Understanding your compost nutrient analysis

Chryseis Modderman

University of Minnesota Extension Educator







Compost Analysis

	MANURE	REPORT	
And in case of the local division of the loc	#198	COMPANY AND ADDRESS OF	
Contraction, and the			
SAMPLE: TYPE: SOLID F SOURCE: BEEF STORAGE: LAB NUMBER:	MANURE	DATE RECEIVED: 09/ DATE REPORTED: 10/ PO:	
Moisture:	30%		
Dry Matter:	70% Dry Basis	As Received	lb/ton As Received
Total Nitrogen (N)	:	1.0%	20
Ammonium Nitrogen:		0.0084%	0.17
Nitrate Nitrogen:		0.013%	0.26
Inorganic Nitrogen:		0.021%	0.43
Organic Nitrogen:		0.99%	20
Phosphate (P ₂ O ₅):	0.63%	0.44%	8.8
Potash (K ₂ 0):	2.1%	1.5%	30
Sodium:	0.29%	0.20%	4.0
Calcium:	1.1%	0.77%	15
Magnesium:	0.69%	0.48%	9.7
Zinc:	89 ppm	62 ppm	0.12
Iron:	9225 ppm	6465 ppm	13
Manganese:	431 ppm	302 ppm	0.60
Copper:	20 ppm	14 ppm	0.029
Sulfur:	0.21%	0.14%	2.9
pH:		8.5	
Salts:		7.4 mmhos/	cm
Total Carbon:		11%	

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Moisture and Dry Matter

Represented as %

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- Moisture + Dry matter = 100
- High moisture compost will be harder to spread

	MANURE	REPORT	
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Report columns

- Dry basis: measure/amount when moisture has been removed
- As received: measure/amount with moisture as is
- Lb/ton: calculated based on "as received" column. Use for application calculations

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		MANURE	REPORT	
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SAMPLE: TYPE: SOLID MA SOURCE: BEEF STORAGE: LAB NUMBER:	NURE	N., 2000	DATE RECEIVED: 09/24 DATE REPORTED: 10/08 PO:	/19 /19
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		Dry Basis	As Received	lb/ton As Received
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Nitrogen

- Total Nitrogen: Sum of ammonium, nitrate, and organic N
- Raw manure contains ammonium and organic N
- Composted manure mostly contains organic N

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Phosphorus

- Reported as P₂O₅ or P
- If reported as P, convert to P₂O₅ by multiplying by 2.29

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Potassium

- Reported as K₂O or K
- Convert K to K₂O by multiplying by 1.2

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Total Carbon:		11%	

Other Nutrients

- Test if concerned about nutrient deficiency
- High sodium (>1% dry basis) can damage plants

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contraction, and interest		composition, on the	
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Salts:		7.4 mmhos/	cm
Total Carbon:		11%	

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Acidity/alkalinity

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 Manure compost tends to be alkaline

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Salts

- Soluble salts in the compost
- High salts can damage plants

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	MANURE	REPORT	
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SAMPLE: TYPE: SOLID MAN SOURCE: BEEF STORAGE: LAB NUMBER:	URE	DATE RECEIVED: 09/ DATE REPORTED: 10/ PO:	/24/19 /08/19
Moisture: 3	0%		
Dry Matter: 7	0% <u>Dry Basis</u>	As Received	lb/ton As Received
Total Nitrogen (N):		1.0%	20
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Salts:		7.4 mmhos/	cm
Total Carbon:		11%	

Total Carbon and Carbon to Nitrogen Ratio

- Measure of organic and inorganic carbon
- Use to estimate C:N

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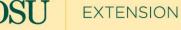
– Optimal C:N is 25:1 to 30:1

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Which Tests to Order

- Minimum for compost:
 - Moisture
 - Total Nitrogen
 - Inorganic/ammonium Nitrogen
 - Phosphorus
 - Potassium

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			and 100	
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Thank you!

