

Leachate Collection from a Feed Storage System



Leachate – Concentrated liquid waste which has percolated or drained by gravity through a pile of manure, manure processing derivative, or animal feed. It contains much higher concentrations of contaminants than contaminated runoff.



Corn silage pile covered in plastic protects the feed and helps with the fermentation process but also creates an impermeable surface which creates the need to address storm water runoff.



A feed mixer and loader used to mix feed and transport to the freestall barns to feed the animals.

The Land Conservation Department works with landowners and farmers on various aspects of non-point pollution prevention. On farming operations, there are many areas that can be enhanced to reduce or completely eliminate the risk of polluted runoff. One of these areas involves feed pads (areas where farms stockpile feed stores such as haylage and corn silage). Feed piles tend to bleed "juice" as feed ferments. This "juice" is high in nutrient content, and if left to runoff, may cause water quality issues in nearby streams or groundwater.

By working with farms to help reduce the amount of clean rain water from coming into contact with nutrient laden "juice", we can greatly reduce the chance of polluted runoff from causing issues. By separating clean water from dirty water, farms can also reduce the amount of runoff that they would otherwise have to store in their livestock waste lagoons, saving both time, and money! The concentrated "juice" or leachate from these systems along with a minimal amount of precipitation that comes into contact with contaminants is directed to a collection system where it can be pumped to the waste storage facility and applied to cropland where it can help to fertilize next year's crops! Who'd have thought that there's science to stockpiling feed??? But there is!

Rohan Dairy Farm recently contacted Outagamie County for technical assistance for a feed pad expansion on their dairy farm in the Town of Deer Creek. The new feed pad will have a collection system with an underground transfer line to transfer the leachate and runoff to a collection cell. There will be a V-channel on the south side of the pile that directs clean water away from the pile. The north side will have a plastic layer over the concrete wall redirecting clean storm water runoff to a vegetated swale in the crop field. Rohan Dairy's feed pad expansion project is pending approval from the DNR and is expected to be constructed in the summer of 2022.

For more information about the Rohan project or to learn more about feed pad leachate collection, or other non-point reduction efforts on area farms, contact Engineering Technician, Quint Krueger at (920) 832-6074. - *Quint*



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