



Analysis Report For:					Copy To:		
Zane Smith Smith Farms 123 Farmland Road Smithville PA 11111							
LAB ID:	SAMPLE ID:	REPORT DATE:	DATE SAMPLED:	COUNTY:	MATERIAL:	TYPE:	STORAGE SYSTEM:
M05245	Fresh	08/09/2010	08/01/2010	Adams	Manure	Dairy Cattle	Fresh-No Storage

## MANURE ANALYSIS REPORT

Results on as sampled (wet weight) basis

Analyte	lb/ton	lb/1000 gal
<b>Solids:</b> 14.6 %		
<b>Total Nitrogen (N)</b>	10.33	43.07
<b>Ammonium N (NH<sub>4</sub>-N)</b>	3.53	14.74
<b>Calculated Organic N</b>	6.79	28.33
<b>Total Phosphate (P<sub>2</sub>O<sub>5</sub>)</b>	4.09	17.07
<b>Total Potash (K<sub>2</sub>O)</b>	8.99	37.50

  

Optional Test Results:	pH	Carbon (C) (%)	C:N Ratio	Ash (%)	Volatiles (%)	Nitrate Nitrogen (lb/ton   lb/1000 gal)		Soluble Salts (mmhos/cm   manure:water)		PSC*

\*P Source Coefficient for use in Pennsylvania P Index

### Comments:

- The enclosed fact sheet “Using Your Manure Analysis Report” provides information to help you interpret this report and calculate appropriate manure application rates for your crops.
- Manure nutrients are not all equivalent to fertilizer nutrients. Phosphorus and potassium can be substituted directly for fertilizer to meet your soil test recommendation. Nitrogen (N) availability varies with handling. This must be accounted for in utilizing manure to meet soil test N recommendations. See the enclosed fact sheet “Using Your Manure Analysis Report”

Nutrient contents are presented as both “lb/ton” and “lb/1000 gal”. Choose results with the units that are most convenient for you. An assumed manure density of 8.34 lbs per gal was used to calculate results on a lb/1000 gal basis.

## ANALYSIS REPORT

### Estimated Application Rates

Below are estimated manure application rates based on the information that you provided with your sample. There are two sets of rates: one based on matching the N needs of the crop and the other based on matching the P needs of the crop. The N based rate will meet the N needs of the crop but will usually supply excess P. The P based rate will not usually supply excess nutrients but will require more land and additional fertilizer N. Given these considerations you must decide which rate is appropriate for your situation. More accurate manure application rates and rates for other situations can be calculated using the worksheet in the enclosed factsheet.

#### Estimated Application Rates to Meet Crop Nitrogen Requirements

Farm Scenario	Crop	Planned N Fertilizer (lb/A)	Previous Legume and Stand	Historical Manure Use		Spreading Season	Manure Rate (if incorporated same day as spread) Ton/A	Manure Rate (if not incorporated for > 7 days) Ton/A
				Frequency	Rate			
F#1	Corn silage: 18-21 ton/A	16	Alfalfa, 25- 50 % Stand	Frequent	Low	Fall	<b>25</b>	<b>25</b>
F#2	Corn silage: 18-21 ton/A	16	Alfalfa, 25- 50 % Stand	Frequent	Low	Spring	<b>10</b>	<b>25</b>
F#3	Corn silage: 18-21 ton/A	16	Alfalfa, < 25 % Stand	Frequent	Low	Winter	<b>40</b>	<b>40</b>

∞ The rates in the above table are calculated for the extremes in incorporation i.e. immediate incorporation and no incorporation mechanically or by rainfall for at least a week. For management in between these extremes adjust proportionally. For example, if the manure is incorporated in 3 or 4 days after spreading, a rate midway between the extremes would be appropriate. **If no rate is presented, a realistic rate could not be calculated with the information provide.**

∞ Usually when manure is applied at rates to meet the crop N requirement, excess P is applied. This excess P may represent an environmental hazard.

∞ Caution should be exercised in applying rates in excess of 10 tons/A of poultry manure or 30 tons/A of other types of solid manure or in excess of 9,000 gal/A of liquid manure. These rates should be split into 2 or more separate applications.

#### Estimated Application Rates to Meet Crop Phosphorus Requirements

Farm Scenario	Crop	Planned P <sub>2</sub> O <sub>5</sub> Fertilizer (lb/A)	Manure Rate for Low P Testing (< 30 ppm Soil Test P)			Manure Rate for Optimum P Testing (30-50 ppm Soil Test P)		
			Manure Rate Ton/A	Fertilizer N required (lb/A)*		Manure Rate Ton/A	Fertilizer N required (lb/A)*	
				Manure incorp same day	Manure not incorp > 7 days		Manure incorp same day	Manure not incorp > 7 days
F#1	Corn silage: 18-21 ton/A	48	<b>25</b>	0	0	<b>9</b>	33	33
F#2	Corn silage: 18-21 ton/A	48	<b>25</b>	0	0	<b>9</b>	12	33
F#3	Corn silage: 18-21 ton/A	48	<b>25</b>	35	35	<b>9</b>	73	73

\* Additional fertilizer N required to meet crop N needs when manure is applied at rates to meet crop P needs.

- The table above provides an estimated rate of manure required to meet the P<sub>2</sub>O<sub>5</sub> needs of the specified crop for an average low testing soil and an average optimum testing soil. For an optimum testing soil this manure rate will apply an amount of P<sub>2</sub>O<sub>5</sub> equivalent to what the crop will remove. At high soil test P levels the recommendation is 0 thus no manure would be recommended on these soils if the rate is based on P.
- Usually applying manure to balance the P needs of the crops is the most environmentally safe approach.
- When manure is applied at a rate to meet the P requirement of the crop, additional nitrogen will usually be needed for non-legume crops. The amount of additional N required if the manure is applied at a P balanced rate is given in the table above. While incorporation of the manure has little impact on P availability it does affect the N availability. Consequently, if the manure is not incorporated more additional N will be required to satisfy crop needs. This is why there are two different additional N recommendations in the table above. Use the one most appropriate for your situation.