



Summary of Information on Milk Reduction/Disposal Options

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Background

The global coronavirus pandemic has impacted U.S. dairy from farm to fork and presented an unprecedented industry challenge. In order to maintain the decrease in supply to maintain a balance with demand, many cooperatives and processors are continuing to ask for milk to be removed from their supply chains. Considering these marketing limits, this article provides an overview of some management options that may help reduce milk production going into the marketplace.

This article represents a summary by National Milk Producers Federation staff of some information that is available about Milk Reduction and Disposal Options, and not any original research by NMPF staff. The summary is intended as an introduction to the subject matter in general, not as a specific guide. It is being provided as a convenient tool to acquaint producers with that information. NMPF encourages dairy farmers to read the linked materials, if possible, and to consult with nutritionists and other experts in this area when necessary to implement their own strategies.

Goals

- Reduce total on-farm milk production so to not exceed marketplace demands
- Keep cows healthy and efficient while maintaining their welfare
- Maintain cow numbers, as best as possible, to be well-positioned to reestablish normal business operations as quickly as possible once markets stabilize

Strategies for Reducing Milk Production

- Reduce milking frequency
Reducing milking frequency from three to two times daily is a viable option for decreasing production on farms. Cow numbers remain unchanged, so once markets stabilize, normal operations can be resumed in a timely manner. This approach also reduces labor pressure in the parlor.
 - › Considerations: Switching high-producing cows near peak lactation from three to two times daily may be challenging due to high intramammary pressure. This can lead to milk leakage, higher Somatic Cell Count and increased mastitis risk.

- › Potential Impact on Production: This strategy is expected to reduce milk production by 7-8 pounds per cow per day.
- Reformulate cow rations
(Adapted from Cornell ProDairy's [factsheet](#) and [podcast](#))
 Including more forage and reducing starch and sugar accordingly will reduce production per cow.
 - › Considerations: Always work with your nutritionist when making ration adjustments and keep protein and energy balance to maintain normal milk composition. Forage inventories also need to be measured, as you do not want to run out of forage prior to the next harvesting.
 - › Potential Impact on Production: Varied
- Dry cows off earlier
 Review your herd's current days dry. If you are at a 45-day target, consider increasing the target to 60 to 65 days dry.
 - › Considerations: Targeting dry days at greater than 70 days increases the risk of excessive weight gain and markedly increases the risk of metabolic disease at the time of calving and early lactation culling. Stocking density must be considered with these strategies. Reducing stocking density may result in increased milk production from remaining cows offsetting the milk production removed from increased culling or drying off.
 - › Potential Impact on Production: An additional two weeks of days dry in a herd with a 14-month calving interval reduces milk days by 3.3% and milk production by up to 2.5%. This is a decrease of about 1.6 pounds per cow per day.

Feeding Strategies to Use Milk Produced

(Adapted from "[Feeding Unpasteurized Milk to the Dairy Herd](#)" and "[Feeding Milk to Cows?](#)")

- Make adjustments to calf feeding and weaning
 Consider increasing feeding volume to up to 12 quarts of milk per day, increased over a period of 1-2 weeks. Delay weaning from 8 weeks to 12 weeks (or longer) with a longer adjustment to starter grain. Another option for using excess milk on farms is to acidify it to preserve it for future calf feeding. More information on acidified milk is available from Penn State [here](#).
 - › Considerations: Unpasteurized milk is a concern for spreading Johne's disease, Mycoplasma, bovine leukosis (BLV), Staph aureus and other diseases. If possible, pasteurization is encouraged to reduce disease transfer. A pasteurizer capacity is likely limited, so prioritize pasteurized milk to young calves/heifers.

- › Potential Impact on Production: If calves are fed 2.5-3 gallons for an additional 30 days, each calf will consume an additional 1290 to 1935 pounds of milk. This will use about 1.9 pounds of milk per cow per day.
- Add milk to heifer or lactating cow rations

Incorporating milk into the ration adds a large amount of water and the effect is similar to using water to reduce ration dry matter and sorting. Up to about 16 pounds of milk or 2 pounds milk solids (dry matter) per cow (15% of the ration as fed) can be included. Consider adding a TMR preservative to control microbial growth and spoilage. Milk inclusion should vary depending on the ration dry matter content with reduced inclusion in wetter rations. Ration dry matter should not be below 45-50%, as this can restrict intake and will cause greater spoilage. Balancing nutrients is required as milk provides fat, protein, lactose sugar and other nutrients which should be accounted for in the ration. Milk feeding can also substitute for some purchased feeds. Feeding to dry and transition cows is not recommended. Always work with your nutritionist when making ration adjustments.

 - › Considerations: Unpasteurized milk is a concern for spreading Johne's disease, Mycoplasma, bovine leukosis (BLV), Staph aureus and other diseases. If possible, pasteurization is encouraged to reduce disease transfer. Regarding moisture content, high water content (85-88% water) limits the amount fed in a total mixed rations (TMR). Usage of milk in TMR is similar to using water to reduce dry matter content (10-15% of TMR as fed). Unpasteurized milk added to the TMR may cause unpleasant odors due to microbial growth, especially in warm weather. Monitoring of feed intake and the TMR for heating and smell is needed. Consider adding a TMR preservative to control microbial growth and spoilage. Feed-bunk and equipment cleanliness is critical to control bacterial growth. Flies may become an issue when adding milk to a TMR. A feed-through insect regulator is useful to control fly populations. Feed-bunk and equipment cleanliness is critical to minimize fly populations feeding on milk residues as well.
 - › Potential Impact on Production: Total milk (heifers and lactating cows) per 100 cows on the farm would be about 1600 pounds per day at 15% inclusion rate.

Strategies for Reducing Milk Production

- Cull cows

Prioritize "do not breed", late-lactation, and open cows in culling decisions. Also consider culling cows that have had either severe or repeated disease incidences, and non-competitive first and second-lactation cows. Alternatively, remove older cows because they produce more milk, which may result in selling fewer animals as more total head may be retained, which may be beneficial for long-term planning.

- › Considerations: Note the distribution of your herd by days in milk. Consider culling cows from the bottom of your lactation curve distribution, not just late lactation cows. Confirm that auction markets or processing plants are currently accepting cattle before shipping and put together an entire load of cattle to sell, if possible. Buyers are likely to prefer single loads from known sources than auction market cattle.
 - › Potential Impact on Production: Varied
- Feed out identified cull cows for higher quality beef
 There remains the potential of increased numbers of dairy cows going for beef, which will drive down short-term dairy-beef prices. If there is space and feed inventory, consider drying these cows off and feeding them for 30-60 days until the market settles.
 - › Considerations: Confirm that auction markets or processing plants are currently accepting cattle before shipping and put together an entire load of cattle to sell, if possible. Buyers are likely to prefer single loads from known sources than auction market cattle.
 - › Potential Impact on Production: Varied

On-Farm Milk Disposal

*****Always confirm with State and local authorities what is permitted in your area.**

Milk associated with a [Federal Milk Marketing Order \(FMMO\)](#) can be dumped at the farm and still priced and pooled during this crisis. Contact your [area](#) FMMO staff for more information.

The USDA's Risk Management Agency recently [announced](#) that dumped milk can be counted as milk marketings for the Dairy Revenue Production or actual marketings for the Livestock Gross Margin for Dairy programs. For the most current updates, visit farmers.gov/coronavirus.

- Land application
 Incorporate into soil, if possible.
 - › Considerations: Avoid spreading on frozen or saturated ground. Ensure that the application conforms with your nutrient management plan. Note that the discharge of milk to surface water or groundwater is a discharge of pollutants and is illegal.
- Lagoon
 Dispose of milk directly into a lagoon management system when possible. Note that sending milk through sand separation or other systems can clog equipment.
 - › Considerations: Make sure that lagoon disposal conforms with your nutrient management plan. Maintain adequate space for 25-year storm and exercise proper safety precautions as there is possible increases in manure biogas and hydrogen sulfide production.
- Digester

(Adapted from [Michael Best](#) and the [American Biogas Council](#))

Dispose of milk into a digester that can accept milk. Exercise extreme caution when considering adding milk to anaerobic digesters. Significant increases in biogas production and hydrogen sulfide is likely. We strongly recommend consulting with a qualified engineer prior to adding milk to the digester to determine appropriate volumes of milk that can be added without causing negative outcomes to human health or facilities.

- › Considerations: Ensure that disposal conforms with your nutrient management plan and that your system has capacity and capability of using milk as a feedstock. Note that there may be implications for any renewable energy tax credits.

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