How to dispose of excess milk during the COVID-19 crisis

Due to the COVID 19 crisis, dairies are facing both a lack of demand from restaurants and other businesses as well as a lack of processing capacity as facilities have closed. This crisis had led to some dairies and processing facilities needing to dispose of surplus milk.

This fact sheet provides guidance on how to dispose of surplus milk with minimal impacts to the environment and with permit compliance.

Individual dairies

Individual dairies may choose to either:

- Land-apply the milk now
- Add the milk to their liquid manure storage area (basin) and land apply it at a future date

In either case, they will need to:

- Follow their manure management plan (MMP). Ensure that you account for the nutrient value of the milk. Avoid applying to fields where manure was applied this spring or the previous fall. Nitrogen rates should not exceed the expected needs of the crop grown.
  - For dairies without a manure management plan, apply the milk at a rate that does not exceed the expected crop needs.
- Collect a milk sample and send it to a lab for analysis to record the nutrients applied.
  - If not able to submit a milk sample for analysis, then use 100% availability when calculating the nutrient availability of nitrogen-phosphorus-potassium (N-P-K). Availability does not change with different methods of application. Producers could also use book values for nutrients. For more information, see this University of Wisconsin publication: https://ipcm.wisc.edu/download/pubsNM/UW-LandspreadingMilkConsiderations2020.pdf.
- Follow all guidelines for manure application. Do not apply the milk within required setbacks from sensitive features like waterbodies, ditches, tile intakes, sinkholes, etc. Consider using larger setbacks if possible. Minimum state requirements can be found here: www.pca.state.mn.us/sites/default/files/feedlots-manureapplication.pdf.

Milk will have a strong odor as it decomposes in the field. Inject or incorporate it as soon as possible. If possible, notify neighbors that you need to land-apply surplus milk because of low demand or processing capacity.

- Avoid applying milk immediately before or after a rain event. The interactive Minnesota Runoff Risk Advisory Forecast (RRAF) map can help determine when a runoff event is likely in the next 24 to 72 hours: www.mda.state.mn.us/rraf.
- Account for the additional volume and nutrients on land application records.

If adding milk waste to manure basins:

- The addition of milk will change the usual nutrient content of manure. Consider trying to collect a sample from storage and send it to a lab prior to application to adjust the application rates appropriately.
- Odor production and/or how crusts form on the top of the storage will likely be impacted. This could impact how producers agitate their storage later on.
- The fats in milk may plug equipment. Transfer milk waste to manure storage basins at the closest possible point. Plan to clean equipment more frequently to reduce the chance of plugging or failure.
- Don't have enough storage? Contact neighbors to see if they can take the milk and put it in their storage.
- **Do not dump milk down the drain** with your milkhouse wastewater. Milkhouse wastewater treatment systems are not designed to handle milk that cannot be added to the bulk tank (milk from fresh or treated cows). The biological oxygen demand will overload the treatment system.

Regulatory flexibility

In most cases, dairies will not need to request regulatory flexibility. The one exception where regulatory flexibility may be needed: Liquid manure storage areas operating with less than 1 foot of freeboard.

Keep records

According to Marin Bozic, a University of Minnesota dairy economist, producers should keep records that include the date, volume of milk, reason for dumping, and where it was disposed. These records will help in the event that state or federal programs become available to help farmers with lost revenue during the COVID-19 epidemic.

Milk processing plants

Milk processing plants should contact the MPCA Industrial By-Products program for assistance on a case-by-case basis:

- Individualized assistance is needed because facilities differ on permit coverage and requirements.
- The Industrial By-Products program will work with milk processing plants in determining options for milk disposal. Requesting regulatory flexibility is also an option, but in most cases should not be necessary.

Contact information

Individual dairies should contact their MPCA permitting and compliance staff:
www.pca.state.mn.us/sites/default/files/wq-f1-11.pdf

Milk processing facilities should contact the MPCA Industrial By-Products program:

- Adam Sekely at 218-316-3880

Regulatory flexibility

For more information on MPCA regulatory flexibility during the COVID-19 crisis, please visit this webpage: www.pca.state.mn.us/covid-19/covid-19-and-regulatory-flexibility.