



Making Manure Matter

“Getting the most value from manure nutrients”



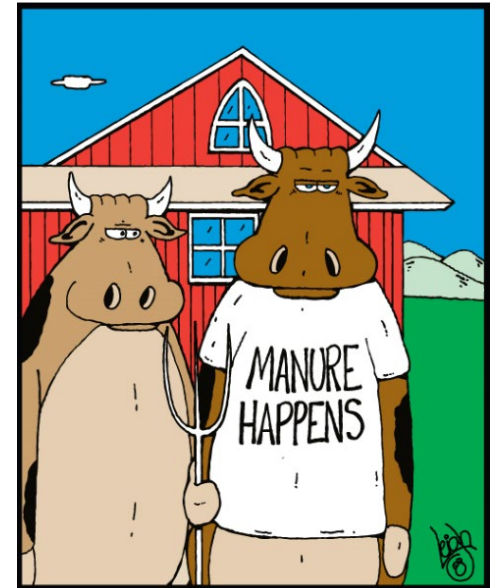
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Manure Management: What's in it for me?

- Reduces chemical fertilizer requirements
- Improves soil nutrient levels
- Replaces nutrients removed by crops
- Provides organic matter and microorganisms

We have to do something with it!
Why not get the most benefit possible?





Liquid Manure – What is it worth?

The average liquid dairy manure is worth **\$0.04/gallon** (based on 2019 fertilizer N, P, K values)

A farm producing 1 million gallons/yr = **\$40,000** worth of fertility

Would you spread \$40,000 worth of fertilizer on a field because it was closest to the barn!?





Manure Analysis – Why measuring is important!

	Pit #1	Pit #2	Pit #3	
Nutrient			Top	Bottom
Dry Matter %	5.51	11.17	4.62	29.99
Total N Kg/T	2.20	2.30	1.80	4.60
Amm N Kg/T	1.10	0.70	0.60	1.70
P2O5 Kg/T	0.98	1.10	0.85	1.19
K2O Kg/T	2.52	1.98	1.16	4.59

Target: 90 kg/ha of N (incorporated manure)

Pit #1 = 6500 gal/ac

Pit #2 = 7500 gal/ac

Pit #3 top = 9000 gal/ac

Pit #3 bottom = 3500 gal/ac



Manure Analysis – Why measuring is important!

Farm Scenario:

- 800,000 gallons to spread in the spring
- Planting 150 ac of corn – target N for manure = 90 kg/ha (after losses)

Do they have enough manure?

Pit #1 (6500 gal/ac) = 123 acres

Pit #2 (7500 gal/ac) = 107 acres

Pit #3 Top (9000 gal/ac) = 89 acres

Pit #3 Bottom (3500 gal/ac) = **229 acres**

**Knowing what is in
your manure can
save you money!**

**Avoid yield losses
or reduce chemical
fertilizers!**



Application Rates - What difference does a few gallons/acre make?

Farm Scenario:

- 3 different people on the farm spread manure
- All 3 use a different gear on the tractor - guessing
- They have a 4000 gallon spreader

6500 gal/ac – 1.6 loads/acre = 90 kg/ha

5500 gal/ac – 1.4 loads/acre = 75 kg/ha

4500 gal/ac – 1.1 loads/acre = 60 kg/ha



**Unintentional
yield loss**



Getting the Most Value – Follow your manure plan!

Farm Scenario 1:

Hired hand spread fall manure on convenient fields all at the same rate of 4000 gal/ac. Farmer was happy because hired hand kept busy and emptied the pit.

Following spring total fertilizer = 56 tonnes

Farm Scenario 2:

Farmer gave hired hand target fields and target rates to maximize fertility. Farmer was happy because hired hand kept busy and emptied the pit.

Following spring total fertilizer = 40 tonnes

Saved 16 tonnes!!

Over \$10,000 saved!



What is the Manure For? – Nutrient targets change

Spring – Nitrogen

- What are the requirements for each crop?

After cuts – Phosphorus and Potassium

- Application rates have to be lighter to not choke grass
- Replace the P and K and some of the N

Fall – Potassium, Phosphorus and Nitrogen

- Feeding next year's crop
- Fall potassium on alfalfa
- Replace nutrients removed
- Fall planting



Where Did All the Nitrogen Go!?

How and when manure is applied

6500 gal/ac

- **Injected** = 109 kg/ha
 - 0% loss of Amm N due to volatilization
- **Surface applied and incorporated same day** = 90 kg/ha
 - 25-30% loss of Amm N incorporated within 12 hrs
- **Surface applied** = 49 kg/ha
 - 70-75% loss of Amm N



How long was it applied before planting? Cold & Wet?



Conclusions – To put it in a pile:

- What's in the manure matters
- How it's applied matters
- The application rate matters
- The purpose of the manure application matters – target nutrients



**Making manure matter on your farm
can save you money!**



Having a Plan Matters

Call LP Consulting to get the most value from your manure through our crop management plan.

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