

## Fall Manure Application for Dairies

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Harvest season is coming with corn silage mostly off and soybean following quickly, and with it manure application. This year we are going to do something a little different, so with all respect to David Letterman, here is a “top ten” list for using dairy manure.

- 1. Safety:** Both for workers and animals, as you get started for the day check over the ventilation system. Are wind speeds adequate? Are the fans all working? If pumping from a manure pit, use a pump out curtain to help keep hydrogen sulfide (H<sub>2</sub>S) away from the workers. Once agitation has started, avoid going into the barn. If you are working near the agitated manure, wear an H<sub>2</sub>S monitor to make sure conditions are safe and watch out for cool evenings when air gets still. Pay special attention if you use gypsum bedding as this can be a significant source of sulfur in manure.
- 2. Rules of the Road:** Before we get started for the season, make sure to check over all your equipment to make sure lights and flashers are working and your slow-moving vehicle signs are up and visible. During the season, make sure to check these and when necessary clean them off so you remain visible. Try to pre-map routes from farm to fields looking to avoid blind corners, busy roads, and soft shoulders.
- 3. Equipment:** Manure application is fertilizer application and we need to treat our equipment that way. Test it now to make sure everything is in working order; check your flow meter, any seals on the tank or equipment, air intake valves, and injectors. All items need to be in working order to get our manure applied quickly and where we want it. Calibrate your equipment, especially solid manure spreaders. Do you know the drive speed and apron speed you need to hit your application rate?
- 4. Treat it like a fertilizer:** Get your manure tested and use those results to determine application rates for the fields. Using manure as a fertilizer requires we know what’s in it, get it tested for N, P, and K. Good application decisions demonstrate we think manure is a fertilizer to take advantage of and not a waste product.
- 5. Review your manure management plan:** Make clear maps that show where the manure should go and what rates are going on the different fields. Note your soil and weather conditions throughout the application season and plan accordingly. If rainfall or storms are imminent, delaying application may be necessary. In other cases, it might mean ensuring the manure is either injected or incorporated before the storm reaches the field.
- 6. Spill response:** Have a plan of who to call and review the plan with your employees about what to do should something go wrong. An effective plan reduces risk to humans, animals, and the environment. Make sure to hand out the important phone numbers of who to call to help with spill cleanup, as well as the DNR spill line (515-725-8694) to report it.
- 7. Communication:** Harvest and manure application season are busy times, but making sure everyone is on the same page is critical to keep everyone safe and help ensure the job is done correctly. Having a farm map showing both fields and application rates can help keep everyone on the same page. If you know of any sensitive areas in the field like sink holes, waterways, and tile intakes, mark them out so everyone can easily identify these critical areas and act accordingly.
- 8. Stockpiling Rules:** If you are working with bedded pack manure and plan to stockpile in your field before application, scout ahead to identify areas that will be high and dry, easily accessible when you come back to load your spreader, and are away from houses and areas of water flow.
- 9. Complete but not balanced:** Fertilizer prices may be down and manure may not look quite as valuable as it was a couple years ago, but they still have significant value. When it comes to dairy manure, especially for P and K, looking for fields where you need these nutrients can help ensure you are getting as much value from the manure as possible.
- 10. Cover Crops:** Corn silage fields are often harvested early, leaving applied manure nutrients vulnerable to erosion and loss with nothing growing in the field. Using cover crops can be a great way to reduce soil, phosphorus, and nitrogen losses while growing some tasty forage.



Figure 1. Beginning manure agitation of a dairy lagoon.