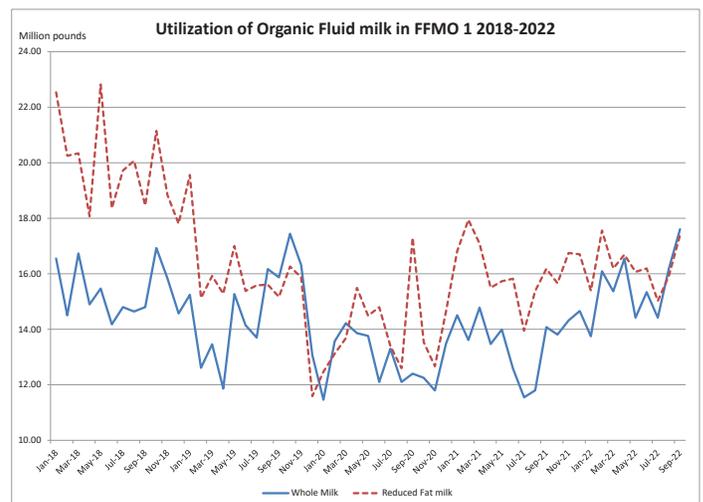
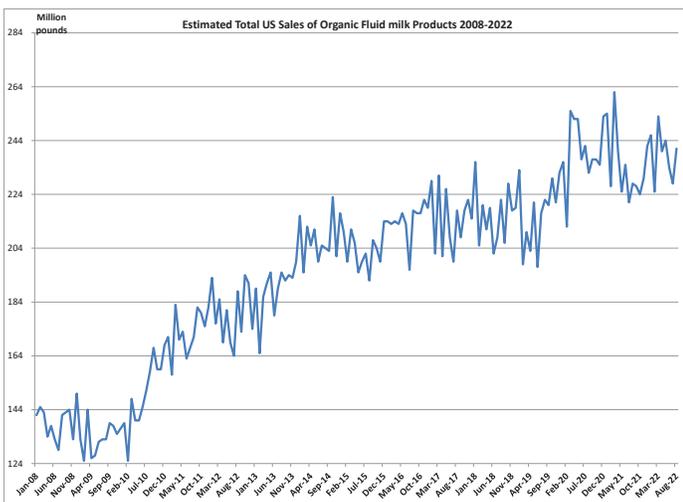
The Agricultural Marketing Service (AMS) reported in July 2022 that estimated fluid product sales of organic milk increased by 0.3% over July 2021, and an increase of 2.1% in August 2022 over August 2021, with a minus 1.5% for the year-to-date 2022 over 2021. Organic whole milk sales, at 108 million pounds in July, and 116 million pounds in August, showed the greatest growth with a 2.2% growth year-to-date. Reduced fat milk sales were 119 million pounds in July, and 124 million pounds in August 2022, falling 4.7 percent from the previous year year-to-date.

Federal Milk Market Order 1, in New England, reports utilization of types of organic

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Product Name	Sales of Organic Fluid Milk in million pounds		Percent Change from	
	Jul-22	2022 Year to date	Jul-21	Year to date
Organic Whole Milk	108	779	5.6%	1.6
Flavored Whole milk	1	12	-22.3%	10.1
Organic Reduced Fat Milk (2%)	75	558	-3.6%	-3.7
Organic Low-Fat Milk (1%)	22	173	-6.9%	-8.4
Organic Fat Free Milk Skim	13	100	-8.9%	-7.3
Organic Flavored Fat-Reduced Milk	8	48	11.8%	-4.8
Other Fluid Organic Milk Products	0	1	234.2%	261.8
Total Fat Reduced Milk	119	879	-3.8%	-5
Total Organic Milk Products	228	1,670	0.3	-2

Product Name	Sales of Organic Fluid Milk in million pounds		Percent Change from	
	Aug-22	2022 Year to date	Aug-21	Year to date
Organic Whole Milk	116	894	6.6	2.2%
Flavored Whole milk	1	13	37.5	11.60%
Organic Reduced Fat Milk (2%)	79	636	-1.1	-3.3%
Organic Low-Fat Milk (1%)	24	197	-8.4	-8.4%
Organic Fat Free Milk Skim	13	113	-6.7	-7.2%
Organic Flavored Fat-Reduced Milk	8	56	25.4	-1.5%
Other Fluid Organic Milk Products	0	1	85.7	221.6%
Total Fat Reduced Milk	124	1004	-1.9	-4.7%
Total Organic Milk Products	241	1911	2.1	-1.5



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Field Days Session Summary: Strategies for a Sustainable Pay Price for Organic Dairy

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NODPA Executive Director Ed Maltby opened the session by emphasizing its relevancy today, as organic dairy farmers are struggling with high costs of production and low pay price. He noted that the USDA's program to transition dairy farmers to certified organic production - the Organic Transition Initiative (<https://www.farmers.gov/organic-transition-initiative>) announced in August - is funded by billions of dollars, yet there is little if any money designated to assist the current organic dairy farmers, despite their ongoing struggles.

"Where is the priority there?" It is becoming increasingly necessary, as organic dairy matures, and heads further down the path to being a commodity, to look at different ways to survive, Maltby said. "If a market price isn't going to sustain organic dairy farms in the Northeast, and across the country... then what do we need to look to the government to do; what programs are successful; are there answers on the State level; on the Federal level? Are there any answers at all?"

Industry Solutions

Sharad Mathur - speaking for himself, and not officially representing DFA - acknowledged that issues facing today's small and mid-sized family organic dairy farmer are numerous. In the Northeast, smaller dairies and long distances between farms are a primary concern.

"There are so many challenges. Farms are scattered all over the place. Farm size is a big issue. Load size going from state to state is a big problem," he said.

A plant, that could be located somewhere in the Northeast and owned collectively by the farmers for processing organic milk from the region, is a very good idea. Branding the milk as a regional product is an important first step, even before shovels are put in the ground.

"It's easy to build a plant. It's hard to build a brand. First build a brand, co-pack and market the products, and after that, build a plant," he said. "The plant would take two or three years to



Sustainable Pay Price Strategies Session: L-R: Jim Goodman, Siena Chrisman, Sharad Mathur, Tade Sullivan, Dan Smith, Ed Maltby, facilitator

build, so doing so while simultaneously building the brand is a good option."

Based on his experience, this method worked for Natural by Nature, and also for Fage, both of which were co-packed for years before they needed to build their own plant. Other brands built plants first, and then their products didn't sell. That, he says, should be a warning.

"The brand was built first, and then the plant came," he said of these - and other- success stories in dairy processing.

Hauling is another major concern for organic dairy in the Northeast. If cooperative members don't pay for hauling, the cost must be absorbed by the processor from sales. But if producers are charged for hauling, they'd receive a higher pay price, and "at least you would have known how much it cost to get the milk from your farm to your plant," Mathur said. "The only solution is if we can figure out how to get the milk picked up together, regardless of who is processing it, or whose member you are."

In Mathur's experience, concerns about milk quality seem to be the biggest hurdle to co-hauling. But most organic farms in the region are high-quality farms, and there should be solutions to overcome this hesitancy by farmers. Balancing the milk is also an issue, as any over-production of organic milk currently goes into conventional products, and the organic's value-added

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premium is therefore lost. Processing any oversupply of organic milk into organic dairy products is the solution.

Conventional processors in the Northeast swap and transfer milk regularly, despite being competitors. This benefits the companies, but also the farmers who have a market for their milk even if their own processor's milk supply is overabundant, or not. By working together to keep the region's milk balanced, everybody wins, Mathur said.

Technology, as well as economies of scale, has put pressure on small dairy farmers. Now that ultra-high temperature pasteurized milk can last for six months, and even standard milk can now have a shelf life of more than 22 days after packaging; delivering dairy products to local, rural areas is no longer an issue for larger, more-distant plants. The smaller processors, located in rural communities, were no longer able to compete.

State Level Initiative

Dan Smith, who has worked on milk pricing at the Vermont legislative level for many years, discussed some new initiatives from Vermont aimed at keeping dairy farmers in business. The loss of dairy farms in the past 20 years has been of great concern—about two-thirds of Vermont dairy farms have closed.

Historically, all of Vermont's milk went to Boston, with 10 percent staying in-state. And almost all of this was fluid.

In the past several decades, that has changed, and the Vermont milk market is no longer so simple. The legislative ability of Vermont to regulate the milk pricing was nominal, as that occurs in the state where the milk is purchased.

Now, however, the milk market in Vermont has been transformed. Vermont now has regulatory authority over milk pricing, as approximately 60 percent of the milk produced in the state is currently being used by processors located in Vermont.

“When you add the on-farm processing and the smaller scale plants, it's bumped up even more than that,” Smith said. “But at the same time, the state is shedding farmers.”

Vermont is trying to find out how to keep dairy farmers in operation, by looking at how the processing plants are paying for the milk, creating a task force to investigate the issue. While the volume of organic milk that's produced in Vermont is not a significant number, the number of organic dairy farms is, he said.

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Field Days Session Summary: Strategies for a Sustainable Pay Price for Organic Dairy

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While an exemption from the existing FMMO might be in order for the organic dairy industry, and is probably going to be considered in the next Farm Bill, it is important to know what is actually occurring in the organic dairy sector before implementing changes.

“As Class 1 sales continue to decline, the pool may actually work to the benefit” of organic dairy processors as there now is more organic value-added dairy processing, Smith said.

Tade Sullivan, who grew up on a generational dairy farm in New York, and now works on dairy policy in Maine, discussed how Maine is attempting to address ongoing issues in the dairy market. There are 177 dairy farms in Maine, with 56 certified organic. Maine’s organic dairies produce about 4.8 million pound of milk per month, which is known because the State collects production data.

Maine produces about as much milk as it consumes and isn’t controlled by the FMMO. Instead, they have their own State level system, which is governed by the Maine Milk Commission, and has been since 1935. It was established to benefit consumers, establishing minimum prices at the retail level, which are reviewed on a monthly basis.

Addressing the price the farmers are paid, and the cost of production, is a part of the Maine Dairy Stabilization “Tier” Program, in effect since 2004. The program is based on conventional pricing. A cost of production survey is conducted every three years - 2020 was the latest one - by the Maine Milk Commission. “It is intended to provide some assistance to producers when prices are bad,” Sullivan said. “In June, everybody starts over at Tier One. Some farmers never break the threshold, but there may be farm, on the larger side, that break that Tier One threshold the first month.”

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An over-order price is based off the Federal Order, and is calculated based on the farmer's tier, to create a State price. The monthly price is compared against the cost of production. Money comes from the Maine State Legislature's General Fund.

"We are not calculating these payments based on individual payments to a farmer. It's all based on an aggregate," Sullivan said. "It does not make anybody whole. But it's a tool to help dairy farmers in the State of Maine. It doesn't account for the differences that I know every one of you experiences as organic producers."

Organic producers receive Tier payments regardless of any premium they may receive from their processor, but they receive payments based on conventional cost of production levels. Those selling farm-gate milk are not in the program, as it is based on milk sold into the market.

National Advocacy

Jim Goodman and Siena Chrisman addressed solutions on the national level. The National Family Farm Coalition (NFFC) has been representing all family dairy farmers, conventional and organic.

"We believe the best organic industry has strong rules everyone has to follow. We've always opposed industry consolidation because we think that takes away market power from farmers and market access for consumers," Goodman said.

In 2019, the NFFC launched the *Milk from Family Dairies Act*, which is all about fair pricing for farmers, as well as stable, quality milk supply and fair consumer pricing.

"Over the course of developing this Act, the market has really changed," Chrisman said. "Organic farmers in the Northeast still felt pretty cushioned by the premium, and by the way your markets managed their supply."

The Act has three main concerns: fair farmer pricing based on their cost of production; a balance of supply and demand; and better dairy import and export control. Additionally, the Act promotes measures to break up concentration in the market, and to strengthen regional dairy structure. Increased enforcement of organic standards "would really go a long way towards shrinking the power of large, organic operations," Chrisman said.

The Act would include the establishment of a board made up of dairy farmers. They would use existing USDA-ERS data, based on farm

size and costs of production, to determine farmer pay pricing. Organic dairy could be handled separately from conventional. Regional farm boards could adjust the prices up, as needed, based on regional price differences.

"Each farmer will determine their production base, which is the amount of milk each farmer could sell into the market," which once established follows the farmers, not the farm. These production bases cannot be bought, sold or combined, in an effort to curb consolidation, Chrisman said, and is an alternative to quotas, which have not worked in other industries.

"We are trying to correct for that," she said, "and to avoid the high prices we see in other markets."

Whether any of these solutions can effectively assist organic dairy farmers remain viable by buffering against unfavorable market forces remains unknown. But changes are needed to keep the once-thriving, family organic dairy farms in the Northeast, and other regions, alive.

"Feed inputs aren't going to come down in price. There is no magic silver bullet. It's going to take time to improve genetics, it's going to take time to improve the quality of your pasture," Maltby said. "What we're trying to do here is to put out different ideas that can be taken by NODPA and other groups and individuals, from state, to regional, to federal levels, to stem the flow of losing organic dairy farmers." ♦

Contact information for the presenters can be obtained by contacting NODPA at 413-772-0444.



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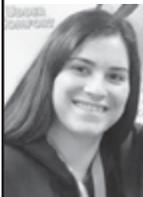
She's doing her part, we've got to be doing ours.



File photo unrelated to farms quoted in ad.

A recent graduate review of the literature by Cora Okkema and Temple Grandin, published in the Journal of Dairy Science (Vol. 104, Issue 6), suggests udder edema is becoming an “emerging animal welfare issue” in addition to being “quite costly to the dairy operation.”

The authors observe it may be present in a high percentage of dairy cows, especially first-calving animals that “exhibit negative behaviors, such as decreased lying time, frequent stepping in the parlor and udders and teats that are sensitive to the touch. Udder edema can have detrimental effects on the structural integrity of the udder and teats, which then increases risk of mastitis,” the authors write, noting that “udder edema is associated with udder cleft dermatitis (udder scald) and increased risk of mastitis.”



This is one reason why Emily Pankratz relies on Udder Comfort™ for the 150-cow Organic dairy herd she manages at Holtz Ridge Grass Farm, Rudolph, Wisconsin, where she has enjoyed caring for the cows from calving through dryoff.

“We keep using Udder Comfort because it takes edema out of the udders more quickly than anything else,” Emily reports.

“Our protocol is to spray udders with the Udder Comfort yellow spray after every milking (post-calving) until the cow or heifer is no longer high on CMT test. This includes all fresh cows plus any cow that may acquire mastitis or high SCC at any point in lactation,” she explains.

“What I like most about this product is how fast it works on edema. It helps blood flow and gets our heifers off to a quick start,” Emily confirms.

Jonathan Miedema of Dutchlane Dairy agrees. He is the third-generation operating the 130-cow Organic dairy farm near Sherburne, New York. “Being an organic dairy, it’s good to have this natural product for preventive use in fresh cows. Udder Comfort provides relief from swelling. It’s part of our management for high quality milk,” he relates.



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ORGANIC PRODUCTION

Best Nutrition Strategies During Times of High Grain and Input Costs

By Bill Kipp, Nutritionist and Dairy Consultant, Independent Dairy Consultants, Inc., Middlebury, VT, Heather Darby, Agronomic and Soils Specialist, UVM Extension, St Albans, VT, and Sara Ziegler, Crops and Soils Coordinator, UVM Extension, St. Albans, VT

This article provides highlights from a presentation given at the NODPA Field Days held on September 29th, 2022.

Organic grain prices continue to increase as well as most other input costs (Table 1). With ongoing supply chain issues, a war in Ukraine and stagnant milk prices, it is critical to find opportunities to feed more homegrown feed and reduce grain purchases. This article will outline 10 practical approaches to consider while managing high grain costs.

Table 1 Organic grain and milk prices, 2020-2021

	2020	2021
Organic Milk	\$31/cwt	\$33/cwt
Organic Corn meal	\$450/ton	\$565/ton
Organic Soybean meal	\$1,200/ton	\$1,700/ton
Organic Complete feed	\$570/ton	\$700/ton

#1- Forage quality

Forages must be the primary component of your ration and grain should be added to compliment the forage. The goal is to produce pasture and stored forages that can meet the targets shown in Table 2. Growing ample forage protein on the farm is easily achievable; however, producing adequate energy from forages can be more difficult. Forage energy is derived from soluble carbohydrates (sugar, starch, etc.) and digestible fibers.

Table 2. Stored Forage Quality Targets

Protein	14-16%
Fiber digestibility	>60% NDFd 30-hr
Sugar	>10% ESC
Dry matter	45-60% baleage 40-50% haylage
Fermentation VFAs	
Lactic	>5%
Acetic	<2.5%
Butyric	0%

To meet the energy targets outlined in Table 2, close attention needs to be paid to harvest timing, species/variety selection, soil fertility management, and storage.

Forage species differ dramatically in their potential to produce highly digestible fiber (Figure 1). Forage species also differ in their productivity depending on the season (Figure 2). As an example, perennial grasses and forage produced from small grains can have some of the most digestible fiber concentrations. Finding the right balance/combination of these forages that meets your management system can help greatly reduce purchase of grain. However, growing annual forages can often increase production costs so trade-offs need to be evaluated closely.

Forage species and variety evaluations are conducted by the University of Vermont each year and results can be found at www.uvm.edu/nwcrops/research.

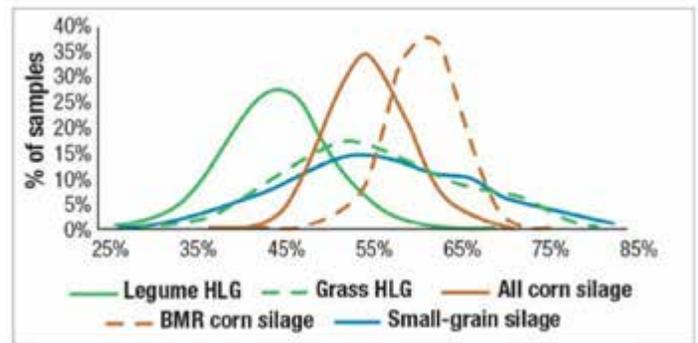


Figure 1: Fiber digestibility of various forages (Cumberland Valley Analytical Services).

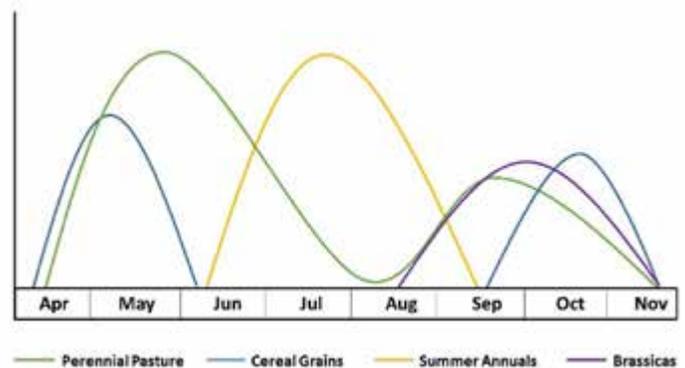


Figure 2: Productivity of various forage types throughout the season.

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Best Nutrition Strategies During Times of High Grain and Input Costs

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Clearly, there is more to producing high quality forages than just selecting the right species! Proper maintenance of soil pH and fertility levels is critical to growing high yields, high protein, and

high energy feeds. Timely harvest is also critical to obtaining the most yield throughout the season and adequate levels of protein and digestible fiber. The more mature a plant becomes

the less digestible it becomes too! Ultimately, optimizing yield and maximizing pounds of digestible fiber should be the goal. Remember these same principles apply to pasture too!

Storing feed for the winter is a must in our region and proper storage is essential to maintaining the quality of the feed over time. Much of our forage is stored as fermented feed and hence must have a protective shield to keep out pests and maintain the fermented state. Individually wrapped bales allow much flexibility and also easier management. Each bale is wrapped and damage to one doesn't mean loss of an entire tube or pile. Wrapped bales can also be easily labeled and categorized by quality. This makes it easier to feed out or combine feeds into optimum rations.

#2 Farm-raised Grains

If you have sufficient land base and are already maximizing productivity and quality on your acres, then you may have an opportunity to raise some of your own grain or corn silage/snaplage. However, growing grain isn't for everyone and comes with additional equipment needs and considerations.

#3 Higher Production Peaks

Remember, the first 100 days of lactation offer the highest margin over feed costs and attaining a higher peak translates throughout the rest of the lactation. The result is that the same or more milk can be produced from fewer cows, reducing associated expenses. Grouping cows by stage of lactation can be a means to "get the most" from these animals at the lowest cost.

#4 Grouping Cows

Although largely inconvenient and likely more management intensive, grouping cows into production levels can reduce feed costs, improve cow productivity, and also reduce



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nutrient waste. It promotes feeding valuable nutrients to benefit cows at different stages of lactation and results in optimum efficiency, productivity, and profitability.

#5 Dry Cow Management

Managing the milking herd optimally really starts at managing that herd when they're dry. Grouping dry cows and ensuring they receive the right nutrition, including minerals, is critical to preparing them for lactation in a way that will maximize production and health. Below are some quick rules of thumb for dry cow group management:

Groups	Hay	Pasture/forage	Supplements	Minerals
Far cows (1-25 days)	Min 5#/cow/day	Good quality pasture, baleage, or hay ad lib		Dry cow mineral
Close up (25-50 days)	Min 5#/cow/day	Excellent quality pasture, baleage, or hay ad lib	Roasted soybean 2#/cow/day	Dry cow mineral

It is important to supply the close-up cow with adequate amounts of highly digestible protein. The developing fetus is requiring more protein leading up to calving. Roasted soybeans are palatable, available in the Northeast, and easy to store. Offer your best forage to these cows to enhance dry matter intake and avert ketosis.

In addition, you need to consider your facilities. There are lots of creative and low-cost options that will keep them comfortable. You must also have good pasture available close by where you can see them.

#6 Grain Storage

Due to shortage of drivers and increases in shipping costs, grain companies have begun to impose minimum delivery size requirements or may offer lower prices for larger orders. Having adequate storage can help minimize surcharges and, in some cases, keep your farm on the delivery route. Some grain companies offer assistance with upgrading grain bins to keep your business and lower their transportation costs.

#7 Grain By-products

Some feed components used in dairy rations, such as brewers waste, are from human food waste streams. These by-products may provide less expensive alternatives to purchasing whole grains. Unfortunately, there have been limited grain by-products available in the organic industry; however, as organic food production grows so does the opportunity to receive by-products. Also, local sources may be available.

#8 Grain Contracts

Price contracting is an excellent tool used by many farmers to lock in prices for their business. With known costs, budgeting and planning throughout the year can be easier. Many dairy farmers have routinely contracted with a local feed company for a certain tonnage of a complete grain mix (complete feed) or

protein supplement to be delivered for a set time frame, usually one year. With high grain prices this has become more difficult but should still be investigated.

#9 Minerals

Mineral supplements are essential and should not be disregarded due to high costs. Many cooperatives offer pre-purchase minerals at a discounted price. For example, DFA leverages a milk check payment assignment to in return offer farmer members very competitive pricing on minerals. Pallet quantities are direct shipped from any one of three mineral distributors in the Northeast.

#10 Fertility and Breeding

It is always important to consider what type of animal is best suited to your land, facilities, management, and milk market. Make sure you are selecting animals that fit these criteria and culling animals that don't even if they are desirable in other ways. If your conception rate is >50% you should delay breeding until 90 DIM. This will result in higher production peaks as peaks are

higher on open cows. ♦

If you are interested in reaching the presenters, please call or email NODPA: 413-772-0444, or email Nora Owens, Field Days Coordinator, at noraowens@comcast.net.

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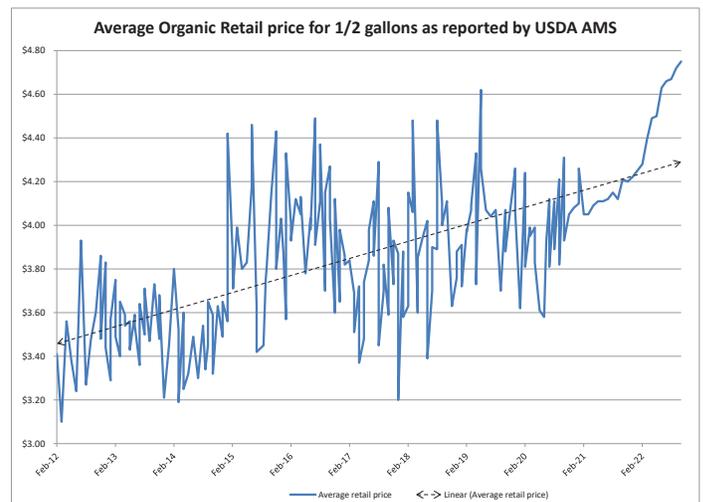
ORGANIC INDUSTRY NEWS

FMMO 1 UTILIZATION OF ORGANIC FLUID MILK PRODUCTS AND CREAM BY POOL PLANTS (Million pounds)					
	Fluid retail Organic Milk 2022	Fluid retail Organic Milk 2021	Fluid retail Organic Milk 2020	Increase/Decrease of 2022 over 2021	Increase/Decrease of 2021 over 2020
JANUARY	29.14	31.32	23.93	-7%	31%
FEBRUARY	33.65	31.56	26.69	7%	18%
MARCH	31.56	31.87	27.90	-1%	14%
APRIL	33.23	28.97	29.35	15%	-1%
MAY	30.49	29.72	28.25	3%	5%
JUNE	31.53	28.41	26.90	11%	6%
JULY	29.44	25.50	26.70	15%	-4%
AUGUST	32.12	27.18	24.70	18%	10%
SEPTEMBER	35.00	30.26	29.70	16%	2%
OCTOBER		29.47	25.78		14%
NOVEMBER		31.07	24.47		27%
DECEMBER		31.36	28.13		11%
ANNUAL	286.16	356.68	322.50		11%

Pay and Feed Prices

continued from page 3

milk by pool plants. During August 2022, organic whole milk utilization totaled 16.2 million pounds, up from 11.8 million pounds the previous year. The utilization of organic reduced fat milk, 16.0 million pounds, increased from 15.4 million pounds a year ago. During September 2022, organic whole milk utilization totaled 17.6 million pounds, up from



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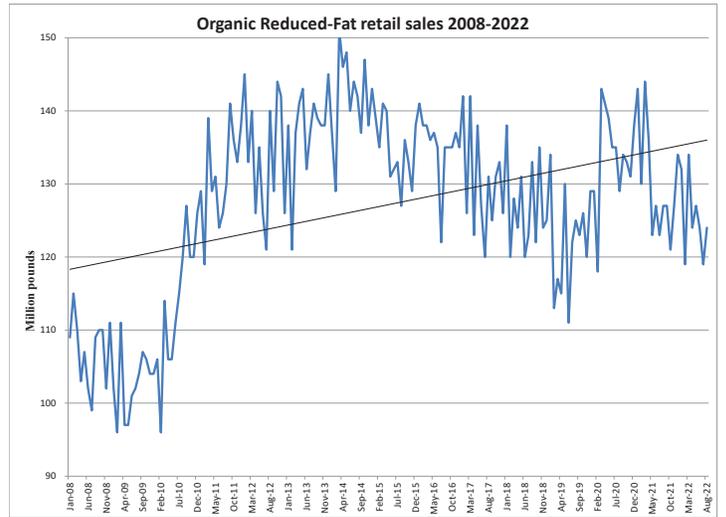
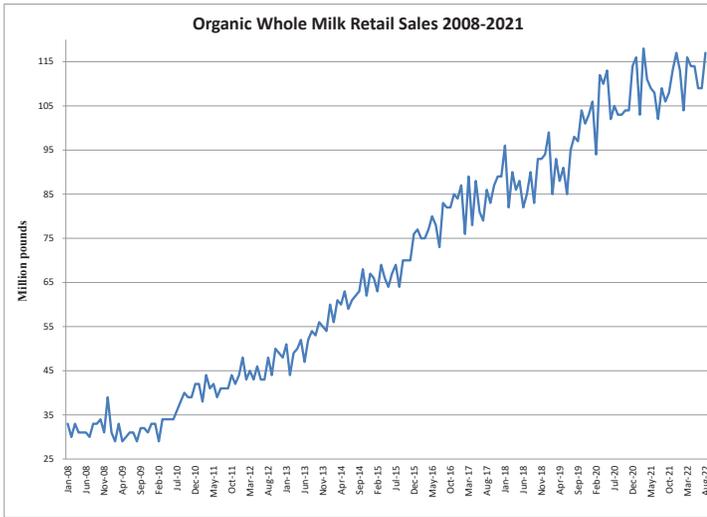
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14.1 million pounds the previous year. The utilization of organic reduced fat milk, 17.4 million pounds, increased from 16.2 million pounds a year ago.

August 2022. with Pittsburgh, PA paying up to \$6.49 per half gallon while Seattle WA pays only \$3.94 per half gallon. The producer receives \$1.33 for a half gallon of milk.

Mercaris supplies data on the average pay price for organic milk over the spot price. There was not a significant amount of trading on the Spot Market in September 2022. Anecdotally, producers, processors, and buyers report that organic milk is short in the northeast.

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U.S. Organic Dairy Prices (U.S. Dollars per CWT)		
Date	Spot Fluid Milk Price	Fluid Milk Pay Price
Mar-22	\$ 33.21	\$ 28.54
Apr-22	\$ 32.72	\$ 29.59
May-22	\$ 33.88	\$ 28.77
Jun-22	\$ 35.88	\$ 29.05
Jul-22	\$ 35.88	\$ 28.37
Aug-22	\$ 37.05	\$ 29.66
Sep-22	\$ -	\$ 29.66

Data from Mercarus 10/18/2022

AMS reports organic milk retail prices for selected U.S. cities. The data is collected by the Federal Milk Market Order administrators based on a survey conducted one day between the 1st and 10th of each month (excluding Fridays and weekends) in selected cities or metropolitan areas. One outlet of the largest and second largest food store chains are surveyed. The price represents the most common brand in ½ gallon nonreturnable containers. The September 2022 in-store retail surveys showed the average retail price increased to \$4.72 and to \$4.81 in October 2022, up 14 cents from the

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Field Days Session Summary: Ask the Vet: Question & Answer Session

By Tamara Scully, NODPA Contributing Writer



Dayna Locitzer, DVM (L) and Elizabeth Martens, DVM (R)

The “Ask the Vet” session at NODPA’s annual Field Days is always a highlight. This year, Dayna Locitzer, DVM, of Green Mountain Bovine Clinic in Chesterfield, New Hampshire, and Elizabeth Martens, DVM, of Valleywide Veterinary Services, Bridport, Vermont, fielded attendees’ herd health questions. Below is a transcript of the session recording.

Calf Health

Foremost on everyone’s mind was concern about the prevention and treatment of calf illnesses. And the primary concern was scours.

“We could talk all day about scours,” Dayna said. “We have a bunch of points we think are really important to keep in mind with scours.”

The most important thing is to provide colostrum, which provides lifelong benefits and protects immediately from the pathogens which cause calf scours. Colostrum is filled with antibodies, and is the only protection calves have from pathogens, as they have no immune system when born.

“The first thing that will prevent scours, and the most effective thing, is to make sure they get colostrum - ten percent of their body weight- within eight hours, ideally, of birth,” Elizabeth said. “Colostrum is full of antibodies to the same exact bacteria and viruses that cause diarrhea. We call it ‘liquid gold.’ There is nothing better than that, and it follows them for their entire life as far as health and production outcomes. There is no replacement for sufficient colostrum.”

A second important factor in the prevention and treatment of scours is understanding when particular pathogens are most likely to cause illness, Dayna said. Different pathogens are the primary scours-causing agents at various stages of calf growth.

Escherichia coli is the cause of scours from birth to 10 days of age. It is associated with manure in the environment. When newborn calves ingest manure, they absorb it - as they do colostrum - very well. And that manure contains E. coli bacteria, which then causes scours. Cleanliness in the birthing pen is of the utmost importance in preventing the pathogen from entering the digestive tract.

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Coronaviruses and rotaviruses cause scours from 10 days to two weeks of age. These are prevented via vaccinating the dry cow with Scourguard® several weeks prior to birth, or by providing antibiotics in the form of First Defense® Tri-Shield™ paste to the newborn calf, both of which also protect from E. coli scours.

Cryptosporidium is yet another pathogen causing calf scours, which appear at the same time as does viral-caused scours. Providing calves with proper nutrition - a minimum of 10 percent of their body weight in milk per feeding - will help to keep this pathogen at bay.

Coccidia is an oocyte, and causes scours which occur after a few weeks of age. These pathogens are spread in manure, and the oocyte can live for quite some time, depending on environmental conditions, without a host.

It's important to avoid common myths about treating scours, Dayna said. One misconception is that feeding milk to calves with scours is harmful, and the other involves electrolytes.

Calves need to receive the highest plane of nutrition, which comes from adequate milk feeding, so feeding milk remain

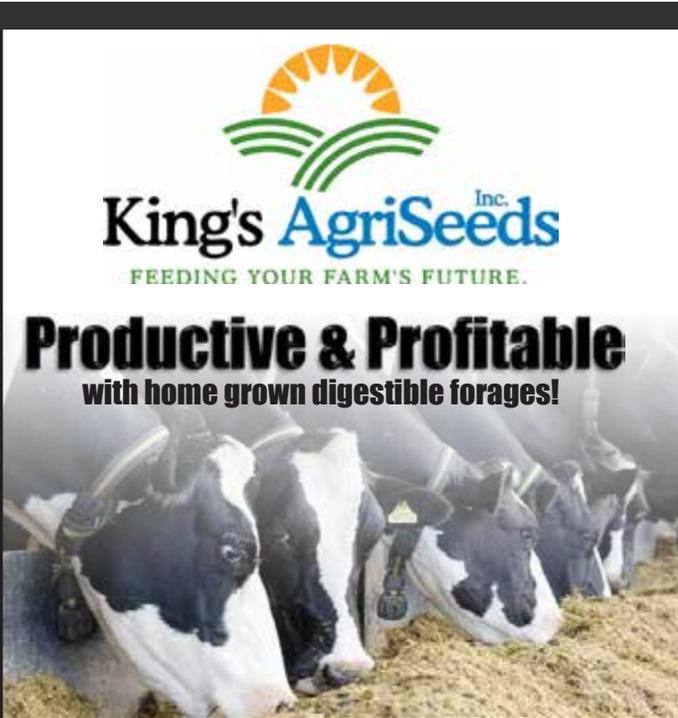
essential. Feeding smaller amounts of milk at a time could be helpful when treating scours, as the sick calves do have digestive problems.

“They are growing animals, and building all of the important foundations for being good milk cows, and they need that nutrition,” Dayna said. And while electrolytes are important, all electrolytes are not created equal, and many do not have the ingredients a calf with scour needs. A calf with scours is dehydrated, but also has too much acid in the rumen. They feel weak, don't want to suckle, have low blood sugar from not absorbing food, and tend to be cold. Keeping them warm and dry, as well as fed and hydrated, are all important.

Not drinking or eating exacerbates the original problem of dehydration from the diarrhea. Electrolytes will provide fluid, but also need to neutralize the acid. Some electrolytes don't even contain products which help with the overabundance of acid.

“There is such thing as bad electrolytes. It's important to feed them the right kind of electrolytes,” Dayna said. “Not all of

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Field Days Session Summary: Ask the Vet: Question & Answer Session

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the electrolytes are listed on what's approved for organic, so check with your certifier. If it's not approved, it can sometimes be approved."

A traditional type of electrolyte has bicarb - such as inexpensive baking soda. But if fed orally, baking soda will go directly to the abomasum - the calves don't yet have a functioning rumen - making it less acidic. But in doing so, the calf is less able to protect against stomach bacteria, and the bicarb actually lowers defenses from environmental bacteria.

Propionate and acetate are other forms of base and are often found in commercial electrolytes. These neutralize the acids, but do not also lower the calf's ability to fight off environmental bacteria in the stomach. Hydrolyte® is one commercial electrolyte recommended.

"Make sure that you are getting a really effective electrolyte that's not only giving them fluids and sugar, but also

something that neutralizes the acid, and makes them feel better," Elizabeth said.

It's really important that calves get milk and electrolytes, but without a good suckle reflex, getting these into the calf can be challenging. Tubing a calf requires a suckle reflex. Without it, the gastrointestinal tract isn't moving, and tubing them will lead to problems, as the fluids will sit in the abomasum and cause bloating and promote growth of pathogenic bacteria, which could lead to death. Intravenous fluids are needed if there is no suckle reflex. "If they don't have a suckle reflex, they need IV fluids," Dayna said.

"When an animal has scours, or diarrhea, the part of the intestine - the villus - that creates lactase enzymes that digest that sugar, the very tip of it is the first thing that gets inflamed...and that's the part of it that makes the enzyme. They become slightly, temporarily lactose intolerant while they have scours," Elizabeth explained.

Adding back lactase in the form of a supplement, just as human's who are lactose intolerant do - assuming it is allowed in organic production - is one way to help the calf digest milk and prevent the milk from fermenting in the intestine and causing more problems. It's not a cure for scours, but it helps.

A discussion on whether lactase is allowed in organic production*** - and recognizing that even if so, some commercial products may contain other ingredients that might not be allowed, as well as whether or not feeding raw milk would allow digestion without lactase enzyme needed- ensued.

*****Bea Hammond of Vermont Organic Farmers/NOFA-VT has researched Lactaid and heard from the Johnson & Johnson Company with the GMO information that was needed for Lactaid. Lactaid is now an allowed healthcare product for VOF producers. *****

As all milk has the sugar lactose, including raw milk, and the only way the lactose sugar can be broken down is via the enzyme lactase, true lactose intolerance means that raw milk cannot be digested, Dayna said. So raw milk would not be digestible by the calf with scours.

Scours can be very serious. One attendee stated that they had no problems with scours for years, until they suddenly did, and half of their calves died. They could not get it controlled

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until they had it cultured, and realized that it was being caused by a pathogen - rotavirus - that their calf preventative regimen was not targeting. Once they began using a product that contained antibodies for rotavirus, the scours was eliminated.

Pink Eye

There has been discussion about pink eye on the ODAIRY forum recently, and pink eye was also a hot topic for the Ask the Vet session. Pink eye is often caused by two distinct pathogens, *Moraxella bovis* and *Moraxella bovoculi*, and each requires a separate vaccine. Other pink eye pathogens cannot yet be vaccinated against, such as mycoplasmas, which are also primary pathogens. Pink eye infections are often caused by more than one microbe simultaneously.

“Unless you are vaccinating against all the different types of pink eye that you are dealing with, vaccination is not going to really prevent a large outbreak,” Dayna said. “Vaccine failure when it comes to pink eye is quite common.” Using autogenous vaccines - made by culturing the pathogens on your farm and vaccinating against them- and keeping boosters and vaccinations up-to-date, could help. But autogenous vaccines are not always economically practical, and cultures need to be done every few years.

Calves should be vaccinated a few months prior to being introduced to pasture, and boosted several times before being turned out onto grass, as tall grass and flies are often co-factors in pink eye outbreaks. Flies spread the pathogens, while tall grass or other conditions such as ultraviolet light, blowing dust, or sand serve as irritants to the cornea. Damage to the cornea then allows pink eye bacteria to enter. Because there is not blood supply in the cornea, healing is difficult.

“Flies are huge. They not only damage the cornea; they spread the bacteria,” Elizabeth said. “Anything that damages the cornea can allow that bacteria in.”

Saline solutions, or taking blood from the sick cow using a red-topped tube and centrifuging and drawing off the top fluid to introduce into the eye, will promote healing. Sewing the eyelids shut or using eye pads can help protect from ultraviolet light and lessen irritation. Antibiotics don't do much except decrease the duration of the illness by a day or two.

Ringworm, a fungal pathogen, was also discussed. While primarily a problem in less healthy calves, ringworm causes a skin infection and as such the immune system is not directly involved in combating the disease. It tends to appear around weaning, when calves are under stress. While it normally subsides on its own after about six weeks, there are measures which can shorten the duration and provide healing. Apple cider vinegar, oregano oil, garlic and kelp were all considered

options as anti-microbial agents that might decrease ringworm's duration early in treatment.

“I don't think it's the ringworm causing them to not do well; it's the other way around,” Elizabeth said.

Minerals and vitamin levels should always be adequate. Kelp does provide trace minerals, and is good as a buffer for stressful times. Kelp has iodine, and can be used during weaning to promote healthy calves. Vitamin E and selenium are also recommended. A calf with a strong immune system isn't as susceptible to illnesses.

Cow Health and Vaccines

Pneumonia in cows was addressed. Prevention is really important with pneumonia, as there aren't many effective organic treatments. The pathogens - both bacteria and virus - causing pneumonia are already in the mouth of the cow. Increased stress can cause them to migrate into the respiratory tract.

Often acute pneumonia is cultured and shows that bacteria are the causative factor in death. Vaccinating for both bacteria

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Field Days Session Summary: Ask the Vet: Question & Answer Session

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and viruses - and doing so during the targeted times when infection is most likely - is recommended.

“In the face of an outbreak, we don’t want to inject the respiratory vaccine, you want to do the intranasal,” Elizabeth said, as nasal vaccines will begin to provide antibodies within hours. “Nasal vaccines are great. Injectable vaccines weeks before are even better, because they prime the entire system.”

It’s not the sick cow that needs the intranasal: They are already infected. But cows without symptoms can be rapidly provided some protection with nasal vaccines. Nasal vaccines have shorter durations of effectiveness, but work more quickly.

“Making sure her neighbor gets the intranasal vaccine,” is of primary importance, Dayna said. “That immunity that you’re putting directly into the nasal passageway is going to help to prevent her from getting what her stall mate has.”

Some producers spoke of not using vaccines and not having problems with disease for many, many years. Then suddenly, they lost many animals when a disease outbreak occurred.

“You’re going to be fine for ten years. And then something will happen and your vaccine would have paid for all those years,” of not vaccinating, by preventing cow illness and death, Elizabeth said.

Aside from discussing illness, the veterinarians talked about good cow health.

Time budgets were a concern for one producers, who said his cows, when outside in the middle of the day in winter, were all lying down. But they first stand in the barnyard for hours after being let out. He wondered why they did this.

“Does a cow know when she needs to lie down?” he asked.

At least seven hours a day lying down, preferably 12 hours, is needed, Dayna said. If nothing is preventing the cows from lying down, they will. A time budget of three hours of socializing is also part of the cow day. Perhaps his cows are doing their socializing in the barnyard, prior to going out to the field and lying down. Otherwise, it could be due to their not liking the transition from the dark barn and into the bright light.

Both of the veterinarians have been intrigued by “happy lines,” the slightly raised, always present lines seen on both sides of animals with good hair coats, and wanted to share their observations with the NODPA dairy farmers. During vet school, they wondered exactly what they are, but without a biopsy they can’t be definitely sure. Healthy fats might play a role. They’ve observed them on conventional and organic herds.

Seeing happy lines is an indicator of overall good health, they both agree, no matter exactly how they form, or what makes them appear. Cows with happy lines should have good immune systems.

Providing calves with colostrum, adequate milk, clean environments, mineral supplementation, vaccinations and preventative antibodies should go a long way towards creating cows with those happy lines. And that will put a happy face on every organic dairy farmer. ♦

THIS MARK MATTERS.

DFA Northeast is pleased to provide continued support to NODPA and organic farms.

NET UPDATE

Recent ODairy Discussions

By Liz Bawden, Organic Dairy Farmer, NODPA Co-President

Back in the early fall, a producer asked the group about their experience using Pyganic as a fly spray. Another producer offered these tips: “Pyganic, (or its cheaper sister, Evergreen Pyrethrin Concentrate 5.0, from the same company,) can be used as a fine mist knock-down spray at the rate of 1 oz./gallon. Most of the Organic farmers around here mix it with the essential oil-based Fertrell Fly-Aside, for more residual repellency on the pasture.” He noted that Pyganic breaks down rapidly in sunlight, so by itself offers very little in residual effect.

At just a few weeks of age, a calf exhibited bloat every day. Dosing with Epsom salts did not help. The gas had to be removed with a stomach tube or needle into her swollen side each day. Two vets on the list offered the following suggestions: Make sure the calf is drinking her milk at udder height so that the milk doesn't go into the immature rumen where it can cause bloat. It was suggested to give 15 to 20 ml of olive oil 2-3 times daily to act as a laxative. Homeopathic Nux vomica can be given to help stimulate movement in the GI tract, and if there is bloat present, Carbo veg can be given. It was also suggested that Fennel seed is a great carminative. If the bloat is from poor rumen motility, also add in astragalus, ginseng, and orange peel. But if it's from an omasum blockage, honey is the best lubricant. Or if there is pain from abomasal ulcers, add calendula.

A farmer was not impressed with the effectiveness of his calf weaning rings, or with the comfort to the calf. One producer shared that he had good success with the orange-colored plastic paddle devices. Another producer shared his favorite solution: use a bull ring and put three pieces of chain on it each three links long, using the standard size for neck chain.

With his barns full, a producer asked the group if wrapping his remaining dry hay in plastic would keep it better through the winter. Several farmers said they regularly wrap dry hay due to a lack of storage, and that the practice works well for them although the bales sometimes have a slight fermented smell. One farmer guessed that the right moisture would be about 12 to 15%, another suggested that net-wrapped bales shed water far better and have less spoilage than twine-wrapped bales.

Subscribing to ODairy:

ODairy is a FREE, vibrant listserv for organic dairy farmers, educators and industry representatives who actively participate with questions, advice, shared stories, and discussions of issues critical to the organic dairy industry.

To sign up for the ODairy listserv, go to:
www.nodpa.com/list_serv.shtml

Looking to reseed some pastures, a producer asked about others' experiences with Festulolium. A producer from Central New York and one from Wisconsin both said it was high quality feed and very palatable, but not reliably winter hardy. In some locations that receive an early and constant snow cover, it will persist longer.

A mid-lactation Jersey cow had been down for 10 days before this farmer found our ODairy community. Her vet had diagnosed the cow with milk fever, but she was not responding well to the CMPK treatments. A vet on the list suggested that she use BoviKalc boluses for an oral calcium source and have her local vet reach in to rule out lymphoma. Another farmer suggested that this may be grass tetany (a magnesium deficiency) since the cow wasn't responding well. He added, “Cows with a blood magnesium deficiency are slow to respond to treatment often taking several days before they can get up again.” The suggested treatment for grass tetany was CMPK given IV followed with Magnesium oxide (“pink pills”). All the participants in the discussion encouraged the farmer to keep treating her and be patient; one vet said, “If she's fairly content, eating and drinking and chewing her cud (even once in a while) and without evidence of any other catastrophic injury, carry on. My patience and that of the cow often is longer than that of the farmer. If she's the same or improving, carry on. If she's declining, reassess.” The farmer was happy to report that the cow was up and mostly back to normal 16 days after she went down. ♦

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ORGANIC INDUSTRY NEWS

Precision Technologies to Improve Dairy Grazing Systems

By Brad Heins, Glenda Pereira, and Kirsten Sharpe Moser, University of Minnesota, West Central Research and Outreach Center

Originally published in the West Central Research and Outreach Center Newsletter, October 2022; reprinted with permission.

Pasture-based dairy herds continue to grow in the United States as the demand for grass-fed and continued sustainable farming practices increases. Sustainable farming practices may be achieved with confinement dairy herds; however, the increased expense of dairy farming has caused farmers to adopt different management styles within their dairy herds. Animal welfare and cow comfort must be a priority within pasture-based dairy herds; however, unlike in confinement herds, cattle are not always within eyesight of employees. Therefore, precision dairy technologies (PDT) allow for cattle to be monitored continuously without constant human observation. Monitoring daily behaviors such as feeding, ruminating, resting or lying, and active time can aid in understanding animal health and productivity. Farmers that

want to increase overall production efficiency should consider implementing PDT.

The goals of PDT for dairy grazing systems include increased animal performance through enhanced milk production, increased fertility, improved animal health, reduced transition disorders, reduced lameness, and increased utilization of pasture through improved grazing patterns and behavior of cattle. Precision dairy technologies for grazing dairies have received a lot of attention because of advances in continuous monitoring of animal behavior and health of cattle on pasture, robotics, computer vision, and machine learning techniques. This article summarizes the current research and status of precision technologies for grazing dairy herds with wearable technologies, pasture forage measurements and grazing management, and autonomous and unmanned vehicles. Figure 1 displays the various precision technologies that are available to grazing dairy farmers and that are utilized at the University of Minnesota West Central Research and Outreach Center's (WCROC) pasture-based dairy herd.

Wearable technologies for grazing cattle

There are more than 50 wearable technologies that have been developed and marketed for dairy cattle. Many technologies are worn by the cow and may be reused, whereas some are placed inside of the cow and may not be reused. Cow behavior data such as eating time, ruminating time, lying time, and standing time may be continuously collected by the PDT. Once data is processed through algorithms it can be categorized into specific behaviors or health and estrus alerts. The data can then be viewed on a computer system, on a website, and some companies have applications for mobile devices. There is a need to improve welfare and efficiency and utilize behaviors to study grazing patterns as well as determine how heat stress can affect cattle on pasture.

The research team at the WCROC has [validated wearable technologies](#) for grazing cows and found which ones will accurately monitor rumination and eating behavior. The technologies were less accurate in monitoring the active behavior because grazing behavior and walking are difficult to define. In pasture-based herds, fly pressure may influence the behavior of cows. Increased horn fly populations were associated with a



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Figure 1: Precision technologies utilized at the pasture-based dairy herd at the U of MN WCROC. Left to right, top to bottom: CowManager sensor, SCR collar, RumiWatch halter, smaxtec bolus, Cowbot, AfiLab milk sensors, AfiActII pedometer, Jenquip rising plate meter, Smarbow, RumiWatch pedometer

decrease in rumination for cows that grazed almost 24 hours per day. Another study conducted at the WCROC determined that activity and rumination were different across breeds.

Pasture measurements and grazing management

Satellite photography is growing in popularity to measure pasture forage biomass on grazing dairy farms. These satellite images will provide farmers with weekly real-time information to support

pasture management. Satellite technology can reduce the amount of time that farmers spend determining forage biomass of their pastures. Farms can use normalized difference vegetation index (NDVI) from satellite images to determine pasture biomass. Alternative methods to calculate the biomass of pastures may provide advantages for farmers to improve grazing management.

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Understanding the Opportunities and Risks Associated with Alternative Milking Strategies

Heather Darby of UVM Extension, Sara Ziegler of UVM Extension, and Sarah Flack of Sarah Flack Consulting

INTRODUCTION

What are alternative production (milking) strategies? As farmers continue to find ways to adapt to milk and labor market conditions, strategies such as **seasonal production** or **flexible milking frequencies** (i.e. once a day milking) are increasingly appealing. Although the benefits of these strategies may come at the expense of reduced milk production, farmers in some markets, such as 100% grass-fed where production is generally lower and the pay price is higher, may be better able to compensate for such impacts.

Do farmers in the Northeast use alternative production strategies? Researchers from the University of Vermont Extension conducted a survey of Northeast dairy producers in the spring of 2021 to answer this question. This article summarizes the 134 farmer responses.

FARM DEMOGRAPHICS

Approximately 800 surveys were mailed to dairy producers across the Northeast, including Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, and Pennsylvania (Figure 1). The survey asked about the farmers' use and interest in alternative strategies, impacts they observed if they tried an alternative strategy, and benefits they'd be interested in obtaining through alternative strategies. If a farmer was not interested in these strategies, there was also a place for them to indicate their reasons and/or concerns.

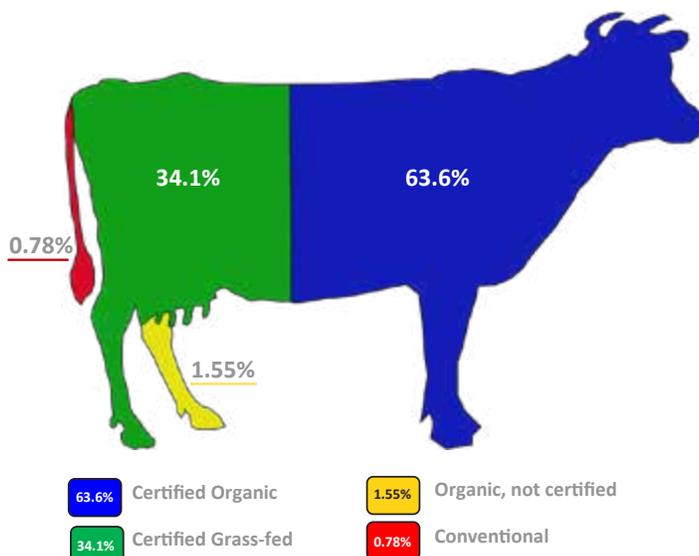
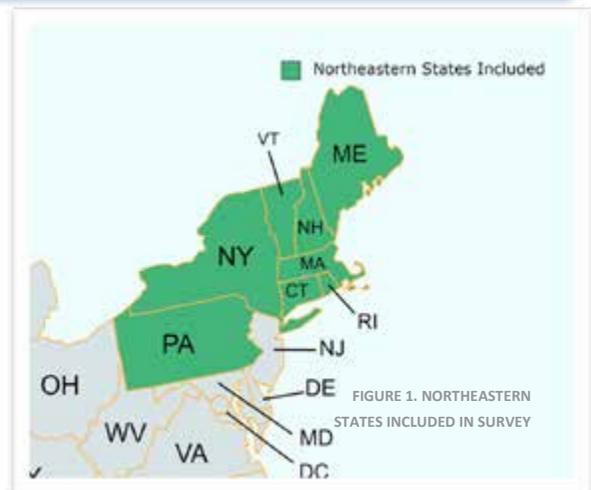


FIGURE 2. DISTRIBUTION OF RESPONDENT PRODUCTION SYSTEMS

The majority of respondents operated certified organic farms while 34.1% were certified grass-fed (Figure 2). The remaining farms were organic without certification or conventional.

Of the 134 farmer responses, 62% of respondents self-identified as belonging to the Plain community (i.e. Amish, Mennonite, etc.).

Of the total respondents, annual milk production averaged 12,898 lbs. per cow but ranged from 4,400 to 27,375 lbs. There was a **51 mature cow/ herd average** with 57% of herds being Holsteins, 33.1% of herds bring Crossbreeds, and 17% of herds being Jerseys.

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RESULTS

Of the total respondents, only 17% indicated they have tried or currently use an alternative strategy with 20% interested and 63% not interested or unsure. Interestingly, 76% of the Plain community said they were not interested or were unsure about alternative milking strategies. This is significantly higher than English respondents, of which 38% were unsure or uninterested. Furthermore, 10% of Plain community respondents and 31% of English respondents reported trying or using an alternative milking strategy. Amongst the respondents that have tried or are using one of these strategies, the most popular strategy employed was once-a-day milking, followed by seasonal production, and milking three times in two days (Figure 3. It is important to note that farms could have reported experiences with multiple strategies).

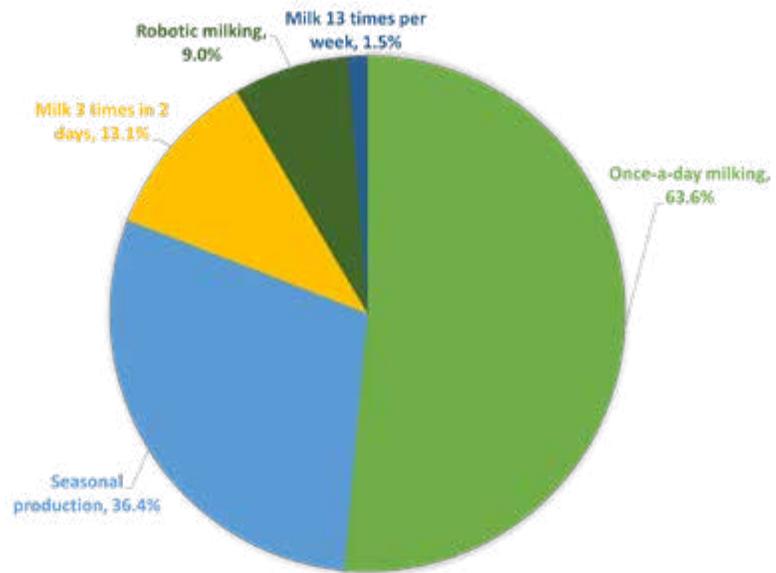


FIGURE 3. TYPES OF ALTERNATIVE MILKING STRATEGIES ADOPTED BY FARMS IN THE NORTHEAST

Interestingly, 18% of grass-fed respondents and 12% of organic respondents reported having tried an alternative strategy. While this suggests that a higher proportion of grass-fed farms have at least tried one of these alternative strategies, we do not know how many continued the practice.

The length of time that an alternative milking strategy was employed by a farm depended on the strategy (Table 1). Farms were engaged in seasonal production for 4.5 times longer than farms on once-a-day milking. This is somewhat to be expected as trying a different milking frequency can occur within a much shorter span of time compared to a shift towards seasonal production. Interestingly, only 13% of farms who indicated they have tried or are milking three times in two days have done so for an average of 15 months indicating that this practice is relatively new and rare in the northeast compared to the other strategies.

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Table 1. Duration, herd size, milk production, and breed types for each alternative milking strategy.

STRATEGY	MAX AND MIN months	MEDIAN DURATION months	HERD SIZE	MILK PRODUCTION lbs	BREED TYPES %
Once-a-day	1 and 252 (21 years)	18.5	53	9,864	46.7% Jersey, 40% crossbred, 6.7% Holstein, 6.7% other
Twice-a-day	6 and 840 (70 years)	204 (17 years)	50	13,479	47.6% Holstein, 32.0% Crossbred, 16.5% Jersey, 3.9% other
Three-in-two	2 and 24 (2 years)	20	55	11,584	50% crossbred, 50% Jersey, 0% Holstein, 0% other
Seasonal	1 and 276 (23 years)	84	59	10,996	71.4% crossbred, 14.3% Jersey, 14.3% other, 0% Holstein
All farms	1 and 276 (23 years)	24.5	54	10,207	41% crossbred, 32% Jersey, 18% Holstein, 9% other

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The average herd size varied little across strategies or management types (i.e., organic, conventional, etc.). However, milk production varied widely. The average annual milk production of the twice-a-day milking farms was 13,479 lbs per cow while the once-a-day farms averaged 9,864 lbs per cow. Interestingly, the farms that reported milking three times every two days averaged 11,584 lbs per cow. These data suggest a 14% reduction in milk production when milking three-in-two compared to a 27% reduction milking once-a-day. The lower milk production for the seasonal farms may have been due to the higher proportion of crossbred animals that fit the reproductive performance needs of that production system and may not be bred for high milk production. Some respondents may have also employed alternative milking frequencies in conjunction with seasonal production leading to lower production than the twice-a-day farms that produce milk year-round. In general, the distribution of breeds shifts from predominantly Holstein in year-round twice-a-day milking systems to crossbred or Jerseys in the alternative systems. This is consistent with alternative strategy farms selecting cows for additional characteristics necessary to be successful in these alternative systems. For example, high-producing cows may be less suited to tolerating the extended milking intervals in once-a-day and three-in-two systems. Furthermore, although milk volume may be reduced in these systems, selecting cows for higher components may help offset lost income from milk volume.

BENEFITS OF INTEREST

Each group of respondents was asked about the benefits that interested them in adopting, trying, or potentially adopting/trying alternative strategies. Across all Groups, the top benefit was increased flexibility in daily task timing which was cited by 75.9% of respondents in each group (Figure 4). Increased flexibility in timing also contributes to the ability to use that time to generate additional income, which was also cited as a top benefit of interest. Many of the responses within the “other” category included topics related to increasing quality of life either via reductions in physical demands on farmers or having more time for family and time off. In addition, many responses in the “other” category pertained to reductions in labor demands and costs associated with labor.

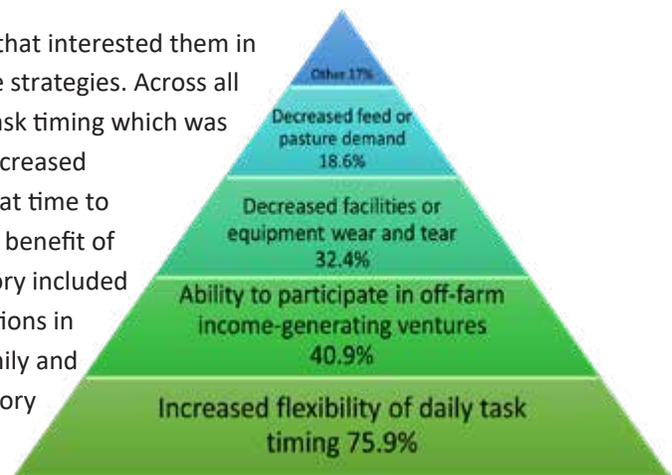


FIGURE 4. TOP CITED BENEFITS OF INTEREST

COMMON IMPACTS OF ALTERNATIVE STRATEGIES

The most common impacts observed by respondents who have tried or are currently using an alternative strategy are summarized in Figure 5. **Decreased milk production was the most cited impact.** Productivity reductions averaged approximately 25% but ranged from 0% to 50%, indicating that some herds were better suited to the alternative strategy employed. This was further supported by the range in increased cull rate from 3% to 30%. **Approximately 35% of farms also experienced increases in somatic cell count** ranging from 13.6% to 277%, indicating significant differences between herds in response to the strategies.

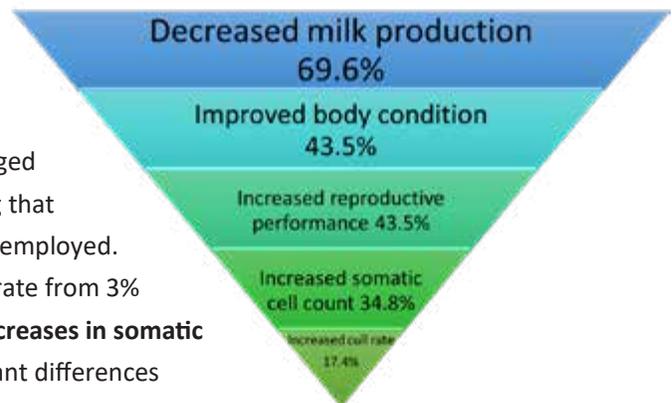


FIGURE 5. PREVALENCE AND MAGNITUDE OF IMPACTS

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However on a positive note, respondents noted improved body condition and increased reproductive performance of the herd. Despite the challenges, 84% of interested farms, and 11.1% of unsure farms, indicated they would be interested in the strategies if they could overcome the barriers. However, 41.6% of the unsure group remained unsure of their interest in the strategy. Of farms that were unsure or not interested, approximately 22.9% indicated that they did not understand the benefits these strategies may provide and 15.7% did not understand what the strategies themselves were. This indicates that additional education and outreach on alternative milking strategies is needed.

COMMON CHALLENGES AND CONCERNS

For each alternative milking strategy, respondents identified their top challenge. Managing somatic cell count and mastitis was identified as the biggest challenge for farms using once-a-day milking, while farms milking three times in two days found managing the variation in the daily schedule and odd milking times the most challenging. As expected, the biggest challenge for farms milking seasonally was getting the herd bred within the narrow window necessary and having to cull otherwise high-producing cows who do not fit this reproduction schedule.

The main concern amongst farms that had not yet tried or adopted an alternative strategy was the economic viability either due to lower milk production or other aspects of the system. Farms were unsure that the potential benefits would be outweighed by the unknown costs of lost milk production, quality, or costs associated with the slow transition of the herd to be better suited to the systems. Farms were also uncertain about potential cow health impacts of these strategies.

CONCLUSION

These data suggest that northeast dairy producers are interested in adopting alternative milking strategies but require education and technical assistance to evaluate economics and assist with minimizing impacts on milk production, quality, and herd health.

ACKNOWLEDGMENTS

This work was made possible with funding from USDA National Institute of Food and Agriculture (NIFA) Northeast Sustainable Agriculture Research and Education Program (project no. ONE 20-360).

This resource was developed by the University of Vermont Extension using data collected from the survey, *Understanding the Opportunities and Risks Associated with Alternative Milking Strategies*. A special thanks to Sarah Flack Consulting and the University of Vermont Center for Rural Studies for their collaboration on this project.



Photo of a Grazing Herd provided by Sarah Flack of Sarah Flack Consulting

Thank you to all the farmers who provided honest and accurate responses. Information gathered is helping us learn more about the current interest and use of alternative milking strategies on farms and helping to identify areas of research and outreach critical to helping farmers successfully evaluate and implement these strategies on their own farms.



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COLLEGE OF AGRICULTURE AND LIFE SCIENCES

Published: June 2022

FEATURED FARM

SHEFFER'S GRASSLAND DAIRY, HOOSICK FALLS, NY

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“We transitioned because we saw where the conventional market was going. Get big or get out, large consolidation and high production efficiencies were making grazing economics fall short,” Eric said. “We were pretty successful conventionally but saw where things were headed, so we utilized the very strong profit year of 2014 to help start the process.”

Eric's grandfather ran a small dairy, in outdated facilities. During the 1980s, Eric's father, Wally, purchased the farm and operated it as a crop operation with a custom heifer raising component. Eric and Wally both became interested in grazing cows during the 1990s, and after graduating Cornell in 2008, Eric returned to the farm and he and his father began operating as a successful, conventional dairy farm, which included grazing as an important part of its herd management.

Today, the dairy employs four full-time people, and Wally continues to work alongside Eric. Eric and his wife, Jillian, are proud that their son Jackson who is the seventh generation of Sheffers being raised on the farm.

Sheffer views the economics of organic dairy farming today and has serious concerns that the organic dairy system is mimicking the consolidation issues which prompted the farm's own certification journey, less than a decade ago. In the conventional market, high milk price years often lead to high margins, such as in 2022. But that's not what is occurring for organic dairy farmers, Eric said.

“Organic producers are seeing record high costs and stagnant pricing. Organic commodities, soy in particular, are so high in price that many farms are sinking quickly. Relying on imported soy and corn poses a huge threat to us in our industry and will for some time. We need domestic grains or a much higher pay price to account for the trade and shipping disruption,” Eric said. “I'm enough of a finance guy to tell you that my system, as well as the majority of northeast systems, can't hang on for very long with these costs and milk prices.”

Sheffer's System

The 225-head milking herd is down from a high of 255 earlier this year. Drought was an impetus for hard culling, as was herd health. With a few challenging grazing seasons and a lot of fly pressure, somatic cell counts were higher than they prefer the past few years. Somatic cell counts typically stay in the 150,000 to 175,000 range, with a few higher months, and with an SCC average below 200,000 for the year. Some recent culling has



Wally, Eric and his son, Jackson

helped to bring the SCC rates back into their comfort range. The herd's annual average production is 12,000 to 14,000 pounds of milk per cow. The average fat is 4.25 percent, with protein around 3.45 percent.

The cows are a mixed herd of Jerseys and smaller stature Holstein Friesians. They cross within the two breeds, and have started adding in Normande genetics, strategically, to some of the cow families. While they used New Zealand genetics for about a decade, they've brought American genetics back into the herd over the last four seasons.

“American genetics have started to correct themselves from the high production non-grazing friendly big cows. Productive life has been coming back into the importance of American genetics,” Eric said.

They use AI for one month, and then use bulls. Breeding is exclusively for health and grazing traits. They select for production as well as for components. Smaller stature with depth and capacity; good feet and legs; SCC traits; fertility and daughter pregnancy rate are also prioritized.

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“We really like some of the new grazing index information,” Eric said. “The grazing index balances what we evaluate for our sought after genetics so I like it because it knocks out the cows we don’t want and saves time.”

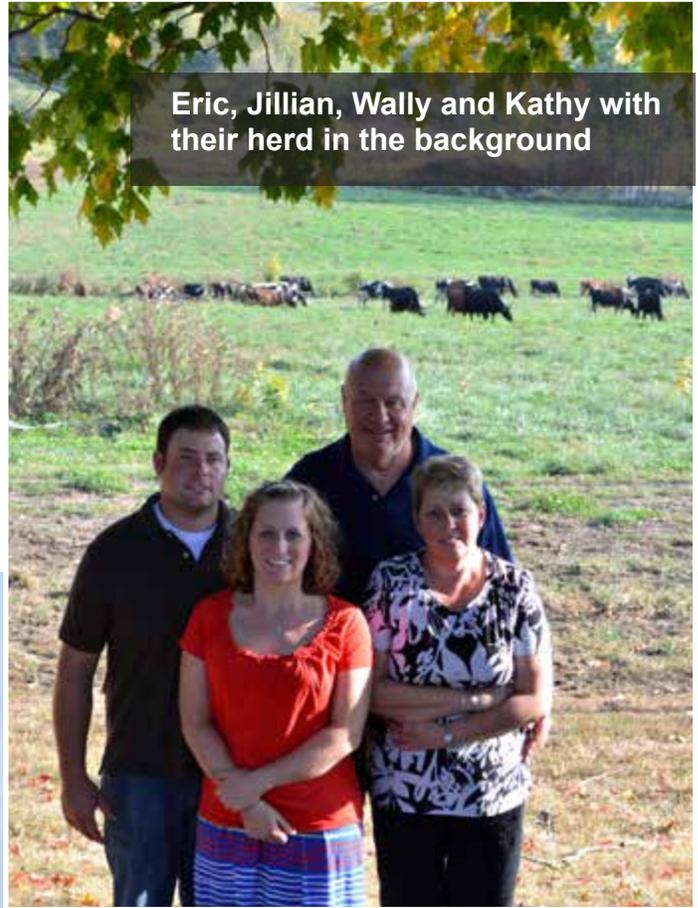
Clean-up bulls - they use about five each season, both their own and borrowed from a neighbor - are Jerseys or beef breed bull. The calves from these are not raised on the farm.

Breeding is seasonal, but they very selectively opted to purchase a partial herd in 2021, with the aim of no longer breeding seasonally. The fall and early winter calving animals they purchased were fully tested and quarantined, to avoid bringing any illness into the existing herd.

There are 270 acres of pasture, most of which is tillable. Ten new acres were added this year. The milking herd’s pastures consist of 220 acres, while the heifers graze about 50 acres located way up a hill and across the road. The heifers are moved every few days, with labor being a primary concern, but they do monitor closely for over-grazing and pasture regrowth. Heifers are on grass during the grazing season, with the exception of a few pounds of starch coming from grains.

The milking herd is pastured in fields close to the barn, with the farthest daytime paddock located a distance of one half mile. They are on strict moves every 12 hours, after milking, and the land they graze is a mix of permanent pastures along with some large paddocks with step-in post break wires to allow

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**SHEFFER'S GRASSLAND DAIRY,
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for the most flexibility. Between 10 and 30 acres of pasture are also harvested, typically for first cut hay. Some years, they don't harvest anything off of the pastures.

"Our goal is to graze the milking cows day and night the whole season, but the last couple seasons have been very tough, from way too wet to way too dry, so we pull cows inside during the day and keep on full night grazing, which allows us to hit our percentages needed," Eric said. "But we shoot to graze far more than that. We want to always hit 40 percent DMI from pasture with cows, but the last couple seasons have been a train wreck weather-wise. Because of this, we are actually changing around cow numbers and focusing on more grazing."

The weather the past few years has made grazing more difficult, and forced them to focus more on soil health. They've adopted longer rest periods, grazing higher, and intensive observation to avoid over grazing mistakes. Their grazing season typically runs May 1st through November 1st each year.

"Keeping the grazing mentality at the front of your decision making process and overall mindset" is the best part of being an organic dairy farmer, Eric said. "It is easy to become a frustrated grazer when things get tough with weather and production issues."

They have tried to graze annuals, as well as bale them, including Sudangrass as well as sorghum-Sudangrass mix, but over time have decided that they prefer to keep pastures in perennials, only using annuals if undergoing a full renovation. They only renovate a few acres at a time, so annual forages for grazing are minimal. They do harvest some annual forages and like to direct chop fields planted to forage sorghum. The sorghum is typically fed April-July, but the drought this season means that it will need to be fed in the TMR mix this winter.

"It breaks up the amount of bales we are harvesting and that stuff just flat out yields like crazy," Eric said of the direct chop sorghum. "It makes for some great digestible starch."

During the grazing season, cows are also fed 10-15 pounds of grain along with a few pounds of forage for fiber. If grass isn't available in the pastures, more forage is added as needed. Over the winter, a full or partial total mixed ration - depending on the



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quality of the baleage - is fed, consisting primarily of baleage and about 10 pounds of grains. They do have to purchase baleage, some of which is not processed, requiring a change in feeding management. They will roll out baleage at times.

Most of their hay acres are on rented ground. The acreage on the home farm not used for pasture is planted primarily to hay, with some to sorghum.

And with “insanely high commodity prices,” Eric says they will be grouping cows this winter for better feeding management. “Commodity price and fuel is an absolutely scary thing to us. With the commodity situation at hand we are going with the ‘get back to basics’ approach and relying far more on grass and produced forages from close by.”

They utilize an independent nutritionist, one who understands grazing nutrition - both the science and the philosophy, Eric said. They use modern programs to formulate rations. Eric looks at the cows daily, and every few weeks they review the formulated ration. They’ve found that pushing for milk does not work for their herd, and do not do so, managing for nutrition and herd health instead.

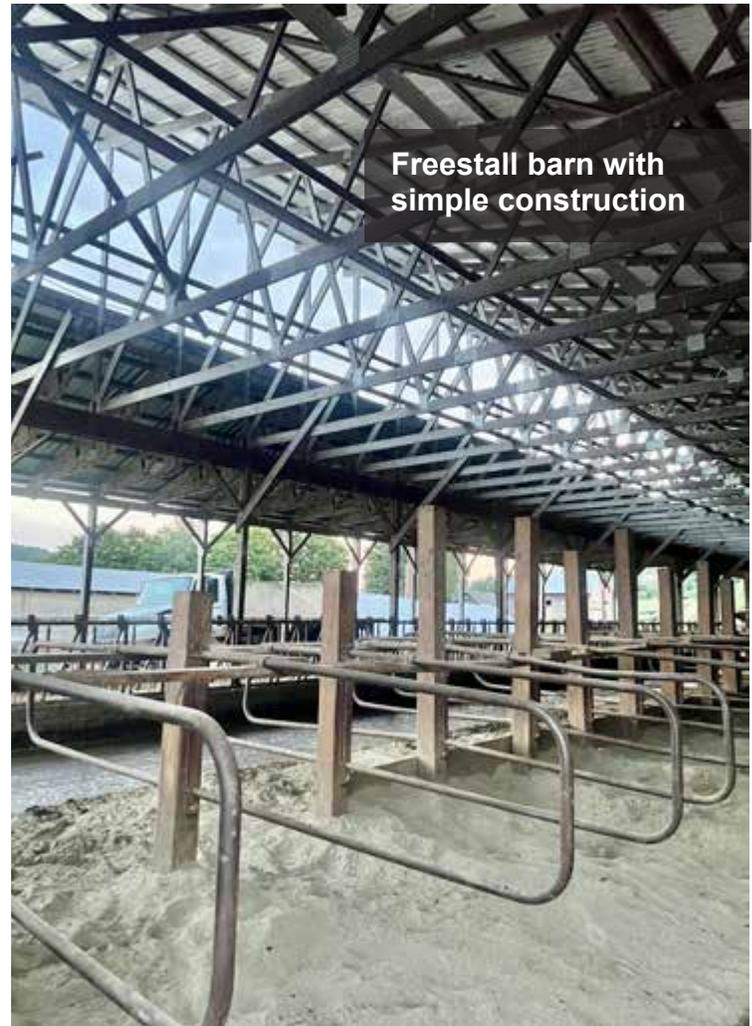
Herd Health

They haven’t had any major herd health issues since becoming organic. They have a yearly NYSCHAP - The New York State Cattle Health Assurance Program - meeting where they work with a veterinarian to keep a herd health plan active and up to date. They vaccinate the herd with a 10-way vaccine, and also for *Escherichia coli* and pink eye.

“The only antibiotics we miss from the conventional days would be conventional dry treatment and the occasional use of antibiotics for the acute cases of hoof rot,” he said. “The herd is, I believe, just as healthy and productive, but those are the things we find ourselves saying regularly. I don’t feel as though anything is necessarily better now that we are organic because we were a pretty simple grass-based healthy herd to begin with when conventional.”

Fly control is a primary concern in the organic system. Without the conventional products, which do a reasonably good job of keeping flies away for a few weeks at a time, there is a significant difference, Eric said. While he feels they do a good job with the organic fly control methods available, flies do cause a significant amount of stress for the cows - and the humans - on the farm.

“Keep a simple and healthy management system, understand your cattle, and you don’t need a vet for a whole lot,” Eric said. “We use the veterinarian for two or three pregnancy checks per year, one of which is a whole herd one, and for emergency



Freestall barn with simple construction

situations. On average we will see one emergency a year. This is my ideal situation.”

The farm keeps a treatment log, and uses PC Dart for records. They test milk four to six times annually to keep SCC and production efficiency records.

“Our vet is open minded in regards to organic and lives close. Supporting the local private practice vet is what we are all about. He is a friend and colleague, not just a vet,” Eric said. “My vet is definitely an investigator of science, so we get by just fine. I do have great network of organic farms that I bounce things off of, too. We attend conferences as well.”

Calves

An old greenhouse has been converted into a calf barn, retrofitted with clear sunlight panels. Calves haven’t had many issues. For the past few years they did have some respiratory issues, but nasal vaccines given at two weeks of age have put

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a stop to these concerns. The move to certified organic didn't significantly change their philosophy or management of calves. We have never been big believers in calf antibiotics when conventional so this was an easy move for us," he said.

Eric credits a clean environment for keeping scours at bay, as well as having water immediately available to calves. For the most part, we have learned over time that if the calving pen is clean and we resurface our calf barn yearly, there isn't much in the way of scours that calves can't beat," Eric stated.

"We group feed in a pretty nice environment so we don't see a whole lot of scours. For scours, we separate, hydrate, and use organic allowed probiotics Eric said. "We introduce water right away and have free choice calf starter available within a couple

weeks. They don't ingest much at first but it helps keep their noses and tongues out of the bedding."

They keep the calves healthy by providing one gallon of colostrum immediately, which is when they also offer water and grain. They are on fresh milk for the first few days. Some hay is available, primarily "to keep noses out of bedding," Eric said. After a few days, calves are grouped, New Zealand style. They are provided with 3/4 gallon of milk from the bulk tank twice per day while growing, and are weaned at eight or nine weeks of age.

Resurfacing is also their key to keeping coccidia away. "In the past, during our conventional days, we learned this lesson, so we spend every dime needed to make it pretty near impossible for the little ones to get coccidia," he said.

Herd Housing and Parlor

An older converted heifer barn fits about 85 cows. There are 75 sand stalls plus a ten cow area located close to the parlor



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that is used for sick or lame cows, and as a calving pen. Sand is comfortable for the cows, which is a primary reason they've opted to bed with it. The stall and feed alley manure gets pushed directly into a manure pit.

Another barn, which was built in 2011 and 2016 in two sections, is 256 feet long with 135 sand stalls and a bedded pack that can hold roughly 35 cows comfortably. They installed the bedded pack for calving large amounts of cows and heifers at once. While they really do like it, the labor and bedding cost are drawbacks.

The parlor is a Dairymaster Swing 18 with take offs. The parlor started as a 12-unit one, built to be easily expanded. They worked with the company to increase its size. There is a crowd gate in the holding area.

"We've always had this parlor. We like the brand's simple functionality and love the swing concept for labor and machine cost efficiency," Eric said.

Current Outlook

Eric has found that the most difficult part of farming organically "is knowing that there are many healthy and cost-effective tools not in our toolbox when things get tough. Also, the market is in

shambles, arguably worse than conventional right now, which is tough to stomach."

Looking ahead, Eric is concerned that organic dairy farming may not be economically viable for the Northeast's family dairies unless changes are made soon. While he is grateful for progress made by the many organizations working to keep family organic dairy farms viable as large-scale industrial organics has exploited loopholes in regulations, he remains concerned that family-sized organic dairy farms such as his own are not being recognized for the value they bring to the food system.

"I admit, some of the large farms that we compete without west have cleaned up their acts in many ways, but until our regional milk that is made by our families is seen as a higher value over the organic commodity milk, I think we are in a lot of trouble," he said. "We are a more consolidated version of the conventional market with a very different story. I truly believe that if we don't take control of that story that is reaching the consumer, our future is not bright at all." ♦

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Sheffer's Grassland Dairy herd

ORGANIC INDUSTRY NEWS

The End of Organic Farming (as we know it)

By By Jim Riddle, *Organic Independents LLP, Blue Fruit Farm*
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The fundamental concepts of organic farming have always been, “Feed the Soil, not the Plant,” and “Healthy Soil leads to Healthy Crops, Healthy Animals, Healthy People, and a Healthy Planet.” Now, those concepts have been turned on their head, with a recent Appeals Court ruling that you don’t even need soil for growing terrestrial crops, in order to be certified organic in the United States.

Will the 9th Circuit Court’s September 2022 ruling, which stated, “no part of the statute [Organic Foods Production Act] clearly precludes organic certification of crops grown hydroponically,” mean the end of organic farming, as we know it? Maybe. Maybe not.

If the ruling is allowed to stand, it will mean that crops grown using hydroponic methods can officially be certified as “organic,” as has been done by a handful of renegade certification agencies for a number of years. Consumers will continue to be deceived when they buy organic products, thinking that such products were grown in healthy soil, using methods that “foster cycling of resources, promote ecological balance, and conserve biodiversity,” as required by the legal definition of “*organic production*.”

It will also mean that authentic organic farmers, who produce crops in healthy soil, who protect and enhance the biological diversity of their operations, and who use green manures, cover crops, crop rotations and compost to recycle nutrients, will continue to compete with hydroponic operations that use inputs “approved for organic use,” but do not comply with the soil building, crop rotation, and ecological requirements of the Organic Foods Production Act (OFPA) and the National Organic Regulations (7 CFR 205).

The Court’s ruling directly contradicts a stated purpose of the OFPA, which is “to assure consumers that organically produced products meet a consistent standard.” Consumers who purchase “organic” blueberries, blackberries, raspberries, tomatoes, peppers, cucumbers and leafy greens will have no way of knowing if those products were produced by operations that comply with all requirements of OFPA and 7 CFR 205, or if those products were produced by hydroponic operations that only use “approved inputs” in their nutrient solutions.

In its ruling, the Court stated, “the statute imposes three requirements for organic crops—a restriction on synthetic chemicals, 7 U.S.C. § 6504(1); a prohibition on growing

organic crops “on land to which any prohibited substances . . . have been applied,” id. § 6504(2); and a requirement that organic products “be produced and handled in compliance with an organic plan,” id. § 6504(3).”

The OFPA requirements for an organic crop production plan, at 6513(b)(1), state, “An organic plan shall contain provisions designed to foster soil fertility, primarily through the management of the organic content of the soil through proper tillage, crop rotation, and manuring.” (emphasis added.)

The Court stated, “USDA’s decision [to allow “organic” hydroponic] interpreted that provision to mean that *if* crops are grown in soil, their producers must take measures to preserve that soil’s “fertility” and “organic content.” (emphasis not added.)

That interpretation is not supported by the OFPA, which contains no language that allows for organic crop production plans which do not address soil fertility. The word “if” is not used in the plain language of section 6513(b), which establishes the requirements for organic crop production plans.

In addition, the Court failed to address the fact that USDA has issued no rules or regulations to guide the organic certification of hydroponic operations. In fact, there is no language in the OFPA or 7 CFR 205 that supports organic certification of hydroponic systems.

The Court went further, stating that the USDA’s “interpretation is consistent with the OFPA, which provides that “[i]f a production or handling practice is not prohibited or otherwise restricted under this chapter, such practice shall be permitted unless it is determined that such practice would be inconsistent with the applicable organic certification program.” 7 U.S.C. § 6512.”

That interpretation is extremely dangerous, and could open the door to all sorts of technologies, systems, and practices, such as genetic engineering and food irradiation, which are not explicitly prohibited by the OFPA, from being approved for organic use, if the regulatory prohibition on such practices is challenged in court.

There is a silver lining on this issue, however – the National Organic Standards Board (NOSB), which is charged by the OFPA with providing advice to USDA regarding implementation of the organic law and with making “consistency” determinations, clearly stated, in April 2010,

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by a decisive 12-1 vote, that, “Hydroponics, the production of plants in nutrient rich solutions or moist inert material, or aeroponics, a variation in which plant roots are suspended in air and continually misted with nutrient solution, have their place in production agriculture, but certainly cannot be classified as certified organic growing methods due to their exclusion of the soil-plant ecology intrinsic to organic farming systems and USDA/NOP regulations governing them.”

This is a clear indication that USDA’s statutory advisory board has ruled that hydroponic production is not consistent with organic certification. This important fact was ignored by the Court.

Likewise, the Court failed to mention that the NOSB, in establishing the “Principles of Organic Production and Handling” by a 15-0 vote in October 2001, stated, “Organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles, and soil biological activity.” The “Principles” go on to state, at point 1.2, “An organic production system is designed to optimize soil biological activity.”

The Court ignored the General requirement section of 7 CFR 205.200, which states, “The producer or handler of a production or handling operation intending to sell, label, or represent agricultural products as “100 percent organic,” “organic,” or “made with organic (specified ingredients or food group(s))” must comply with the applicable provisions of this subpart. Production practices implemented in accordance with this subpart must maintain or improve the natural resources of the operation, including soil and water quality.”

7 CFR 205.2 defines the “*Natural resources of the operation*” as “the physical, hydrological, and biological features of a production operation, including soil, water, wetlands, woodlands, and wildlife.” Hydroponic operations do not comply with this provision, since the crops are produced in isolation from soil and natural resources.

The Court even ignored the definition of “*organic production*” at 7 CFR 205.2, which requires that organic production systems integrate “cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.”

There is no way that hydroponic operations comply with the soil fertility requirements of the OFPA 6513(b)(1); the natural resource requirements of 7 CFR 205.200; the definition of “organic production” in 7 CFR Part 205.2; or are consistent with organic certification, as ruled by the NOSB.

To protect organic farming, as we know it, what can be done? There are a number of viable options:

1. Partial Appeal – Parties who filed the original suit can challenge the substantive portions of the Court’s ruling, due to the omissions, misinterpretations, and misrepresentations it contains.
2. New Suit – A new lawsuit, based on the USDA’s failure to enforce the law and rule as written, could be filed by certified organic growers who follow all requirements, yet are forced to complete with hydroponic operations that only have to comply with “approved input” rules.
3. New Suit - A new lawsuit could be filed by consumers, based on the USDA’s failure to enforce the law and rule as written, and for its failure to follow the second purpose of the OFPA “to assure consumers that organically produced products meet a consistent standard.”
4. Economic Pressure – Expose the corporations, including Driscoll’s, Wholesum Harvest, Eden Green, Superior Fresh and others, which sell hydroponic products as “organic.”
5. International Pressure – No other countries, including our major trading partners, allow hydroponic products to be labeled “organic” and most explicitly prohibit it. Pressure can be brought to bear to exclude hydroponic products, ingredients, and formulated products, certified as “organic” under the USDA, from accessing foreign markets, and reciprocity agreements can be amended.
6. Support local and regional organic producers – Buy from local and regional organic growers who follow all OFPA and regulatory requirements. Plant organic gardens and orchards.
7. Support the Real Organic Project and Rodale’s Regenerative Organic Certification, both of which highlight operations that fully comply with all requirements of OFPA and 7 CFR 205, including those which require soil building, crop rotation, protection of biodiversity, and natural resource management.
8. Amend the Law – As a Big Plan B, amend the OFPA to make it clear that hydroponics, genetic engineering and food irradiation are not allowed in organic. Period.

While the USDA would like us to believe that this is a “settled issue,” it will not be settled until the USDA enforces the soil fertility provisions of 6513(b)(1) and uses its accreditation program to stop certification of hydroponic operations as “organic.” ♦

ORGANIC INDUSTRY NEWS

Pay and Feed Prices

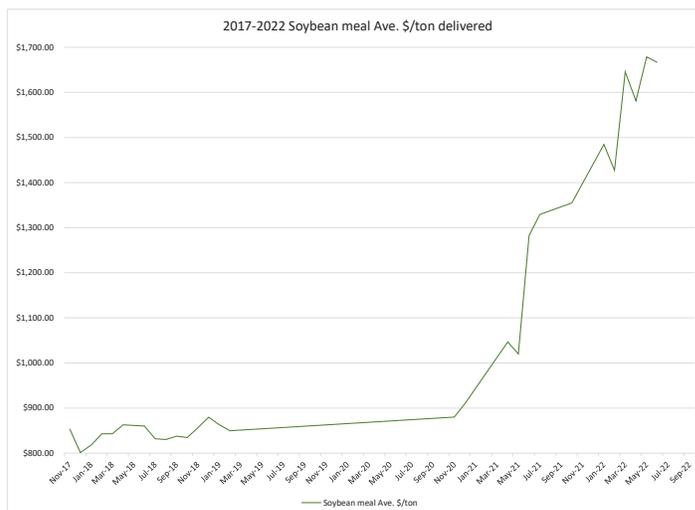
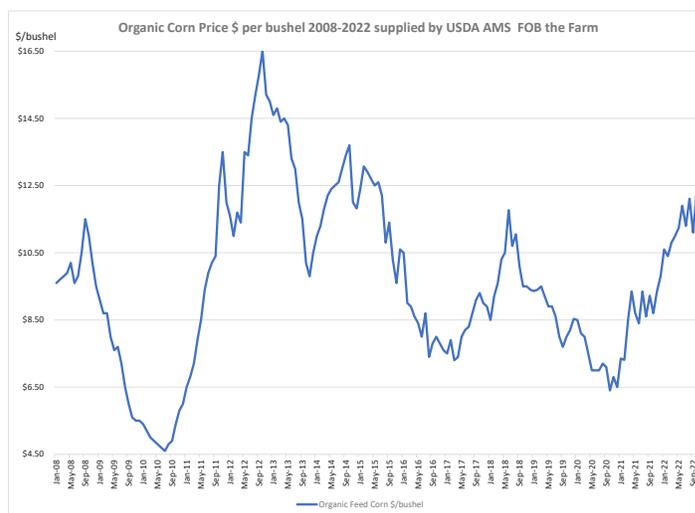
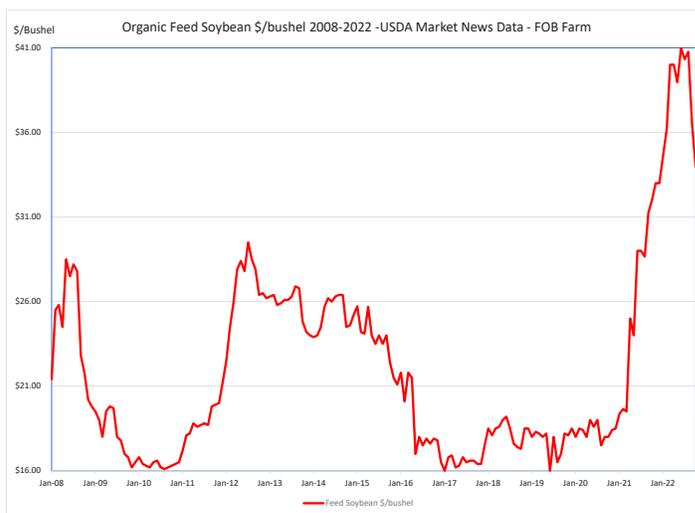
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Stonyfield/Lactalis have increased their pay price by \$1.50/cwt starting in December 2022. This brings their pay price just above Upstate and above CROPP. The table below puts

Year	Average cost of production \$ per cwt	Average Pay Price in the northeast
2014	\$ 35.09	35.39
2015	\$ 38.29	38.39
2016	\$ 38.58	35.68
2017	\$ 36.90	33.27
2018	\$ 33.80	31.52
2019	\$ 37.72	31.52
2020	\$ 37.02	31.52
2021	\$ 36.73	31.51
2022	\$ 40.20 est.	31.86

the long-term picture in perspective.

Organic soybean meal is reported “down” to \$1,450/ton at the mill. Soybeans are at \$31.55 and feed corn is at \$11.18 per bushel. ♦



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Deadline for advertising in the January 2023 issue is December 15, 2022.

Full Page Ad (7.5" W x 10.25" H) = \$660

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1/4 Page Ad (3.5" W x 4.75" H) = \$190

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(3.5" W x 2.25" H) = \$100**

Commit to a full year of print advertising and get 10 percent discount: Full: \$600, Half: \$306, Quarter: \$171, Eighth: \$90.

Classified Ads: Free to organic dairy farmers and business members. All others \$20 for the first 30 words; \$.20 per word over 30

For advertising information call Nora Owens: 413-772-0444 or email noraowens@comcast.net.

Please send a check with your ad (made payable to NODPA).
30 Keets Rd., Deerfield, MA 01342

Classified Ads

FEED, GRAIN, HAY FOR SALE/WANT TO BUY

FOR SALE: 200 4x4 Dry 2nd cut bales for sale \$50 a bale store in a tube. Raymond E Tardif, Juno2557@aol.com, 802-309-9152

Location: Swanton, VT

FOR SALE: NOFA VT Certified Organic Baleage, approximately 180 bales, with about 120 of them processed. Early first cut done, the last week of May and the first week of June. You can respond to this ad in a text or email, and I can send you Dairy One forage test results. Mixed mostly grass with some clover. Contact Jeremy Russo, 802-236-1920, southwindfarmstead@yahoo.com.

Location: North Rupert, VT

HAY WANTED: A few VT farms just contacted me looking for good quality round bales. These are grassfed farms so they are looking for forage with energy in it (not high protein or alfalfa). Farms are in S. Vermont and the Connecticut River Valley. If you have some let me know and I'll pass the info on to farms looking to buy some. Sarah Flack, sarahflackconsulting@gmail.com

EQUIPMENT FOR SALE:

FOR SALE: Nearly complete milking system. Was used for a 10 stall flat parlor with 5 milking units. Includes 2in and 1.5in stainless pipeline, Delaval balance tank, NuPulse washer control unit, Bender air injector, 2 bay sink with Bender diverter valve, 5 pneumatic InterPuls pulsators, 5 stainless cip hangers for jetter cups, Boumatic glass receiver jar and backup jar, receiver controller, 3/4hp milk pump, 3hp Masport

vacuum pump. Was working when removed in July 2022 when we upgraded to a bigger parlor. Call or email, no texts. Andrew Smith, 207-933-8184, mainmilkhouse@gmail.com.

Location: Monmouth, ME

FOR SALE: NuPulse pipeline complete with motor, washer, etc., for 58 cows. 2 H&S 14'rachet driven forage boxes, \$500.00 each. Will transfer to your trailer. Buffalo till 4 row cultivator with speed shields, \$200.00. Call Alcuin Marthaler at 320-859-4141 for more information.

Location: Osakis, Minnesota

EMPLOYMENT OPPORTUNITIES:

Certification Director, Pennsylvania Certified Organic (PCO)

Pennsylvania Certified Organic (PCO) announces a job opening for Certification Director. The Certification Director is responsible for the leadership of the Certification department and the growth and continual improvement of the PCO Certification Programs. This position oversees all certification program processes, resources, and results-based outcomes. This position will collaborate closely with the Director of Operations and Executive Director as part of the Leadership Team of PCO.

PCO is a growing non-profit organization that works with organic farmers and food producers across the US. PCO provides organic certification services to more than 1600 operations, employs approximately 35 staff, and sub-contracts with around 40 field inspectors. Our staff are dedicated to our vision: all communities are enriched by organic food and farming, and we are committed to a work culture of purpose, caring, and results. This is a full-time, exempt, remote telecommuting position. Salary range: \$83,100 - \$114,300, depending on experience. This position will remain open until Jan 4th, 2023. Please submit a resume and cover letter to PCO Job Openings, <https://paorganic.org/about/staff/openings/> by Jan 4th, 2023.

Precision Technologies to Improve Dairy Grazing Systems

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Autonomous clipping of pastures

Grazing farmers can be engaged in an annual battle to control weeds in their pastures. Current weed control methods using herbicides have been very effective; however, there may be unintentional and harmful consequences to air, land, water, and wildlife.

The [Cowbot](#) is an autonomous mower being developed to control weeds in cow pastures at the WCROC. The Cowbot uses GPS for navigation, a GPS receiver on the Cowbot, and a GPS receiver on a tripod in the pasture. Weeds are variable in a pasture in terms of density and distribution which may provide challenges for the Cowbot. First, the perimeter of the pasture to be mowed must be defined by entering GPS coordinates of the corners of the pasture. A control system then determines a

path to mow the grazed area that includes turning around in the pasture when the Cowbot reaches the boundaries. Furthermore, the Cowbot may be used in a dual-purpose manner to mow weeds as well as herd and move cows from pasture to a milking parlor.

Virtual fencing

Cattle are routinely contained with electric fencing of numerous forms within grazing dairy farms. Virtual fencing is an encouraging future technology to implement because it allows for remote monitoring of cattle, improved pasture utilization, and reduced labor. Virtual fencing provides boundaries for cattle without using a physical barrier. Previous research demonstrated

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Precision Technologies to Improve Dairy Grazing Systems

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that virtual fencing could contain grazing cattle within the boundaries of a pasture, with no adverse behavioral events associated with implementing virtual fencing for grazing dairy cattle. For virtual fencing to be utilized by grazing farmers, one can assume that the technology must be economically feasible, it must be easy and convenient for farmers to use, and it must reduce labor costs.

Precision technologies for grazing dairy farms will aid in decision support for farmers, improve animal health and performance, and increase production efficiency. However, there are challenges that come with any new technology that include costs of the

technology, familiarization of new software, willingness to implement technology, interpretation of the data and subsequent actions to take with cattle, and lack of technical service. They have the potential to maximize profit of a grazing dairy herd when integrated into the whole grazing farm, which includes a self-feeder, robotic milker, feed pusher, wearable technologies, pasture management technologies, and virtual fencing, among numerous other technologies. In the future, farmers need more information from researchers and industry professionals to help implement new precision technologies on their grazing dairy farm.. ♦