

*Feb. 21, 2023*

# On Farm Manure Composting

**Jeff Endres, Endres Berryridge Farms**



# Manure composting – What have we learned?



# Water Quality

## 5. Manure stacking and/or composting

Table 5 shows a comparison of the reduction in the risk of phosphorus loss from **manure stacking and/or composting during the critical runoff period**. This program was first offered to farmers in the watershed in 2016. Interest in this program continues to grow and the YPF board of directors feels it is important to encourage farmers to not apply manure during high-risk periods. This practice is also one that has a significant reduction in soluble phosphorus loss.

Year	2016	2017	2018
Farms	1	9	9
Fields	1	9	44
Acres	50.4	301	898
Average (lbs/acre)	2.1	2.1	2.0
Total P reduction (In pounds)	106	665	1,855

Table 5 Number of farms, acres and phosphorus reductions through the LDDT + cover crop program





# Where can you compost?



# Where can you compost?





# Types of manure

Free Stall Scrapings



Bedding Pack



# Separated Solids



# Loading different types of manure





# Building compost windrows



# Turning and aerating





# Finished compost





# Transporting compost



# Spreading compost



# Compost value

Moisture 69.05      Dry Matter 30.95

All Values Reported in Pounds Per Ton on an As Is Basis

	Total Nutrients	Estimated Available Nutrient Credits for Manure		
		In 1st Year of Application	If Applied 2 Consecutive Years	If Applied 3 Consecutive Years
Total Nitrogen (Incorporated after 72 hours or not incorporated)	9.39	2.35	3.29	3.76
Total Nitrogen (Incorporated in 1 to 72 hours)	9.39	2.82	3.76	4.22
Total Nitrogen (Incorporated within 1 hour or injected)	9.39	3.29	4.22	4.69
Total Phosphorus as P2O5	8.54	6.83	6.83	6.83
Total Potassium as K2O	9.94	7.95	7.95	7.95
Sulfur	1.79	0.99	1.17	1.26

Total Carbon: 6.42%  
C:N Ratio: 14:1  
Organic Matter: 30.7%  
Nitrate 6.96 ppm on an as-is basis.  
pH 9.73  
Ammonium Pounds Per Ton = 0.01  
Ammonium % of Total N = 0.10  
Organic N: 0.46%

Moisture 41.60      Dry Matter 58.40

All Values Reported in Pounds Per Ton on an As Is Basis

	Total Nutrients	Estimated Available Nutrient Credits for Manure		
		In 1st Year of Application	If Applied 2 Consecutive Years	If Applied 3 Consecutive Years
Total Nitrogen (Incorporated after 72 hours or not incorporated)	31.81	7.95	11.13	12.72
Total Nitrogen (Incorporated in 1 to 72 hours)	31.81	9.54	12.72	14.31
Total Nitrogen (Incorporated within 1 hour or injected)	31.81	11.13	14.31	15.90
Total Phosphorus as P2O5	28.46	22.77	22.77	22.77
Total Potassium as K2O	56.16	44.93	44.93	44.93
Sulfur	7.83	4.31	5.09	5.48

Total Carbon: 17.08%  
C:N Ratio: 11:1  
Organic Matter: 33.47%  
Nitrate 35.37 ppm on an as-is basis.  
pH 9.53  
Ammonium Pounds Per Ton = 3.23  
Ammonium % of Total N = 10.14  
Organic N: 1.39%





# Composting Manure Fiber for Bedding



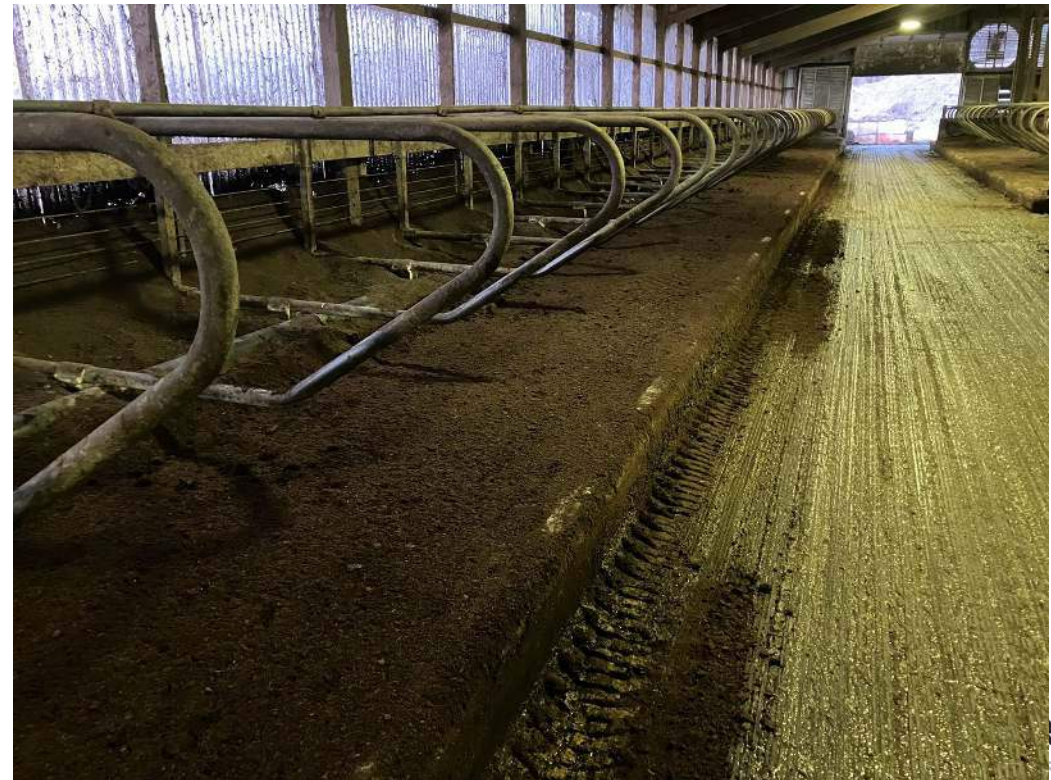
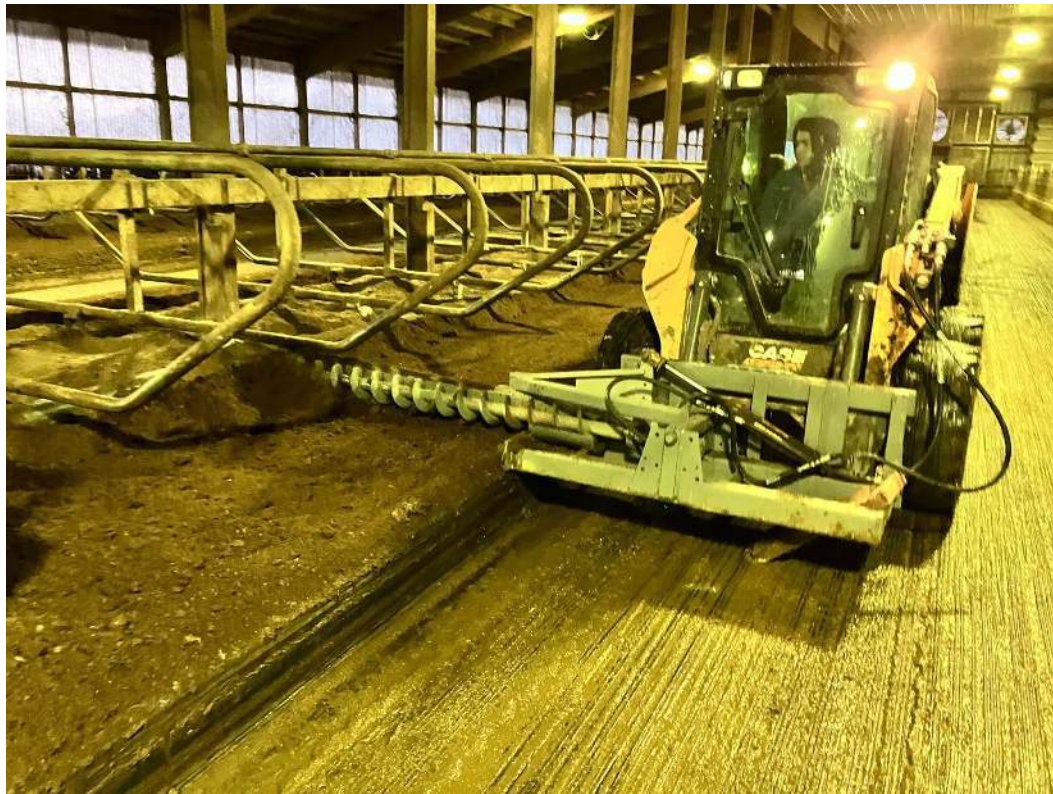


# Three Week Process



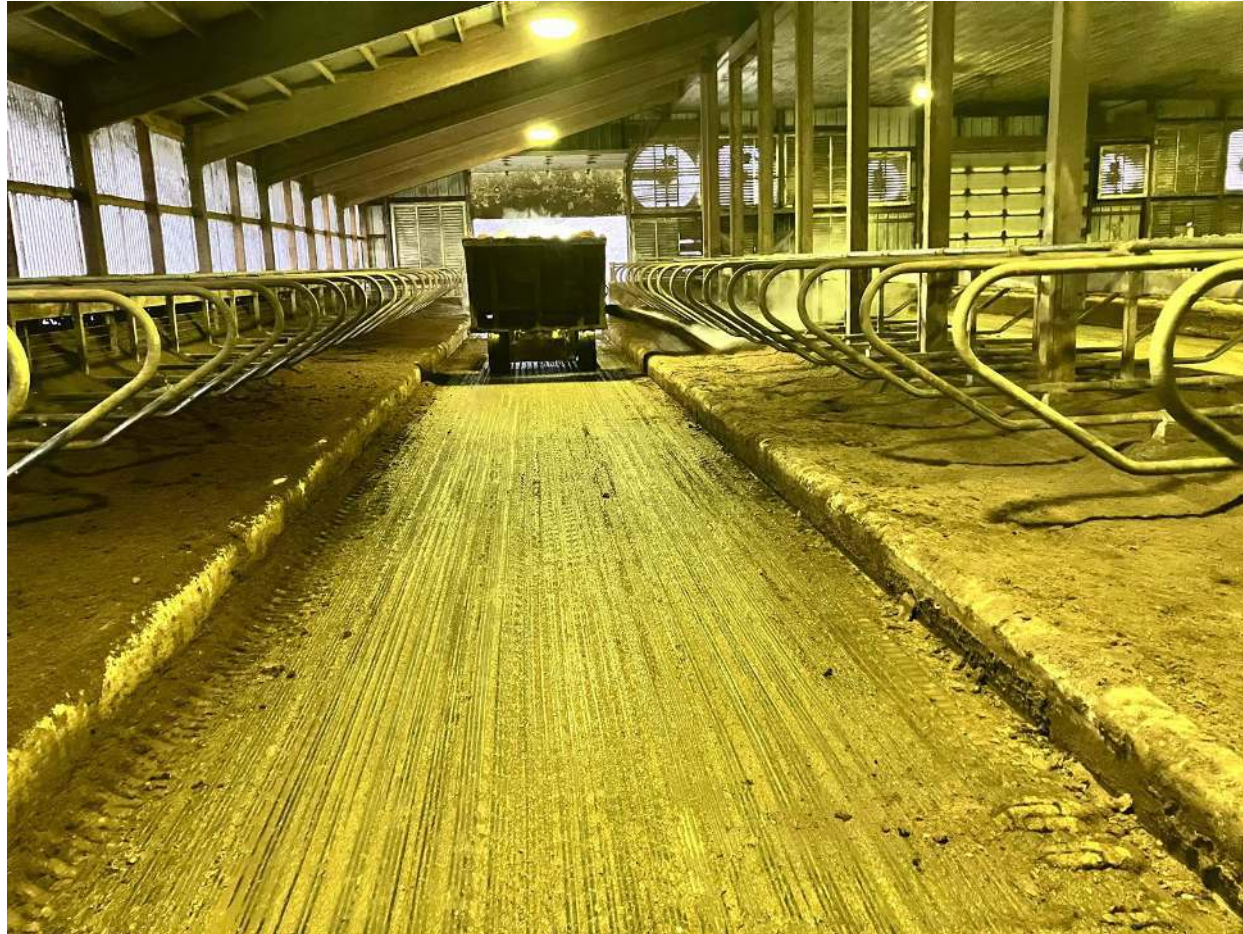


# Grooming Stalls





# Adding Compost





# Cow Comfort





# Cow Cleanliness





# Cow Safety





# Questions?

