



Waste Analysis Report

7/16/04

Grower: **Bolick, Frank**
 Watauga Co. Ext.
 Courier #15-91-03
 Boone, NC 28607

Copies To:

Farm:
 Watauga County

Sample Info.	Laboratory Results (parts per million unless otherwise noted)														
Sample ID:	N	P	K	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl	C	
01	Total	16879	7054	12324	15854	4712	1815	2037	419	265	382	34.4		448640	
Waste Code: FCW	IN -N														
	-NH4														
Description: Composted Waste - Other	-NO3														
	OR-N														
	Urea														
			Na	Ni	Cd	Pb	Al	Se	Li	pH	SS	C:N	DM%	CCE%	ALE(tons)
			2767							7.55	193	26.58	28.27		

Recommendations:	Nutrients Available for First Crop										Other Elements									
Application Method	N	P ₂ O ₅	K ₂ O	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl	Na	Ni	Cd	Pb	Al	Se	Li
Broadcast	3.8	5.5	6.7	5.4	1.6	0.62	0.69	0.14	0.09	0.13	0.01			1.6						
Soil Incorp	4.8	6.9	7.5	6.7	2.0	0.77	0.86	0.18	0.11	0.16	0.01			1.6						

The waste product has an ideal C:N ratio of 20-30 for optimum composting. No additional blending is necessary.

Soluble salt level is high. The roots of plants growing directly in the compost may be damaged particularly under dry soil conditions. The compost should be blended at least 50:50 with another material of lower salt level. High soluble salts likely indicate high nutrient availability. Take a matching soil sample to further evaluate pH and nutrient availability.

Compost pH is well above the desired range for plant production. If the compost will be used as a landscape or potting soil, blend it with other materials or add elemental sulfur to decrease pH to the desired range. As a general rule, add 0.25 lb. elemental sulfur per cu. yd. of compost to lower pH 0.5-1.0 unit. Take a follow-up soil sample to determine if pH is within the desired range.

Sample Info.	Laboratory Results (parts per million unless otherwise noted)														
Sample ID:	N	P	K	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl	C	
02	Total	7223	3075	7663	24000	5103	1243	10907	644	125	116	37.8		150543	
Waste Code: FCW	IN -N														
	-NH4														
Description: Composted Waste - Other	-NO3														
	OR-N														
	Urea														
			Na	Ni	Cd	Pb	Al	Se	Li	pH	SS	C:N	DM%	CCE%	ALE(tons)
			2318							7.65	108	20.84	49.77		

Recommendations:	Nutrients Available for First Crop										Other Elements									
Application Method	N	P ₂ O ₅	K ₂ O	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl	Na	Ni	Cd	Pb	Al	Se	Li
Broadcast	2.9	4.2	7.3	14.3	3.1	0.74	6.5	0.38	0.07	0.07	0.02			2.3						
Soil Incorp	3.6	5.3	8.2	17.9	3.8	0.93	8.1	0.48	0.09	0.09	0.03			2.3						

The waste product has an ideal C:N ratio of 20-30 for optimum composting. No additional blending is necessary.

Soluble salt level is high. The roots of plants growing directly in the compost may be damaged particularly under dry soil conditions. The compost should be blended at least 50:50 with another material of lower salt level. High soluble salts likely indicate high nutrient availability. Take a matching soil sample to further evaluate pH and nutrient availability.

Compost pH is well above the desired range for plant production. If the compost will be used as a landscape or potting soil, blend it with other materials or add elemental sulfur to decrease pH to the desired range. As a general rule, add 0.25 lb. elemental sulfur per cu. yd. of compost to lower pH 0.5-1.0 unit. Take a follow-up soil sample to determine if pH is within the desired range.

Sample Info.	Laboratory Results (parts per million unless otherwise noted)														
Sample ID:	<i>N</i>		<i>P</i>	<i>K</i>	<i>Ca</i>	<i>Mg</i>	<i>S</i>	<i>Fe</i>	<i>Mn</i>	<i>Zn</i>	<i>Cu</i>	<i>B</i>	<i>Mo</i>	<i>Cl</i>	<i>C</i>
03	Total	5891	2566	5173	13362	4513	1022	12712	524	133	132	16.3			101995
Waste Code:	<i>IN -N</i>														
FCW	<i>-NH4</i>														
Description:	<i>-NO3</i>		<i>Na</i>	<i>Ni</i>	<i>Cd</i>	<i>Pb</i>	<i>Al</i>	<i>Se</i>	<i>Li</i>	<i>pH</i>	<i>SS</i>	<i>C:N</i>	<i>DM%</i>	<i>CCE%</i>	<i>ALE(tons)</i>
Composted Waste - Other	<i>OR-N</i>		1015							6.68	108	17.31	58.60		
	<i>Urea</i>														

Recommendations:	Nutrients Available for First Crop												Other Elements								
	<i>lbs/ton (wet basis)</i>												<i>lbs/ton (wet basis)</i>								
<i>Application Method</i>	<i>N</i>	<i>P₂O₅</i>	<i>K₂O</i>	<i>Ca</i>	<i>Mg</i>	<i>S</i>	<i>Fe</i>	<i>Mn</i>	<i>Zn</i>	<i>Cu</i>	<i>B</i>	<i>Mo</i>	<i>Cl</i>	<i>Na</i>	<i>Ni</i>	<i>Cd</i>	<i>Pb</i>	<i>Al</i>	<i>Se</i>	<i>Li</i>	
Broadcast	2.8	4.1	5.8	9.4	3.2	0.72	8.9	0.37	0.09	0.09	0.01			1.2							
Soil Incorp	3.5	5.2	6.6	11.8	4.0	0.90	11.2	0.46	0.12	0.12	0.01			1.2							

Nitrogen is very high in relation to carbon (Low C:N Ratio). If the waste product is to be used as a raw material in composting, blend it with another material with a high C:N ratio. The C:N ratio should be 20-30 for ideal composting conditions.

Soluble salt level is high. The roots of plants growing directly in the compost may be damaged particularly under dry soil conditions. The compost should be blended at least 50:50 with another material of lower salt level. High soluble salts likely indicate high nutrient availability. Take a matching soil sample to further evaluate pH and nutrient availability.

Compost pH is higher than ideal for plant production. If the compost will be used as a landscape or potting soil, blend other materials or add elemental sulfur to decrease pH to the desired range. As a general rule, add 0.25 lb. of elemental sulfur per cu. yd. of soil to lower pH 0.5-1.0 unit. One month after treatment, take a soil sample to determine if pH is within the desired range.

Sample Info.	Laboratory Results (parts per million unless otherwise noted)														
Sample ID:	<i>N</i>		<i>P</i>	<i>K</i>	<i>Ca</i>	<i>Mg</i>	<i>S</i>	<i>Fe</i>	<i>Mn</i>	<i>Zn</i>	<i>Cu</i>	<i>B</i>	<i>Mo</i>	<i>Cl</i>	<i>C</i>
04	Total	10446	4677	3729	13843	3852	1434	13134	569	258	418	8.51			169480
Waste Code:	<i>IN -N</i>														
FCW	<i>-NH4</i>														
Description:	<i>-NO3</i>		<i>Na</i>	<i>Ni</i>	<i>Cd</i>	<i>Pb</i>	<i>Al</i>	<i>Se</i>	<i>Li</i>	<i>pH</i>	<i>SS</i>	<i>C:N</i>	<i>DM%</i>	<i>CCE%</i>	<i>ALE(tons)</i>
Composted Waste - Other	<i>OR-N</i>		328							5.06	56	16.22	51.02		
	<i>Urea</i>														

Recommendations:	Nutrients Available for First Crop												Other Elements								
	<i>lbs/ton (wet basis)</i>												<i>lbs/ton (wet basis)</i>								
<i>Application Method</i>	<i>N</i>	<i>P₂O₅</i>	<i>K₂O</i>	<i>Ca</i>	<i>Mg</i>	<i>S</i>	<i>Fe</i>	<i>Mn</i>	<i>Zn</i>	<i>Cu</i>	<i>B</i>	<i>Mo</i>	<i>Cl</i>	<i>Na</i>	<i>Ni</i>	<i>Cd</i>	<i>Pb</i>	<i>Al</i>	<i>Se</i>	<i>Li</i>	
Broadcast	4.3	6.6	3.7	8.5	2.4	0.88	8.0	0.35	0.16	0.26	0.01			0.33							
Soil Incorp	5.3	8.2	4.1	10.6	3.0	1.1	10.1	0.44	0.20	0.32	0.01			0.33							

Nitrogen is very high in relation to carbon (Low C:N Ratio). If the waste product is to be used as a raw material in composting, blend it with another material with a high C:N ratio. The C:N ratio should be 20-30 for ideal composting conditions.

Soluble salt level indicates nutrient availability is likely adequate but not excessive. The material can likely be used as a landscape soil or potting media without blending other materials. Take a matching soil sample to further evaluate pH and nutrient availability.

Sample Info.	Laboratory Results (parts per million unless otherwise noted)														
Sample ID:	N	P	K	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl	C	
05	Total	11309	2111	3928	9939	3650	1052	17481	471	93.0	48.0	107		194490	
Waste Code:	IN -N														
FCW	-NH4														
Description:	-NO3														
Composted Waste - Other	OR-N														
	Urea														
			Na	Ni	Cd	Pb	Al	Se	Li	pH	SS	C:N	DM%	CCE%	ALE(tons)
			549							6.67	42	17.20	31.85		

Recommendations:	Nutrients Available for First Crop											Other Elements		lbs/ton (wet basis)						
Application Method	N	P ₂ O ₅	K ₂ O	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl	Na	Ni	Cd	Pb	Al	Se	Li
Broadcast	2.9	1.9	2.4	3.8	1.4	0.40	6.7	0.18	0.04	0.02	0.04			0.35						
Soil Incorp	3.6	2.3	2.7	4.8	1.7	0.50	8.4	0.23	0.04	0.02	0.05			0.35						

Nitrogen is very high in relation to carbon (Low C:N Ratio). If the waste product is to be used as a raw material in composting, blend it with another material with a high C:N ratio. The C:N ratio should be 20-30 for ideal composting conditions.

Soluble salt level is low. The compost can be used as a landscape soil or potting media without blending other materials to lower soluble salts. Additional fertilizer may be needed to supply required nutrients. Take a matching soil sample of the compost to further evaluate nutrient availability and pH.

Compost pH is higher than ideal for plant production. If the compost will be used as a landscape or potting soil, blend other materials or add elemental sulfur to decrease pH to the desired range. As a general rule, add 0.25 lb. of elemental sulfur per cu. yd. of soil to lower pH 0.5-1.0 unit. One month after treatment, take a soil sample to determine if pH is within the desired range.