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Cornell Cooperative Extension

Central New York Dairy, Livestock and Field Crops

Quarterly Newsletter

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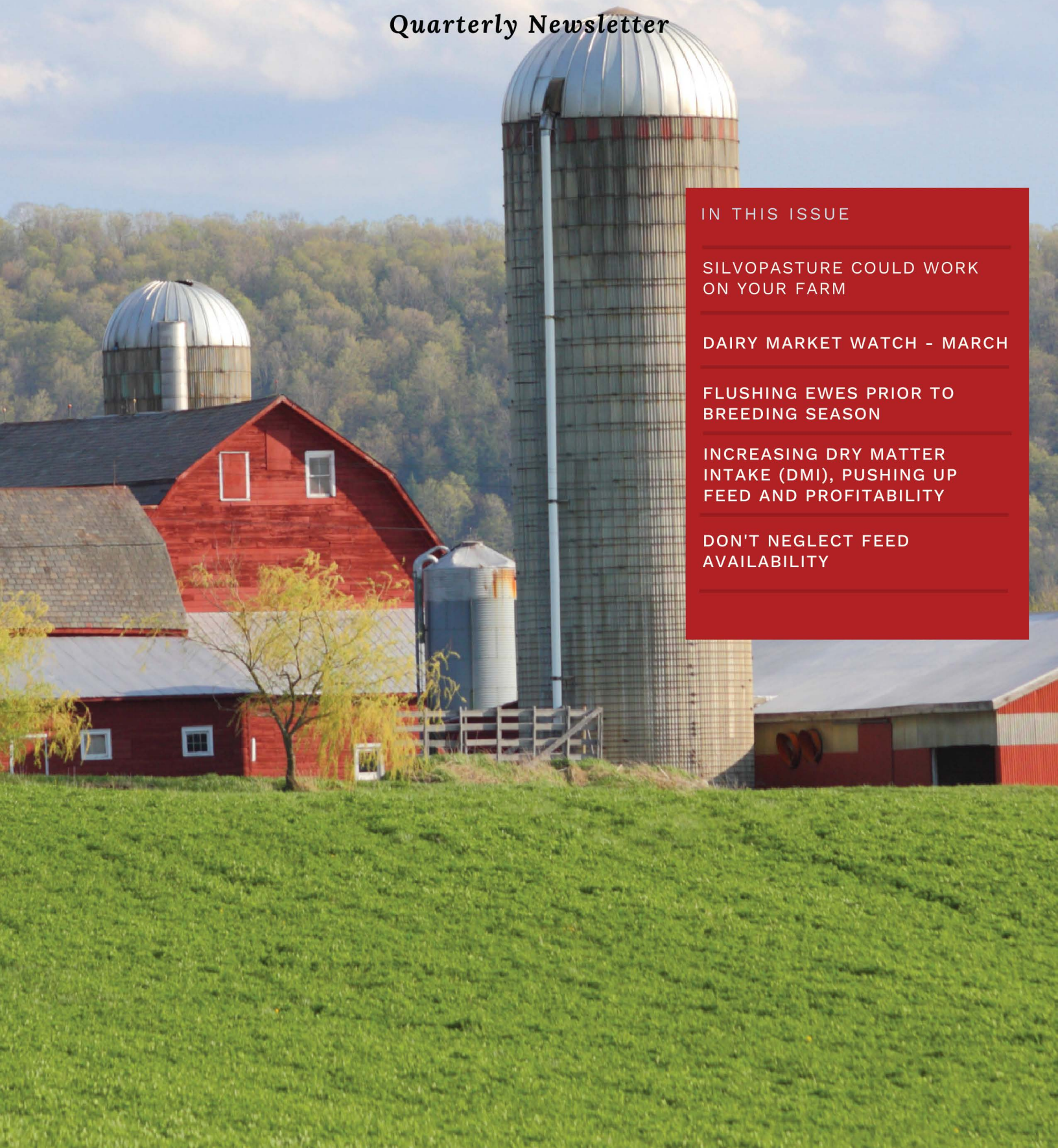
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Silvopasture Could Work on Your Farm

By David Hartman, Penn State Extension Educator, Livestock

In recent years there has been more interest in these types of systems. Grazing livestock in wooded areas was once very common in the northeastern US.

The term silvopasture may be something that you haven't heard before. There are all sorts of grazing management terms and definitions, and this one is different yet. If you graze livestock and have wooded or semi-wooded land on your property, silvopasture may be something that could benefit your operation.

Silvopasture is the integration of trees, livestock, and forage crops together on the same land to create dual income from timber and livestock. Agroforestry is the broader term used to describe any systems that combine crops or livestock with trees and shrubs. In recent years there has been more interest in these types of systems. Increasing land costs and the need to generate more income from an acre of land is one of the reasons for this interest. Other factors include an increased interest in ecologically integrated systems within agriculture.

Grazing livestock in wooded areas was once very common in the northeastern U. S. Lack of management of livestock grazing in woods eventually caused foresters, conservationists, and other farm advisors to recommend keeping animals out of wooded areas. This damage can include soil compaction, poor regeneration, and damage to valuable trees.

Present day we have much better fencing equipment and materials to work with than our predecessors did. Furthermore, we have more knowledge about managing forages, trees, and livestock. Combining these factors, we can create and manage a silvopasture system that is sustainable, productive, and profitable.

Plenty of research results document the benefit of shade for cattle production. Weight gain, milk production, and conception rates all can be improved by offering shade for cattle. Silvopasture systems can provide shade without creating heavy use areas that concentrate manure deposition and create more fly issues.

If you are interested in silvopasturing you need to start with the right location. Land with adequate water available and gentle terrain works the best. It is best to avoid sensitive areas like vernal pools and wetlands.

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Experts recommend that interested persons first need to have better than average knowledge of both silvoculture and grazing. Brett Chedzoy, forestry specialist with Cornell Extension, is an expert in silvopasture systems. He offers the following advice:

- Look for on-line resources. There are a number of temperate agroforestry sites with good articles and information on silvopasturing, though much of the information will need to be extrapolated to your own situation. The "Guide to Silvopasturing in the Northeast" and other silvopasture resources are currently available under the "publications" section of www.forestconnect.info.
- Develop woodlot management and animal husbandry skills, and then gradually look for ways to symbiotically combine the two systems in a context appropriate for your own property.
- Seek out local silvopasture practitioners to see what has worked for them. To ask questions and share experiences with silvopasturing, visit: www.silvopasture.ning.com
- Work with a forester who is willing to help you learn and experiment. Expect some resistance at first when you mention the word "silvopasturing", but foresters are trained to achieve landowner goals. They may lack the knowledge on the livestock side of the equation, but their expertise in vegetation and forest management will be invaluable.



Cattle grazing in the Bighorn National Forests.
Picture shown with permission of Pearson Real Estate, Buffalo, NY



Prepared by Katelyn Walley-Stoll
Farm Business Management Specialist
716-640-0522 · kaw249@cornell.edu
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Dairy Market Watch
Newsletter
March 2023

An educational newsletter to keep producers informed of changing market factors affecting the dairy industry.

Milk Component Prices			Milk Class Prices				Statistical Uniform Price & PPD				
Month	Butterfat	Protein	I (Boston)	II	III	IV	Jamestown, NY		Albany, NY		Albany \$/gal. to farmer
Feb 22	\$3.02	\$2.31	\$24.89	\$23.79	\$20.91	\$24.00	\$22.52	\$1.61	\$23.12	\$2.21	\$1.99
Mar 22	\$3.09	\$2.71	\$26.13	\$24.76	\$22.45	\$24.82	\$23.59	\$1.14	\$24.19	\$1.74	\$2.09
Apr 22	\$3.41	\$3.42	\$27.63	\$25.71	\$24.42	\$25.31	\$24.92	\$0.50	\$25.52	\$1.10	\$2.20
May 22	\$3.10	\$3.86	\$28.70	\$25.87	\$25.21	\$24.99	\$25.42	\$0.22	\$26.03	\$0.82	\$2.24
June 22	\$3.33	\$3.41	\$29.12	\$26.65	\$24.33	\$25.83	\$25.83	\$1.50	\$26.43	\$2.10	\$2.28
July 22	\$3.36	\$2.91	\$29.12	\$26.66	\$22.52	\$25.79	\$25.21	\$2.69	\$25.81	\$3.29	\$2.23
Aug 22	\$3.40	\$2.14	\$28.38	\$26.91	\$20.10	\$24.81	\$24.27	\$4.17	\$24.87	\$4.77	\$2.14
Sep 22	\$3.56	\$1.88	\$26.87	\$26.51	\$19.82	\$24.63	\$23.67	\$3.85	\$24.27	\$4.45	\$2.09
Oct 22	\$3.65	\$2.45	\$25.96	\$25.73	\$21.81	\$24.96	\$23.62	\$1.81	\$24.22	\$2.41	\$2.09
Nov 22	\$3.37	\$2.53	\$27.34	\$24.67	\$21.01	\$23.30	\$23.12	\$2.11	\$23.72	\$2.71	\$2.04
Dec 22	\$3.15	\$2.65	\$25.83	\$23.11	\$20.50	\$22.12	\$21.91	\$1.41	\$22.51	\$2.01	\$1.94
Jan 22	\$2.77	\$2.80	\$25.66	\$21.61	\$19.43	\$20.01	\$20.71	\$1.28	\$21.31	\$1.88	\$1.84
Feb 22	\$2.71	\$2.36	\$24.03	\$20.83	\$17.78	\$18.86	\$19.60	\$1.82	\$20.20	\$2.42	\$1.74

February Utilization (Northeast): Class I = 29.2%; Class II = 24.8%; Class III = 28.1%; Class IV = 17.9%.

Class I = fluid milk; Class II = soft products, cream, and yogurt; Class III = cheese (American, Italian), evaporated and condensed products; Class IV = butter and milk powder.

Dairy Commodity Markets (Excerpt from USDA Dairy Market News – Volume 90, Report 13, March 31st, 2023)

Dry Products: Prices for low/medium heat nonfat dry milk (NDM) moved lower across all facets in the Central and East regions. The price range and mostly price series saw similar downward movement in the West, but the bottom of the price range shifted upward. Demand for low/medium heat NDM is light in the West and market activity is somewhat slow in the Central region. Prices for both acid and rennet casein have moved in a bearish direction, though contacts expect prices to hold somewhere near current levels going forward.

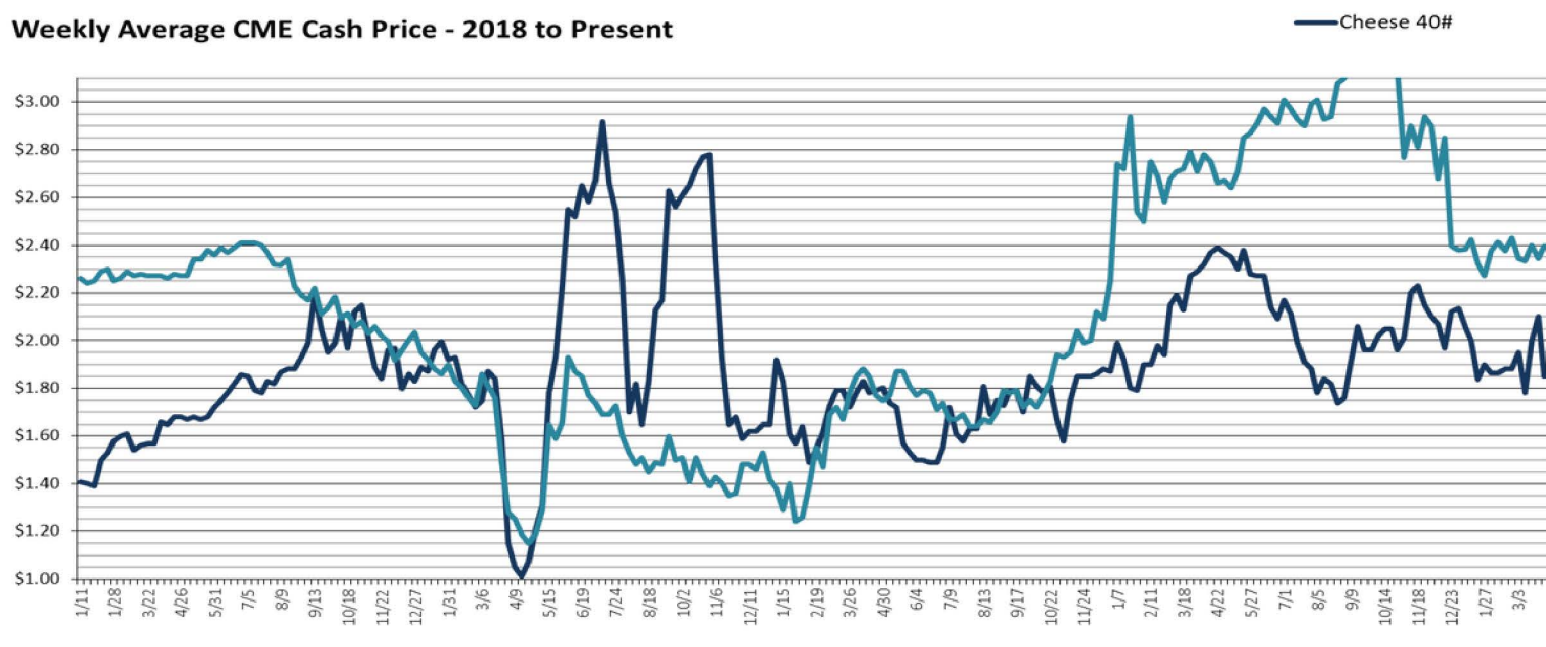
Cheese: Milk is available for strong cheese production in the Northeast and West. In the Midwest, milk remains accessible, though availability varies in different locations. Cheesemakers in the region are running active production schedules, and some say they are operating six to seven days a week. In the Northeast, demand for cheese is steady to strong from both retail and food service customers. Cheese inventories are steady in the Northeast and available to meet current spot purchasing demands in the West.

Butter: Cream is available for butter production in the Central and West regions, while availability varies in the East. Contacts in the East say spring flush will relieve the current tightness of cream for butter makers present in some parts of the region. Butter production is mixed in the East as some manufacturers say they are steadily churning, and others say labor shortages are causing them to operate reduced production schedules.

Fluid Milk: Milk output is steady or trending higher throughout much of the country. Bottling demand has also softened in the Northeast and Pacific Northwest as purchasers in those areas prepare for upcoming spring breaks. Downtime at drying operations in the East and Midwest is contributing to increased condensed skim availability.

Friday CME Cash Prices					
Dates	3/3	3/10	3/17	3/24	3/31
Butter	\$2.35	\$2.33	\$2.40	\$2.35	\$2.39
Cheese (40# Blocks)	\$1.95	\$1.78	\$2.00	\$2.10	\$1.85

Weekly Average CME Cash Price - 2018 to Present



Dairy Situation and Outlook - March 20, 2023 by Bob Cropp, Professor Emeritus, University of Wisconsin-Madison

Originally published here: <https://fyi.extension.wisc.edu/kewauneeag/files/2023/03/Dairy-Situation-and-Outlook-March-2023.pdf>

Some strengthening of cheese prices in March will result in a higher Class III price. The February Class III was \$17.78. March Class III could be near \$18.00. Barrel cheddar cheese prices have increased steadily since early March going from \$1.55 per pound to now \$1.9525. Forty-pound cheddar blocks moved up and down in March declining to \$1.78 per pound early March to now \$1.99. Where milk prices are headed for the remainder of the year is a big question. The answer seems to change weekly as dairy product prices change as do forecasts of milk production, domestic sales, and dairy exports.

Milk production increased just 0.1% in 2022. USDA is forecasting milk production to increase 0.9% in 2023. This higher increase will put some downward pressure on milk prices. It is not likely milk production will increase more than this. With continued high feed costs and higher cost of other inputs along with lower milk prices dairy producers will face tighter margins in 2023 than 2022. Also higher slaughter cow prices will likely increase the culling of cows from the herd and this along with fewer dairy replacements could actually reduce the average number of cows in 2023. USDA forecasts the average number of cows in 2023 will decline by 10,000 from 2022. High feed prices are likely to dampen the increase in milk per cow.

Domestic sales for 2022 fell slightly below 2021. USDA is forecasting domestic sales for 2023 to increase and being higher than 2021. Operators of restaurants are optimistic for sales in 2023. If this materializes it would strengthen cheese sales. Retail prices of milk and dairy products should also decline some which would help sales.

Dairy exports reached a new record in 2022. USDA is forecasting a decline in exports for 2023. This is based on the fact that U.S. will face more competition for markets as milk production is improving in Western Europe and possibly New Zealand, the two leading dairy exporters, and slower growth in global demand. However, dairy exports in January on a milk-solids equivalent basis was 16% higher than last year.

Dairy futures are not the best price forecaster. In early March Class III futures were in the \$17's and low \$18's first half of the year. While Class III was \$17.78 in February Class III futures through June have increased to the high \$18's. Class III futures were in the \$18's to low \$19's for the second half of the year and have increased to the high \$19's. These current futures are much more optimistic than USDA's latest forecast. USDA Class III forecast is \$18.20 first quarter, \$17.25 second quarter, \$17.35 third quarter, \$17.45 for fourth quarter and averaging \$17.55 for the year compared to \$21.94 for 2022.

While neither dairy futures or USDA forecast may end up near what Class III prices will be both are possible. Higher Class III prices the second half of the year versus the first half seems likely as milk production is seasonally lower in the summer and early fall while building of butter and cheese inventories begin in preparation for seasonally high butter and cheese sales Thanksgiving through Christmas. Based on projected less than a one percent increase in milk production, a modest increase in domestic sales and dairy exports down slightly USDA's price forecast seems too low. Dairy futures may also be too high unless milk production ends up lower than projected and domestic sales and or dairy exports end up higher than projected. ▪

Flushing Ewes Prior to Breeding Season

By Ashley McFarland, Regional Livestock Specialist, CNYDLFC Team

Breeding ewes for fall lambing is becoming more common in our seedstock operations, however large commercial operations have been using this method for many years.

Before we go out and stick our rams in with our ewes we should really consider flushing the ewes we plan to breed this spring. Flushing is predominantly done 2-3 weeks prior to breeding and continued 2-3 weeks into the breeding season. This 4-6 week window allows the ewes to be flushed and get into good shape for being pregnant throughout the summer. Flushing has shown to increase lamb crop and we have seen more twins than singles in most cases. (Twins pay the bills, singles do not!)

This method works best on seasoned (mature) ewes that are body condition scoring (BCS) of 2.5- 3.5. These ewes have gained back weight after nursing lambs this past fall and should be in good condition by April to start flushing for fall lambs. The most success is seen on ewes within the 2.5- 3.5 BCS range. Ewes that are too thin or overly heavy will have a lower response to flushing.

Timing is key to flushing! In this case we are trying to flush ewes to lamb in the fall. It is more beneficial to flush early (April/May) in the season when ovulation rates are naturally high compared to mid-breeding (June/July). Flushing not only will increase the number of ovulations (eggs) in the ewe, but will also improve the survival rate of the lamb in utero. The end goal is there will be more eggs available for fertilization, and the higher chance to survive after birth.

When flushing ewes, studies have shown that feeding corn has been most successful, however there has been some success on pasture. The ewes are requiring an increase in energy and protein in their diet at this time to allow the proper flushing to occur.

The other factor we may run into is breed specifics. Some breeds are known for out of season breeding and some are not. The black face sheep tend to have a much harder time at becoming pregnant during the spring vs late summer/ fall. We can alter this by treating the ewes with progesterone for 10-12 days to synchronize estrus. When the progesterone (CIDR) is removed we then inject gonadotropin (pg 600) into the ewe, the ewe will then exhibit estrus within the next 12-24hrs. At this time we will stick the ram in with these ewes. Ewes do not always catch on first heat even with implanting with progesterone. The most successful lamb crop is produced at the second breeding after applying the CIDR.

It is important to understand that flushing is not ideal for every operation. Not every farm is able to separate ewes off to properly flush the ones they plan on breeding for fall lambs. However if you desire to get the most return on your ewes this would definitely be an option to consider.

Increasing Dry Matter Intake (DMI), Pushing Up Feed and Profitability

By David R. Balbian, Dairy Management Specialist, CNYDLFC Team

Today most dairy cows are fed a Total Mixed Ration along a flat feed manger. This feed manger makes it easy to dispense feed and makes it easy to clean out left over discarded feed. A question that often comes up is the number of times/day to provide fresh feed and the number of times/day to push up feed. Frequent feed push-up stimulates feed intake. For a typical high cow diet, an extra pound of DMI equates to an additional 2 pounds of milk production. Some people call this marginal milk production. All the other costs involved in feeding cows are covered and that additional milk income is typically some of the most profitable.

Most researchers and nutritionists recommend that farms feed fresh feed twice a day. However, to save on labor costs some farms are feeding once a day. That practice can be successful, but cautions needs to be taken. Fermented feeds need to be stable with no heating (secondary fermentation) taking place. A tremendous amount of feed is dispensed all at once. Cows will do their best to sort this feed. For this reason, pushing feed up during the first two hours after feeding can be very beneficial as it reduces sorting. Additional pushups throughout the day and night will help to stimulate DMI. Some farms are pushing up feed every two hours during most of the day.

Delivering fresh feed or pushing up feed to ensure cows have feed immediately after returning from the milking parlor is important in stimulating DMI and to allow more time for the sphincter muscle to close prior to laying down.

It is also recommended that cows be without feed for not more than three hours. After three hours, a cow is motivated to eat. When a cow is without feed or when access to the feed bunk is restricted for 10 hours, usually during nighttime, DMI is reduced by 3.5 pounds per day (Collings et. Al., 2011).

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The benefits of frequent feed pushups can be substantial, yet the labor to accomplish it can be challenging. Most farms will use some type of mechanical device to accomplish this task, yet people must be available to operate that device. Farms that find themselves falling very short of the guidelines might want to investigate an investment in one of the several automated feed pushing devices on the market today. A partial budget can be used to calculate the expected results. If uncertainty still exists (and it often does) in this process, perhaps the farm can expend the additional labor for a set period of time to increase pushups that would mimic an automated device. The actual results could then be used to then make a decision on the investment.

Another big item of consideration is what the level of feed refusals should be at the end of the day. You see many recommendations suggesting that refusals should be in the range of 2 to 3% to maximize DMI. I know feed, both home grown and purchased, is very expensive today and people do not want to waste it. What to do with these refusals? Some people feed them to older replacement heifers. There is disease risk with doing this, especially if you have Johne's positive animals in your herd. Some people simply discard them. I know that can be hard to do when you think of the dollars and cents involved. One of the best solutions I have seen is to feed them to steers the farm. I know this does not work for everyone, but with the increased use of beef sires in dairy herds, some people may be raising these animals. In this case, it can be a good option.

Another article in this issue of our newsletter by Dr. Rick Grant from Miner Institute provides some additional insight into the topic of feed refusals or orts.

Don't Neglect Feed Availability

by Rick Grant, President, William H. Miner Agricultural Research Institute

Recently a nutritionist passed along a question to me from one of his clients about feed availability and how it affects feed intake and milk production. Essentially, the producer was wondering whether the potential benefits of feeding for refusals outweighed the cost of wasted feed and labor to clean out the bunks every day. I find that is still a common question in the field: how risky for milk yield is feeding to a slick bunk or very low feed refusals?

No one wants to waste high-priced feed dry matter and so the question is an important one. Upfront I need to stress that we could use more controlled research on the topic of feed availability throughout the day and intake or energy-corrected milk responses.

When I was at the University of Nebraska, we studied how a functionally empty feed bunk overnight (about 6 hours) affected feeding and resting behavior. In this on-farm case study, we couldn't measure dry matter intake because it was on a pen basis. But making sure the feed bunk did not go empty between midnight and 6:00 am doubled feeding activity at the bunk overnight, enhanced free stall use, made for less restless cows, and bumped milk up several pounds per cow.

Work by Alex Bach about 15 years ago found that herds that feed for refusals versus those that let the bunks go empty produce, on average, about 4 pounds per day more milk. This same paper clearly showed that keeping feed pushed up in front of the cow results in greater milk yield as well. More recently, Trevor DeVries at the University of Guelph has confirmed that the real value of feed push-ups is to keep feed within reach of the cow throughout the entire day.

Research also suggests that lactating cows are hungry with just 3 hours per day of feed restriction. Based on this sort of data I've advocated for 24/7 feed access as ideal. Certainly, exceeding three hours daily of empty feed bunk results in hungry cows and we need to avoid that situation especially with our high producers. Research from the University of British Columbia shows that extended time without feed (i.e., 10 hours per day) results in dramatic losses in dry matter intake, about 3.5 pounds per cow. Hopefully that extent of feed restriction rarely if ever occurs on farm!

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Mac Campbell's PhD work here showed that, when cows are overcrowded and in a competitive environment, they experience the greatest degree of sub-acute rumen acidosis (SARA) when feed access was restricted by about 5 h/d. Overcrowded cows with restricted access to feed had as much as 9 to 10 hours daily of SARA. These were short-term study periods, and so we couldn't accurately measure milk yield, but I would infer that SARA would negatively affect both intake and milk efficiency longer term given what would likely happen to the rumen epithelium.

Finally, there is no controlled research that I am aware of that relates various levels of feed refusals to intake or milk in a competitive environment. The best on-farm, case study type data I know of is Diamond-V's TMR Audit database. An informative chapter by Tom Oelberg and Bill Stone in the Large Dairy Herd e-book published by ADSA summarizes most of their key findings. Using time-lapse cameras, they concluded that very few farms can actually achieve zero feed refusals without the cows running out of feed. The few dairy farms that successfully feed to low refusals have very frequent feed push-ups right up to when refusals are pushed out. They also stress that these farms deliver fresh feed within 15 minutes of when refusals are pushed out. That is a high bar to meet! In the future, we really need some controlled research to verify these key conclusions.

The bottom line to me is that, if someone is set on feeding to very low or zero refusals, they need to not overcrowd, keep feed always pushed up so any cow can access feed any time, and be exceedingly consistent on feed delivery time. In my experience, when a producer takes a hard look at their feeding management, that is a tall order, and 2 to 3% feed refusals makes sense especially earlier in lactation.

Central New York Dairy, Livestock and Field Crops Team

Nicole L. Tommell, M. Ag.Ed

Team Leader

Farm Business Management Specialist

Phone: 315-867-6001

Email: nt375@cornell.edu

Ashley McFarland, PAS

Area Livestock Specialist

Phone: 315-604-2156

Email: am2876@cornell.edu

David R. Balbian, MS, PAS

Area Dairy Management Specialist

Phone: 518-312-3592

Email: drb23@cornell.edu

Erik A. Smith, Ph.D.

Area Field Crop Specialist

Phone: 315-219-7786

Email: eas56@cornell.edu

Stay in Touch

Website: cnydfc.cce.cornell.edu

Facebook Page: facebook.com/cnydlfc

Join our E-mail list: <http://eepurl.com/hh3vBj>

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