Gallagher, Tony

From: scarpenter@soilplus.net
Sent: Friday, September 05, 2014 3:56 PM
To: Gallagher, Tony
Cc: Joyce Barrett
Subject: RE: Granville Farms DWM Permit
Attachments: JP Taylor Tobacco Dust Utilization.pdf

Tony,

I have attached the permit application for Granville Farms DWM permit (JP Taylor). Sorry it took so long, but I was trying to configure my database to automatically write nutrient management plans. I have been getting a lot of calls for these and need to just bit that bullet. We are set now. Please let me know if you have any questions.

Joyce,

Can you have Jason Print and Sign on Page 15 as the producer?

Thanks

C. Scott Carpenter, LSS

Soil Plus, LLC
208 Williams St
Greenville, NC 27858

(252) 917-4288 (phone)
(800) 755-7153 (fax)

www.soilplus.net

FTP Site: https://soilplus.sharefile.com (***NEW***)

CHECK OUT OUR NEW WEBSITE FOR PAN-P: www.PAN-P.com

scarpenter@soilplus.net

-------- Original Message --------
Subject: RE: Granville Farms DWM Permit
From: "Gallagher, Tony" <tony.gallagher@ncdenr.gov>
Date: Fri, August 29, 2014 1:49 pm
To: "scarpenter@soilplus.net" <scarpenter@soilplus.net>

Scott,

That should be fine. Once I receive the documentation to renewal the land application approval then I will work to complete the process and send out the renewal which will be good for another 5 years.

Thanks

M.A. (Tony) Gallagher, Supervisor
Composting & Land Application Branch
Solid Waste Section, Division of Waste Management
phone/fax (919)707-8280

E-mail address - tony.gallagher@ncdenr.gov

http://portal.ncdenr.org/web/wm/sw/septage

E-mail correspondence to and from this address may be subject to North Carolina public records law and may be disclosed to third parties.

From: scarpenter@soilplus.net [mailto:scarpenter@soilplus.net]
Sent: Friday, August 29, 2014 11:46 AM
To: Gallagher, Tony
Subject: RE: Granville Farms DWM Permit

Tony,

Just wanted to give you a heads up. I am working on the Granville Farms NMP for the JP Taylor Tobacco Dust. Hopefully should have it done today and be able to compile all relevant information on Tuesday. I will email you a copy and drop one hard copy to you in the mail on or before this coming Tuesday.

Have a good holiday!

C. Scott Carpenter, LSS

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CHECK OUT OUR NEW WEBSITE FOR PAN-P: www.PAN-P.com

scarpenter@soilplus.net

-------- Original Message --------
Subject: RE: Granville Farms DWM Permit
From: "Gallagher, Tony" <tony.gallagher@ncdenr.gov>
Date: Fri, August 22, 2014 1:46 pm
To: "scarpenter@soilplus.net" <scarpenter@soilplus.net>

Scott,

That will be fine and this being a land application approval
for applying tobacco dust I only need one copy which you could send electronically
if that works better.

Thanks

M.A. (Tony) Gallagher, Supervisor
Composting & Land Application Branch
Solid Waste Section, Division of Waste Management
phone/fax (919)707-8280

E-mail address - tony.gallagher@ncdenr.gov

http://portal.ncdenr.org/web/wm/sw/septage

E-mail correspondence to and from this address may be subject to North Carolina public records law and may be disclosed to third parties.

From: scarpenter@soilplus.net [mailto:scarpenter@soilplus.net]
Sent: Friday, August 22, 2014 1:13 PM
To: Gallagher, Tony
Cc: Joyce Barrett
Subject: Granville Farms DWM Permit

Tony,

Joyce has let me know that you are looking for their permit renewal. I am working on it, but have been swamped with many other permit renewals all due at the same time it seems. I have all the information for the permit renewal submission but need to revise the Nutrient Management Plan. I will carve out 4 or 5 hours to get this wrapped up for you. How many copies of the renewal do you need?

Thanks

C. Scott Carpenter, LSS

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Greenville, NC 27858

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(800) 755-7153 (fax)

www.soilplus.net

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scarpenter@soilplus.net

SOIL PLUS

Meeting Your Nutrient Management Needs

SOIL PLUS

September 5, 2014

NCDENR – Division of Waste Management
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Attention: Mr. Michael Scott, Environment Supervisor
Composting and Land Application Branch

Reference: **GRANVILLE FARMS – UNIVERSAL LEAF**
Tobacco Dust Waste Utilization Plan
Soil Plus Project No. 201003.A10

Mr. Scott:

Soil Plus, LLC (Soil Plus) has prepared this Waste Utilization Plan on behalf of Granville Farms, Inc. (Granville Farms) in Oxford, North Carolina. This plan proposes that Granville Farms receives and agronomically reuses an agricultural by-product produced by a tobacco processing plant in Oxford, NC. This plant is owned and operated by J.P. Taylor. Soil Plus understands that the Oxford Plant produces approximately 350 tons of tobacco dust every year and we are requesting renewing 2 farms in Granville County totaling 52.44 buffered acres to utilize this by-product. This Waste Utilization Plan includes:

- Write-up on how to properly store/land apply the by-product
- Standard Nutrient & Heavy Metal Analysis as well as a TCLP representing the typical characteristics of the by-product
- Field Loading Calculations referencing pounds of nutrients per ton of applied material
- A Nutrient Management Plan showing the farm operator, nutrient balance sheet, predominate soil type for each field, & predicted spreading summary
- Maps showing relevant buffers and location of each field
- Current standard soil analysis representing current nutrient conditions in each proposed field

Should you have any questions please do not hesitate to call me at (252) 917-4288 or email me at scarpenter@soilplus.net.

Respectfully,

C. Scott Carpenter, L.S.S.
North Carolina Nutrient Management Planner

740 SE Greenville Blvd.
Suite 400
PMB 104
Greenville, NC 27858

t (252) 917-4288
f (800) 755-7153

www.soilplus.net

Land Application/Storage Write-Up

1. Permittee Contact is as follow:

Jason Smith, V.P.
Granville Farms, Inc.
P.O. Box 1396
Oxford, NC 27565
(919) 690-8000

2. Tobacco Dust will be land applied by Granville Farms, Inc using pull behind or self propelled application equipment
3. Land application will not occur when the seasonal high water table is within 12 inches of the soil surface
4. Tobacco Dust will not be stored on bare ground unless it is to be land applied within 30 days
5. Application rates will be based upon the most current County Realistic Yield Expectations based upon the predominate soil type and crop in that field
6. No more than 1.25 inches of tobacco dust may be applied to a field in a 12-month period (Assuming 3 tons equals ½ inch)
7. No more than 3 tons per acre of tobacco dust may be applied on a cover crop, unless within 30 days of planting a primary crop. A cover crop must cover at least 80% of the soil surface to be used for tobacco dust
8. Tobacco dust may not be stored in the fields for more than 10 days unless adequate measures including hay bales and grass strips, are taken to control runoff and the generation of leachate. Tobacco dust may not be stored for longer than 6 months or until the next crop change
9. The following setbacks shall be maintained:
    a. Residences – 200 feet
    b. Surface Waters – 50 feet
    c. State Road Right of Ways – 25 feet
    d. Ditches or drainageways – 20 feet
    e. No tobacco dust will be land applied on slopes greater than 15%
10. Tobacco dust produced from tobacco raised outside of the United States must be tested and approved by the Division of Waste Management prior to land application or storage on farms
11. Analytical testing frequency will be determined by the Division of Waste Management
12. An annual report, detailing land application activities and waste analysis, will be to the Division of Waste Management by August 1 of each year.

J.P. TAYLOR
OXFORD PLANT

TOBACCO DUST
WASTE UTILIZATION PLAN

By-Product Analysis & Field Loading Calculations

Standard Nutrient Analysis
Heavy Metal Analysis
TCLP

FIELD LOADING ESTIMATES

Facility	JP Taylor
Sampling Date	7/1/2014
% Solids	63.68
Mineralization Rate	0.40
Wet Tons per DT	1.57
pH	8.74
Sodium Absorpotion Ratio	0.32

<5.0 Safe 5.0 - 10.0 Careful Management >15.0 Do Not Land Apply

NITROGEN APPLICATION

TKN (mg/Kg)	26,100	lbs./WT	33.24
Ammonia Nitrogen (mg/Kg)	1,870.00	lbs./WT	2.38
Nitrate-Nitrite (mg/Kg)	2,310.00	lbs./WT	2.94

PLANT AVAILABLE NITROGEN SURFACE APPLIED

PAN (mg/Kg)	12,937	lbs./WT	16.48

PLANT AVAILABLE NITROGEN INJECTED/INCORPORATED APPLIED

PAN (mg/Kg)	13,872	lbs./WT	17.67

Volatization Rate= 0.5 Surface Application

1.0 Injection/Incorporation

NUTRIENT APPLICATION

K2O lbs./WT	79.17
P2O5 lbs./WT	15.28
Calcium lbs./WT	54.64
Calcium lbs./WT	12.47
Manganese lbs./WT	0.35
Sulfur lbs./WT	6.70
Molybdenum lbs./WT	

EPA METAL LIMITS

Class A Ceiling Limits (mg/Kg)	Class B Ceiling Limits (mg/Kg)
41	75
39	85
1,500	4,300
300	840
17	57
420	420
100	100
2,800	7,500

HEAVY METAL CONCENTRATION

Arsenic (mg/Kg)	
Cadmium (mg/Kg)	
Copper (mg/Kg)	31.00
Lead (mg/Kg)	
Mercury (mg/Kg)	
Nickel (mg/Kg)	
Selenium (mg/Kg)	
Zinc (mg/Kg)	128.00

HEAVY METAL LOADING

Arsenic lbs./WT	
Cadmium lbs./WT	
Copper lbs./WT	0.04
Lead lbs./WT	
Mercury lbs./WT	
Nickel lbs./WT	
Selenium lbs./WT	
Zinc lbs./WT	

RESIDUAL NITROGEN CALCULATION

	Surface Application				Injection/Incorporation Application			
	TKN	PAN (mg/kg)	PAN (lbs/DT)	Remaining Organic Nitrogen (mg/Kg)	TKN	PAN (mg/kg)	PAN (lbs/DT)	Remaining Organic Nitrogen (mg/Kg)
1st Year	26,100	12,937	25.87	13,163	26,100	13,872	27.74	12,228
2nd Year	13,163	2,633	5.27	10,530	12,228	2,446	4.89	9,782
3rd Year	10,530	1,053	2.11	9,477	9,782	978	1.96	8,804
4th Year	9,477	474	0.95	9,003	8,804	440	0.88	8,364
5th Year	9,003	225	0.45	8,778	8,364	209	0.42	8,155
	Total	17,322	34.64		Total	17,945	35.89	

Equations

1st Yr. PAN (mg/Kg)=(MR x (TKN-NH3))+(VR x NH3)+NOx

2nd Yr PAN (mg/Kg)= 2nd Yr. TKN x (MR/2)

3rd Yr PAN (mg/Kg)= 3rd Yr. TKN x (MR/4)

4th Yr PAN (mg/Kg)= 4th Yr. TKN x (MR/8)

5th Yr PAN (mg/Kg)= 5th Yr. TKN x (MR/16)

Report Number: 14-183-0205
Account Number: 04596
Submitted By: SCOTT CARPENTER

www.aleastern.com

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: SOIL PLUS, LLC
SCOTT CARPENTER
P.O. BOX 1396
OXFORD , NC 27565

Project : J P TAYLOR
NC CERT#257

REPORT OF ANALYSIS

Lab Number : 56262
Sample Id : JPT 070114

Date Sampled: 7/1/2014 13:30:00
Date Received: 07/02/2014 00:00
Date Reported: 07/08/2014

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	63.68	636800	100.0	JM	07/02/2014 14:05	SM-2540G
Moisture *	36.32		100.0	JM	07/02/2014 14:05	SM-2540G
Total Kjeldahl Nitrogen	2.61	26100	10.0	JM	07/03/2014 07:09	SM-4500-NH3C-TKN
Total Phosphorus	0.52	5240	100	KM	07/03/2014 12:53	SW 6010C
Total Potassium	5.18	51800	100	KM	07/03/2014 12:53	SW 6010C
Total Sulfur	0.53	5260	100	KM	07/03/2014 12:53	SW 6010C
Total Calcium	4.29	42900	100	KM	07/03/2014 12:53	SW 6010C
Total Magnesium	0.98	9790	100	KM	07/03/2014 12:53	SW 6010C
Total Sodium	0.04	351	100	KM	07/03/2014 12:53	SW 6010C
Total Iron		2670	100	KM	07/03/2014 12:53	SW 6010C
Total Aluminum		1600	100	KM	07/03/2014 12:53	SW 6010C
Total Manganese		277	5	KM	07/03/2014 12:53	SW 6010C
Total Copper		31	5	KM	07/03/2014 12:53	SW 6010C
Total Zinc		128	5	KM	07/03/2014 12:53	SW 6010C
Ammonia Nitrogen	0.19	1870	10.0	JM	07/03/2014 07:09	SM-4500-NH3C
Organic N	2.42	24230	10.0		07/03/2014 07:09	CALCULATION
Nitrate+Nitrite-N		2310	2.00	JM	07/03/2014 07:10	SM-4500NO3F
pH (Standard Units) *	8.74		2.00	JM	07/03/2014 07:30	SW-9045D

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

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Debbie Holt

Report Number: 14-183-0205
Account Number: 04596
Submitted By: SCOTT CARPENTER

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: SOIL PLUS, LLC
SCOTT CARPENTER
P.O. BOX 1396
OXFORD , NC 27565

Project : J P TAYLOR
NC CERT#257

REPORT OF ANALYSIS

Lab Number : 56262
Sample Id : JPT 070114

Date Sampled: 7/1/2014 13:30:00
Date Received: 07/02/2014 00:00
Date Reported: 07/08/2014

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Soluble Phosphorus	0.06	600	100	JM	07/03/2014 09:09	SOLUBLE P IN MANURE

Comments:
WATER SOLUBLE P, SULFUR AND ORGANIC NITROGEN NOT FOR COMPLIANCE PURPOSES.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

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Debbie Holt

Microbac Laboratories, Inc. - Wilson Division
3809 Airport Drive NW
Wilson, NC 27896
Tel: (252) 237-4175

CERTIFICATE OF ANALYSIS

Report Date : 2014/07/23

Report To
SCOTT CARPENTER SOIL PLUS 208 WILLIAMS ST GREENVILLE NC 27858 USA

Quote: 23-20140328-14
Work Order: 2014-07-01-028
Matrix: Solid
Collection Date: 2014/07/01
Sample Submission Date: 2014/07/01

SIDN	Client Marks	Analysis Name	Method	Result	Unit
AA52744	J.P. Taylor JPT070114	Flash Point - Liquids	Subcontracted	See Attached	
AA52744	J.P. Taylor JPT070114	pH (Corrosivity)	Subcontracted	See Attached	
AA52744	J.P. Taylor JPT070114	Reactive Cyanide	Subcontracted	See Attached	
AA52744	J.P. Taylor JPT070114	Reactive Sulfide	Subcontracted	See Attached	
AA52744	J.P. Taylor JPT070114	TCLP Full Metals V(	Subcontracted	See Attached	

Comments:

Approved by:

Kim Hesse

Microbac

Lab Report #: L14070267
Lab Project #: 2941.016
Project Name: Wilson NC
Lab Contact: Emily Yoak

Certificate of Analysis

Sample #:	L14070267-01	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	AA52744	**Prep Method:**	SW7.34	**Prep Date:**	N/A
Matrix:	Solidwaste	**Analytical Method:**	SW7.34	**Cal Date:**	
Workgroup #:	WG483350	**Analyst:**	EPT	**Run Date:**	07/09/2014 10:00
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	ET.1407091000-07
Sample Tag:		**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Reactivity, Sulfide	18496-25-8		U	100	100

U Not detected at or above adjusted sample detection limit

Sample #:	L14070267-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	AA52744	**Prep Method:**	9045D	**Prep Date:**	N/A
Matrix:	Solidwaste	**Analytical Method:**	9045D	**Cal Date:**	
Workgroup #:	WG483102	**Analyst:**	ADG	**Run Date:**	07/07/2014 15:24
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	OS14070808480901
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	RL	MDL
Corrosivity pH	10-29-7	9.08		0.000	0.000
Temperature At Determination (C)		20.9		0.000	0.000

Sample #:	L14070267-01	**PrePrep Method:**	N/A	**Instrument:**	PRECISION
Client ID:	AA52744	**Prep Method:**	1010	**Prep Date:**	N/A
Matrix:	Solidwaste	**Analytical Method:**	1010	**Cal Date:**	
Workgroup #:	WG483158	**Analyst:**	RAH	**Run Date:**	07/08/2014 08:00
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	PR14070813395201
Sample Tag:		**Units:**	Degrees C		

Analyte	CAS #	Result	Qual	RL	MDL
Ignitability		73.0	>	0.000	0.000

> Result is greater than the associated numerical value.

Sample #:	L14070267-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	AA52744	**Prep Method:**	SW7.33	**Prep Date:**	N/A
Matrix:	Solidwaste	**Analytical Method:**	SW7.33	**Cal Date:**	06/16/2014 11:00
Workgroup #:	WG483328	**Analyst:**	DLP	**Run Date:**	07/09/2014 15:00
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	1V.1407091500-06
Sample Tag:		**Units:**	mg/kg		

Microbac

Lab Report #: L14070267
Lab Project #: 2941.016
Project Name: Wilson NC
Lab Contact: Emily Yoak

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Reactivity, Cyanide	57-12-5		U	49.9	49.9

U Not detected at or above adjusted sample detection limit

Microbac

Lab Report #: L14070267
Lab Project #: 2941.016
Project Name: Wilson NC
Lab Contact: Emily Yoak

Certificate of Analysis

Sample #:	L14070267-01	**PrePrep Method:**		**Instrument:**	HPMS9
Client ID:	AA52744	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	TCLP Leach	**Analytical Method:**	8260B	**Cal Date:**	06/26/2014 20:17
Workgroup #:	WG483957	**Analyst:**	ADC	**Run Date:**	07/14/2014 14:17
Collect Date:	07/01/2014 13:30	**Dilution:**	10	**File ID:**	9M964670
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	Result	Qual	RL	MDL	EPA HW#	Reg. Limit
Benzene		U	50.0	1.25	D018	500
Carbon tetrachloride		U	50.0	2.50	D019	500
Chlorobenzene		U	50.0	1.25	D021	100000
Chloroform		U	50.0	1.25	D022	6000
1,2-Dichloroethane		U	50.0	2.50	D028	500
1,1-Dichloroethene		U	50.0	5.00	D029	700
Methyl Ethyl Ketone		U	100	25.0	D035	200000
Tetrachloroethene		U	50.0	2.50	D039	700
Trichloroethene		U	50.0	2.50	D040	500
Vinyl chloride		U	100	2.50	D043	200

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.4	86	118	
1,2-Dichloroethane-d4	87.1	80	120	
Toluene-d8	99.9	88	110	
4-Bromofluorobenzene	93.7	86	115	

U Not detected at or above adjusted sample detection limit

Sample #:	L14070267-01	**PrePrep Method:**		**Instrument:**	HPMS12
Client ID:	AA52744	**Prep Method:**	3510C	**Prep Date:**	07/08/2014 13:30
Matrix:	TCLP Leach	**Analytical Method:**	8270C	**Cal Date:**	06/19/2014 12:39
Workgroup #:	WG483324	**Analyst:**	CAA	**Run Date:**	07/09/2014 13:35
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	12M49652
Sample Tag:	01	**Units:**	ug/L		

Analyte	Result	Qual	RL	MDL	EPA HW#	Reg. Limit
o-Cresol		U	50.0	25.0	D023	200000
m-,p-Cresol		U	50.0	25.0	D025	200000
1,4-Dichlorobenzene		U	50.0	25.0	D027	7500
2,4-Dinitrotoluene		U	50.0	25.0	D030	130
Hexachlorobenzene		U	50.0	25.0	D032	130
Hexachlorobutadiene		U	50.0	25.0	D033	500
Hexachloroethane		U	50.0	25.0	D034	3000

Microbac

Lab Report #: L14070267
Lab Project #: 2941.016
Project Name: Wilson NC
Lab Contact: Emily Yoak

Certificate of Analysis

Analyte	Result	Qual	RL	MDL	EPA HW#	Reg. Limit
Nitrobenzene		U	50.0	25.0	D036	2000
Pentachlorophenol		U	250	125	D037	100000
Pyridine		U	250	125	D038	5000
2,4,5-Trichlorophenol		U	50.0	25.0	D041	400000
2,4,6-Trichlorophenol		U	50.0	25.0	D042	2000

Surrogate	Recovery	Lower Limit	Upper Limit	Q
2-Fluorophenol	47.7	21	100	
Phenol-d5	31.9	10	94	
Nitrobenzene-d5	81.8	35	114	
2-Fluorobiphenyl	75.9	43	116	
2,4,6-Tribromophenol	116	10	123	
p-Terphenyl-d14	33.2	33	141	

U Not detected at or above adjusted sample detection limit

Sample #:	L14070267-01	**PrePrep Method:**		**Instrument:**	HP15
Client ID:	AA52744	**Prep Method:**	3510C	**Prep Date:**	07/08/2014 08:50
Matrix:	TCLP Leach	**Analytical Method:**	8081A	**Cal Date:**	07/10/2014 21:34
Workgroup #:	WG483355	**Analyst:**	ECL	**Run Date:**	07/14/2014 16:18
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	15G45252.R
Sample Tag:	01	**Units:**	ug/L		

Analyte	Result	Qual	RL	MDL	EPA HW#	Reg. Limit
Endrin		U	0.500	0.100	D012	20
Lindane		U	0.500	0.100	D013	400
Methoxychlor		U	0.500	0.100	D014	10000
Toxaphene		U	10.0	3.00	D015	500
Chlordane		U	10.0	3.00	D020	30
Heptachlor		U	0.500	0.100	D031	8
Heptachlor Epoxide		U	0.500	0.100	D031	8
alpha Chlordane		U	0.500	0.100		
gamma Chlordane		U	0.500	0.100		

Surrogate	Recovery	Lower Limit	Upper Limit	Q
2,4,5,6-Tetrachloro-m-xylene	55.0	20	180	
Decachlorobiphenyl	38.4	25	140	

U Not detected at or above adjusted sample detection limit

Microbac

Lab Report #: L14070267
Lab Project #: 2941.016
Project Name: Wilson NC
Lab Contact: Emily Yoak

Certificate of Analysis

Sample #:	L14070267-01	**PrePrep Method:**		**Instrument:**	HP17
Client ID:	AA52744	**Prep Method:**	METHOD	**Prep Date:**	07/08/2014 15:45
Matrix:	TCLP Leach	**Analytical Method:**	8151A	**Cal Date:**	07/11/2014 17:34
Workgroup #:	WG483601	**Analyst:**	ECL	**Run Date:**	07/11/2014 23:14
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	17G17467.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	Result	Qual	RL	MDL	EPA HW#	Reg. Limit
2,4-D		U	20.0	5.00	D016	10000
2,4,5-TP (Silvex)		U	2.00	0.500	D017	1000

Surrogate	Recovery	Lower Limit	Upper Limit	Q
2,4-Dichlorophenylacetic acid	45.6	20	144	

U Not detected at or above adjusted sample detection limit

Sample #:	L14070267-01	**PrePrep Method:**		**Instrument:**	ICP-THERMO2
Client ID:	AA52744	**Prep Method:**	3015	**Prep Date:**	07/08/2014 08:57
Matrix:	TCLP Leach	**Analytical Method:**	6010B	**Cal Date:**	07/08/2014 09:50
Workgroup #:	WG483191	**Analyst:**	BKT	**Run Date:**	07/08/2014 12:06
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	T2.070814.120607
Sample Tag:	01	**Units:**	mg/L		

Analyte	Result	Qual	RL	MDL	EPA HW#	Reg. Limit
Arsenic, TCLP		U	1.00	0.500	D004	5
Barium, TCLP	0.714		0.100	0.0500	D005	100
Cadmium, TCLP		U	0.100	0.0500	D006	1
Chromium, TCLP		U	0.200	0.100	D007	5
Lead, TCLP		U	1.00	0.500	D008	5
Selenium, TCLP		U	0.800	0.400	D010	1
Silver, TCLP		U	0.100	0.0500	D011	5

U Not detected at or above adjusted sample detection limit

Sample #:	L14070267-01	**PrePrep Method:**		**Instrument:**	CVAA1
Client ID:	AA52744	**Prep Method:**	7470A	**Prep Date:**	07/08/2014 09:15
Matrix:	TCLP Leach	**Analytical Method:**	7470A	**Cal Date:**	07/08/2014 14:19
Workgroup #:	WG483236	**Analyst:**	JJS	**Run Date:**	07/08/2014 15:13
Collect Date:	07/01/2014 13:30	**Dilution:**	1	**File ID:**	M7.070814.151349
Sample Tag:	01	**Units:**	mg/L		

Analyte	Result	Qual	RL	MDL	EPA HW#	Reg. Limit
Mercury		U	0.00200	0.00100	D009	0.2

U Not detected at or above adjusted sample detection limit

J.P. TAYLOR
OXFORD PLANT

TOBACCO DUST
WASTE UTILIZATION PLAN

Nutrient Management Plan

Signature/Cover Sheet
Nutrient Balance
Predominate Soil Type
Predicted Spreading Summary

NUTRIENT MANAGEMENT PLAN FOR TOBACCO DUST WASTE UTILIZATION

SEPTEMBER 5, 2014

Plan Prepared for:

Granville Farms, Inc
P.O. Box 1396
Oxford, North Carolina 27565
(919) 690-8000

Hunt Farm
Fields 1 – 4

Toler Farm
Fields 1 - 2

LASA-39-01

Plan Prepared by:

Soil Plus, LLC
208 Williams St.
Greenville, North Carolina 27858
(252) 917-4288

Developer Signature

Plan Expiration: September 1, 2019

Plan Revision: 5 Years

Plan Type: Nutrient Management for Waste Generation

Producer Agreement:

I understand and agree to the specifications and the operation and maintenance procedures established in this nutrient management plan which includes a bio-solids utilization plan for the residual source listed above. I have read and understand the required specifications concerning the bio-solids waste management that are included with this plan.

Printed Name of Producer

Signature of Producer

Date

Crop/Field Notes:

Currently J.P. Taylor produces approximately 350 tons per year. Predicting the increases in the production rate is difficult so Soil Plus increased the amount produced by 20% starting in 2018 (as reflected in the hauling summary listed below). Given that the majority of the nutrients are derived from organic material is difficult to derive the mineralization rate (availability) of nutrients. Soil Plus assumed 100% of nutrients are immediately available. This Nutrient Management Plan was based upon a Nitrogen loading rate using the Realistic Yield Expectations for the soil types listed in this plan.

This by-product has large amounts of Potassium and soil testing should be collected annually to monitor Potassium. While Potassium cannot directly cause toxicity in crops it may begin to reduce the availability of other nutrients by binding up other free, negatively charged nutrients and/or occupy negatively soil exchange sites.

This by-product also contains large amounts of Calcium. Similar to Potassium, Calcium cannot directly cause toxicity in crops but it may begin to reduce the availability of other nutrients by binding up other free, negatively charged nutrients and/or occupy negatively soil exchange sites. Also Calcium will tend to increase soil pH. As the soil pH approaches 7.0 and exceeds 7.2 nutrients such as Boron and Manganese will be inhibited. It will also bind Copper, Phosphorus, Iron, and Zinc.

This Nutrient Management Plan is intended to show that this permit has a sufficient amount of land to handle the current production rate (and a 20% increase in production) based upon a nitrogen loading rate. Soil Plus recommends that Granville Farms permit additional land prior to the renewal of this permit to help alleviate the potential pressure from excessive cations such as Potassium and Calcium.

PREDOMINATE SOIL SERIES

Hunt Farm (Granville County)

Field 1 - Helena 2-6% Slope (HeB)
Field 2 - Helena 2-6% Slope (HeB)
Field 3 - Vance 2-6% Slope (VaB)
Field 4 - Helena 2-6% Slope (HeB)

Toler Farm (Granville County)

Field 1 - Enon 2-6% Slope (EnB)
Field 2 - Georgeville 2-6% Slope (GeB)

AGMAN

Nutrient Management Plan

Crop Year End: 5/30/2015 Season	Crop	Acres	Organics Applied (Tons) /Rate	Type	Manure Applied (Tons) /Rate	Type	Biosolid Applied (Tons) /Rate	Location	N - P - K Crop Needs lbs/ac	N - P - K Supplied Needs lbs/ac	N - P - K Remaining Needs lbs/ac
FARM NAME Hunt			**Crop Year End 5/30/2015**								
Field 1											
2015 Spring	Fescue Pasture	10.59	22 / 2.1	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		34 — 32 — 164	
Field Summary			**22**		**0**		**0**		**169 — 30 — 116**	**34 — 32 — 164**	**135 — 0 — 0**
Field 2											
2015 Spring	Fescue Pasture	5.43	15 / 2.8	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		46 — 42 — 219	
Field Summary			**15**		**0**		**0**		**169 — 0 — 66**	**46 — 42 — 219**	**123 — 0 — 0**
Field 3											
2015 Spring	Fescue Pasture	5.94	24 / 4.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		67 — 62 — 320	
Field Summary			**24**		**0**		**0**		**194 — 0 — 110**	**67 — 62 — 320**	**127 — 0 — 0**
Field 4											
2015 Spring	Fescue Pasture	11.23	25 / 2.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		37 — 34 — 176	
Field Summary			**25**		**0**		**0**		**169 — 30 — 80**	**37 — 34 — 176**	**132 — 0 — 0**
Site Summary			**86**		**0**		**0**				
FARM NAME Toler			**Crop Year End 5/30/2015**								
Field 1											
2015 Spring	Fescue Pasture	10.71	24 / 2.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		37 — 34 — 177	
Field Summary			**24**		**0**		**0**		**194 — 49 — 32**	**37 — 34 — 177**	**157 — 15 — 0**
Field 2											
2014 Fall	Fescue Pasture	8.54	24 / 2.8	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		46 — 43 — 224	
Field Summary			**24**		**0**		**0**		**194 — 0 — 16**	**46 — 43 — 224**	**148 — 0 — 0**
Site Summary			**48**		**0**		**0**				
Grand Total			**134**		**0**		**0**				

AGMAN

Nutrient Management Plan

Crop Year End: 5/30/2016 Season	Crop	Acres	Organics Applied (Tons) /Rate	Type	Manure Applied (Tons) /Rate	Type	Biosolid Applied (Tons) /Rate	Location	N - P - K Crop Needs lbs/ac	N - P - K Supplied Needs lbs/ac	N - P - K Remaining Needs lbs/ac
FARM NAME Hunt			**Crop Year End 5/30/2016**								
Field 1											
2015 Summer	Fescue Pasture	10.59	48 / 4.5	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		75 — 69 — 359	
2016 Spring	Fescue Pasture	10.59	24 / 2.3	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		37 — 35 — 179	
Field Summary			**72**		**0**		**0**		**169 — 30 — 116**	**112— 104 — 538**	**57 — 0 — 0**
Field 2											
2015 Summer	Fescue Pasture	5.43	24 / 4.4	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		73 — 68 — 350	
2016 Spring	Fescue Pasture	5.43	12 / 2.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		36 — 34 — 175	
Field Summary			**36**		**0**		**0**		**169 — 0 — 66**	**109— 101 — 525**	**60 — 0 — 0**
Field 3											
2015 Summer	Fescue Pasture	5.94	25 / 4.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		69 — 64 — 333	
2016 Spring	Fescue Pasture	5.94	12 / 2.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		33 — 31 — 160	
Field Summary			**37**		**0**		**0**		**194 — 0 — 110**	**103— 95 — 493**	**91 — 0 — 0**
Field 4											
2015 Summer	Fescue Pasture	11.23	48 / 4.3	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		70 — 65 — 338	
2016 Spring	Fescue Pasture	11.23	28 / 2.5	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		41 — 38 — 197	
Field Summary			**76**		**0**		**0**		**169 — 30 — 80**	**112— 103 — 536**	**57 — 0 — 0**
Site Summary			**221**		**0**		**0**				
FARM NAME Toler			**Crop Year End 5/30/2016**								
Field 1											
2015 Fall	Fescue Pasture	10.71	24 / 2.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		37 — 34 — 177	
2015 Winter	Fescue Pasture	10.71	24 / 2.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		37 — 34 — 177	
Field Summary			**48**		**0**		**0**		**194 — 49 — 32**	**74 — 68 — 355**	**120 — 0 — 0**
Field 2											
2015 Summer	Fescue Pasture	8.54	39 / 4.6	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		75 — 70 — 362	
2016 Spring	Fescue Pasture	8.54	34 / 4.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		66 — 61 — 315	
Field Summary			**73**		**0**		**0**		**194 — 0 — 16**	**141— 131 — 677**	**53 — 0 — 0**
Site Summary			**121**		**0**		**0**				
Grand Total			**342**		**0**		**0**				

Nutrient Management Plan

Crop Year End: 5/30/2017 Season	Crop	Acres	Organics Applied (Tons) /Rate	Type	Manure Applied (Tons) /Rate	Type	Biosolid Applied (Tons) /Rate	Location	N - P - K Crop Needs lbs/ac	N - P - K Supplied Needs lbs/ac	N - P - K Remaining Needs lbs/ac
FARM NAME Hunt			**Crop Year End 5/30/2017**								
Field 1											
2016 Summer	Fescue Pasture	10.59	48 / 4.5	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		75 — 69 — 359	
2017 Summer	Fescue Pasture	10.59	60 / 5.7	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		93 — 87 — 449	
Field Summary			**108**		**0**		**0**		**169 — 30 — 116**	**168— 156 — 807**	**1 — 0 — 0**
Field 2											
2016 Summer	Fescue Pasture	5.43	24 / 4.4	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		73 — 68 — 350	
2017 Spring	Fescue Pasture	5.43	24 / 4.4	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		73 — 68 — 350	
Field Summary			**48**		**0**		**0**		**169 — 0 — 66**	**146— 135 — 700**	**23 — 0 — 0**
Field 3											
2016 Summer	Fescue Pasture	5.94	28 / 4.7	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		78 — 72 — 373	
2017 Spring	Fescue Pasture	5.94	26 / 4.4	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		72 — 67 — 347	
Field Summary			**54**		**0**		**0**		**194 — 0 — 110**	**150— 139 — 720**	**44 — 0 — 0**
Field 4											
2016 Summer	Fescue Pasture	11.23	24 / 2.1	None	0 / 0.0	None	0 / 0.0	None		35 — 33 — 169	
2017 Spring	Fescue Pasture	11.23	60 / 5.3	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		88 — 82 — 423	
Field Summary			**84**		**0**		**0**		**169 — 30 — 80**	**123— 114 — 592**	**46 — 0 — 0**
Site Summary			**294**		**0**		**0**				
FARM NAME Toler			**Crop Year End 5/30/2017**								
Field 1											
2016 Summer	Fescue Pasture	10.71	60 / 5.6	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		92 — 86 — 444	
Field Summary			**60**		**0**		**0**		**194 — 49 — 32**	**92 — 86 — 444**	**102 — 0 — 0**
Field 2											
2016 Fall	Fescue Pasture	8.54	48 / 5.6	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		93 — 86 — 445	
Field Summary			**48**		**0**		**0**		**194 — 0 — 16**	**93 — 86 — 445**	**101 — 0 — 0**
Site Summary			**108**		**0**		**0**				
Grand Total			**402**		**0**		**0**				

Nutrient Management Plan

Crop Year End: 5/30/2018 Season	Crop	Acres	Organics Applied (Tons) /Rate	Type	Manure Applied (Tons) /Rate	Type	Biosolid Applied (Tons) /Rate	Location	N - P - K Crop Needs lbs/ac	N - P - K Supplied Needs lbs/ac	N - P - K Remaining Needs lbs/ac
FARM NAME Hunt			**Crop Year End 5/30/2018**								
Field 1											
2018 Spring	Fescue Pasture	10.59	62 / 5.9	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		96 — 89 — 464	
Field Summary			**62**		**0**		**0**		**169 — 30 — 116**	**96 — 89 — 464**	**73 — 0 — 0**
Field 2											
2017 Winter	Fescue Pasture	5.43	24 / 4.4	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		73 — 68 — 350	
Field Summary			**24**		**0**		**0**		**169 — 0 — 66**	**73 — 68 — 350**	**96 — 0 — 0**
Field 3											
2017 Winter	Fescue Pasture	5.94	24 / 4.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		67 — 62 — 320	
Field Summary			**24**		**0**		**0**		**194 — 0 — 110**	**67 — 62 — 320**	**127 — 0 — 0**
Field 4											
2017 Summer	Fescue Pasture	11.23	16 / 1.4	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		23 — 22 — 113	
2018 Spring	Fescue Pasture	11.23	70 / 6.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		103 — 95 — 493	
Field Summary			**86**		**0**		**0**		**169 — 30 — 80**	**126 — 117 — 606**	**43 — 0 — 0**
Site Summary			**196**		**0**		**0**				
FARM NAME Toler			**Crop Year End 5/30/2018**								
Field 1											
2017 Summer	Fescue Pasture	10.71	60 / 5.6	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		92 — 86 — 444	
Field Summary			**60**		**0**		**0**		**194 — 49 — 32**	**92 — 86 — 444**	**102 — 0 — 0**
Field 2											
2017 Summer	Fescue Pasture	8.54	48 / 5.6	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		93 — 86 — 445	
Field Summary			**48**		**0**		**0**		**194 — 0 — 16**	**93 — 86 — 445**	**101 — 0 — 0**
Site Summary			**108**		**0**		**0**				
Grand Total			**304**		**0**		**0**				

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Nutrient Management Plan

Crop Year End: 5/30/2019 Season	Crop	Acres	Organics Applied (Tons) /Rate	Type	Manure Applied (Tons) /Rate	Type	Biosolid Applied (Tons) /Rate	Location	N - P - K Crop Needs lbs/ac	N - P - K Supplied Needs lbs/ac	N - P - K Remaining Needs lbs/ac
FARM NAME Hunt			**Crop Year End 5/30/2019**								
Field 1											
2018 Fall	Fescue Pasture	10.59	58 / 5.5	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		90 — 84 — 434	
Field Summary			**58**		**0**		**0**		**169 — 30 — 116**	**90 — 84 — 434**	**79 — 0 — 0**
Field 2											
2018 Summer	Fescue Pasture	5.43	42 / 7.7	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		127— 118 — 612	
Field Summary			**42**		**0**		**0**		**169 — 0 — 66**	**127— 118 — 612**	**42 — 0 — 0**
Field 3											
2018 Summer	Fescue Pasture	5.94	48 / 8.1	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		133— 123 — 640	
Field Summary			**48**		**0**		**0**		**194 — 0 — 110**	**133— 123 — 640**	**61 — 0 — 0**
Field 4											
2019 Spring	Fescue Pasture	11.23	70 / 6.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		103— 95 — 493	
Field Summary			**70**		**0**		**0**		**169 — 30 — 80**	**103— 95 — 493**	**66 — 0 — 0**
Site Summary			**218**		**0**		**0**				
FARM NAME Toler			**Crop Year End 5/30/2019**								
Field 1											
2018 Summer	Fescue Pasture	10.71	70 / 6.5	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		108— 100 — 517	
2019 Spring	Fescue Pasture	10.71	34 / 3.2	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		52 — 49 — 251	
Field Summary			**104**		**0**		**0**		**194 — 49 — 32**	**160— 148 — 769**	**34 — 0 — 0**
Field 2											
2018 Summer	Fescue Pasture	8.54	60 / 7.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		116— 107 — 556	
2019 Spring	Fescue Pasture	8.54	28 / 3.3	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		54 — 50 — 260	
Field Summary			**88**		**0**		**0**		**194 — 0 — 16**	**170— 157 — 816**	**24 — 0 — 0**
Site Summary			**192**		**0**		**0**				
Grand Total			**410**		**0**		**0**				

AGMAN

Nutrient Management Plan

Crop Year End: 5/30/2020 Season	Crop	Acres	Organics Applied (Tons) /Rate	Type	Manure Applied (Tons) /Rate	Type	Biosolid Applied (Tons) /Rate	Location	N - P - K Crop Needs lbs/ac	N - P - K Supplied Needs lbs/ac	N - P - K Remaining Needs lbs/ac
FARM NAME Hunt			**Crop Year End 5/30/2020**								
Field 1											
2019 Fall	Fescue Pasture	10.59	32 / 3.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		50 — 46 — 239	
2019 Summer	Fescue Pasture	10.59	64 / 6.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		100— 92 — 478	
Field Summary			**96**		**0**		**0**		**169 — 30 — 116**	**149— 139 — 718**	**20 — 0 — 0**
Field 2											
2019 Winter	Fescue Pasture	5.43	14 / 2.6	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		42 — 39 — 204	
2019 Summer	Fescue Pasture	5.43	38 / 7.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		115— 107 — 554	
Field Summary			**52**		**0**		**0**		**169 — 0 — 66**	**158— 146 — 758**	**11 — 0 — 0**
Field 3											
2019 Winter	Fescue Pasture	5.94	12 / 2.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		33 — 31 — 160	
2019 Summer	Fescue Pasture	5.94	42 / 7.1	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		117— 108 — 560	
Field Summary			**54**		**0**		**0**		**194 — 0 — 110**	**150— 139 — 720**	**44 — 0 — 0**
Field 4											
2019 Summer	Fescue Pasture	11.23	34 / 3.0	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		50 — 46 — 240	
Field Summary			**34**		**0**		**0**		**169 — 30 — 80**	**50 — 46 — 240**	**119 — 0 — 0**
Site Summary			**236**		**0**		**0**				
FARM NAME Toler			**Crop Year End 5/30/2020**								
Field 1											
2019 Summer	Fescue Pasture	10.71	22 / 2.1	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		34 — 31 — 163	
Field Summary			**22**		**0**		**0**		**194 — 49 — 32**	**34 — 31 — 163**	**160 — 18 — 0**
Field 2											
2019 Summer	Fescue Pasture	8.54	20 / 2.3	Tobacco Dust	0 / 0.0	None	0 / 0.0	None		39 — 36 — 185	
Field Summary			**20**		**0**		**0**		**194 — 0 — 16**	**39 — 36 — 185**	**155 — 0 — 0**
Site Summary			**42**		**0**		**0**				
Grand Total			**278**		**0**		**0**				

Hauling Summary

Season	Year 2014	Manure Hauled	Biosolid Hauled	Organics Hauled	Farm	Field
Fall						
		0	0	24	Toler	2
Sum		0	0	24		
Grand Total		0	0	24		

Hauling Summary

Season	Year 2015	Manure Hauled	Biosolid Hauled	Organics Hauled	Farm	Field
Fall						
		0	0	24	Toler	1
Sum		0	0	24		
Spring						
		0	0	25	Hunt	4
		0	0	24	Hunt	3
		0	0	15	Hunt	2
		0	0	22	Hunt	1
		0	0	24	Toler	1
Sum		0	0	110		
Summer						
		0	0	48	Hunt	4
		0	0	25	Hunt	3
		0	0	24	Hunt	2
		0	0	48	Hunt	1
		0	0	39	Toler	2
Sum		0	0	184		
Winter						
		0	0	24	Toler	1
Sum		0	0	24		
Grand Total		0	0	342		

Hauling Summary

Season	Year 2016	Manure Hauled	Biosolid Hauled	Organics Hauled	Farm	Field
Fall						
		0	0	48	Toler	2
Sum		0	0	48		
Spring						
		0	0	28	Hunt	4
		0	0	12	Hunt	3
		0	0	12	Hunt	2
		0	0	24	Hunt	1
		0	0	34	Toler	2
Sum		0	0	110		
Summer						
		0	0	24	Hunt	4
		0	0	28	Hunt	3
		0	0	24	Hunt	2
		0	0	48	Hunt	1
		0	0	60	Toler	1
Sum		0	0	184		
Grand Total		0	0	342		

Hauling Summary

Season	Year 2017	Manure Hauled	Biosolid Hauled	Organics Hauled	Farm	Field
Spring						
		0	0	60	Hunt	4
		0	0	26	Hunt	3
		0	0	24	Hunt	2
Sum		0	0	110		
Summer						
		0	0	16	Hunt	4
		0	0	60	Hunt	1
		0	0	48	Toler	2
		0	0	60	Toler	1
Sum		0	0	184		
Winter						
		0	0	24	Hunt	3
		0	0	24	Hunt	2
Sum		0	0	48		
Grand Total		0	0	342		

Hauling Summary

Season	Year 2018	Manure Hauled	Biosolid Hauled	Organics Hauled	Farm	Field
Fall						
		0	0	58	Hunt	1
Sum		0	0	58		
Spring						
		0	0	70	Hunt	4
		0	0	62	Hunt	1
Sum		0	0	132		
Summer						
		0	0	48	Hunt	3
		0	0	42	Hunt	2
		0	0	60	Toler	2
		0	0	70	Toler	1
Sum		0	0	220		
Grand Total		0	0	410		

Hauling Summary

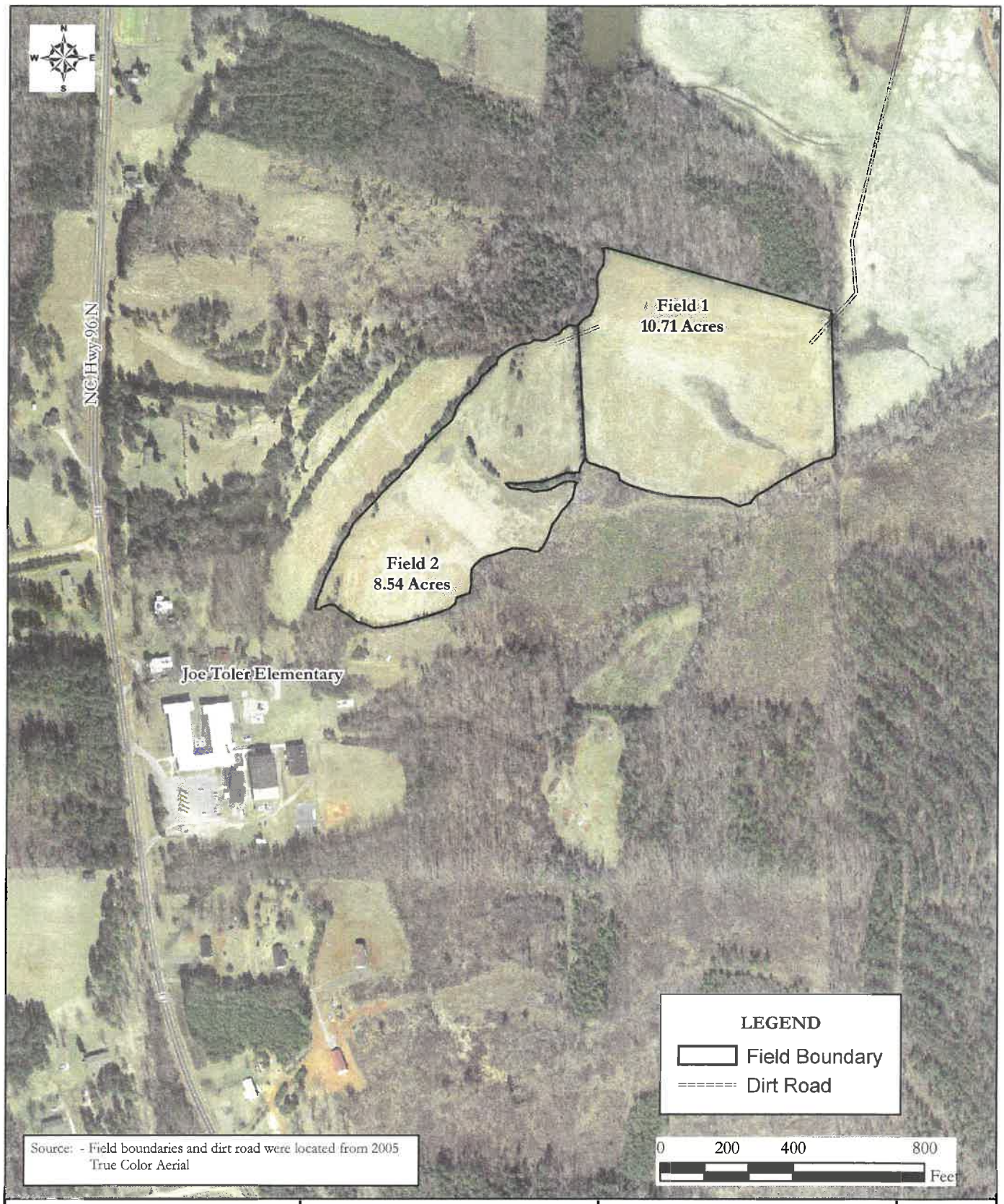
Season	Year 2019	Manure Hauled	Biosolid Hauled	Organics Hauled	Farm	Field
Fall						
		0	0	32	Hunt	1
Sum		0	0	32		
Spring						
		0	0	70	Hunt	4
		0	0	28	Toler	2
		0	0	34	Toler	1
Sum		0	0	132		
Summer						
		0	0	34	Hunt	4
		0	0	42	Hunt	3
		0	0	38	Hunt	2
		0	0	64	Hunt	1
		0	0	20	Toler	2
		0	0	22	Toler	1
Sum		0	0	220		
Winter						
		0	0	12	Hunt	3
		0	0	14	Hunt	2
Sum		0	0	26		
Grand Total		0	0	410		

J.P. TAYLOR
OXFORD PLANT

TOBACCO DUST
WASTE UTILIZATION PLAN

Joe Toler Farm

Land Application Maps
Standard Soil Fertility Analysis



Source: - Field boundaries and dirt road were located from 2005 True Color Aerial

1 inch equals 400 feet	SOIL PLUS	JOE TOLER FARM	FIGURE
Drawn By: CSC		Oxford, North Carolina	1
Reviewed By:		Universal Leaf (Tobacco Dust Permit)	
Date: December 2010		Soil Plus Project No. 201003.A10	

Report Number: 14-183-0519
Account Number: 04596

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A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: SOIL PLUS, LLC
SCOTT CARPENTER
P.O. BOX 1396
OXFORD NC 27565

Grower: GRANVILLE FARMS

Submitted By: SCOTT CARPENTER
Farm ID: JOE TOLER FARM

SOIL ANALYSIS REPORT

Analytical Method(s): Mehlich 3

Date Received: 07/02/2014 **Date Of Analysis:** 07/03/2014 **Date Of Report:** 07/03/2014

Sample ID Field ID	Lab Number	Organic Matter			Phosphorus				Potassium		Magnesium		Calcium		Sodium		pH		Acidity	C.E.C
		%	Rate	ENR lbs/A	Mehlich 3 ppm	Rate	Reserve ppm	Rate	K ppm	Rate	Mg ppm	Rate	Ca ppm	Rate	Na ppm	Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
FIELD 1	23137	7.2	VH	150	46 NC = 38	M			109 NC = 56	M	212	H	1251	H	22	VL	6.8		0.3	8.6
FIELD 2	23138	7.2	VH	150	101 NC = 84	VH			133 NC = 68	M	238	M	1909	M	22	VL	5.9	6.68	2.5	14.4

Sample ID Field ID	Percent Base Saturation					Nitrate		Sulfur		Zinc		Manganese		Iron		Copper		Boron		Soluble Salts		Chloride		Aluminum
	K %	Mg %	Ca %	Na %	H %	NO_3N ppm	Rate	S ppm	Rate	Zn ppm	Rate	Mn ppm	Rate	Fe ppm	Rate	Cu ppm	Rate	B ppm	Rate	SS ms/cm	Rate	Cl ppm	Rate	Al ppm
FIELD 1	3.2	20.5	72.7	1.1	2.9			11 NC = 23	L	7.2 NC = 180.0	H	106 NC = 663	VH	204	VH	2.3 NC = 115.0	H	0.9	M	0.1	VL			
FIELD 2	2.4	13.8	66.3	0.7	17.2			14 NC = 29	L	11.9 NC = 297.5	VH	76 NC = 475	VH	290	VH	3.6 NC = 180.0	VH	0.9	M	0.11	VL			

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: A&L Eastern Laboratories, Inc.

by: Pauric McGroary

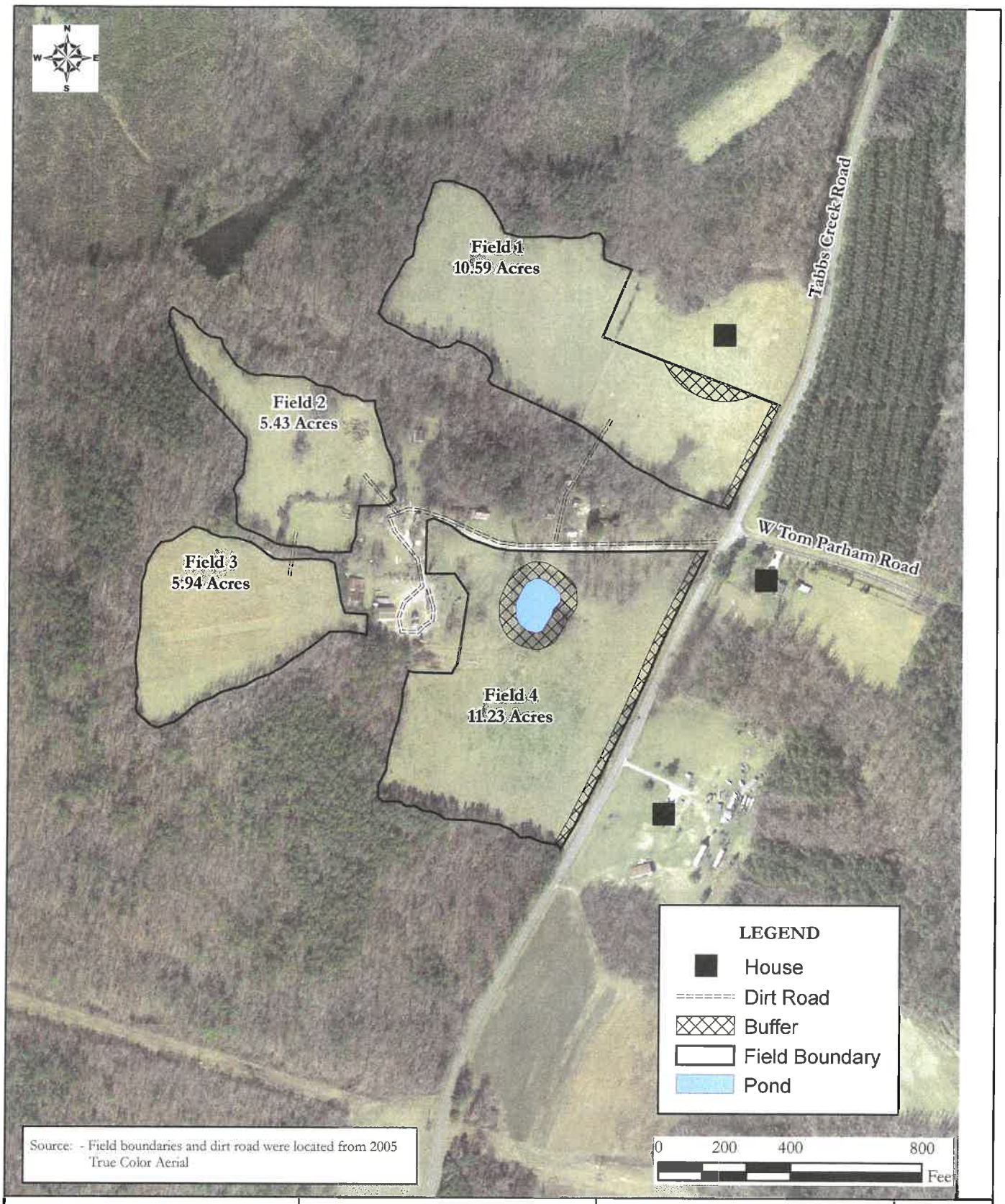
Pauric McGroary

J.P. TAYLOR
OXFORD PLANT

TOBACCO DUST
WASTE UTILIZATION PLAN

Hunt Farm

Land Application Maps
Standard Soil Fertility Analysis



1 inch equals 400 feet	SOIL PLUS	HUNT FARM	FIGURE
Drawn By: CSC		Oxford, North Carolina	2
Reviewed By:		Universal Leaf (Tobacco Dust Permit)	
Date: December 2010		Soil Plus Project No. 201003.A10	

Report Number: 14-183-0518
Account Number: 04596

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SCOTT CARPENTER
P.O. BOX 1396
OXFORD NC 27565

Grower: GRANVILLE FARMS

Submitted By: SCOTT CARPENTER
Farm ID: HUNT FARM

SOIL ANALYSIS REPORT

Analytical Method(s): Mehlich 3

Date Received: 07/02/2014 **Date Of Analysis:** 07/03/2014 **Date Of Report:** 07/03/2014

Sample ID Field ID	Lab Number	Organic Matter			Phosphorus				Potassium		Magnesium		Calcium		Sodium		pH		Acidity	C.E.C
		%	Rate	ENR lbs/A	Mehlich 3 ppm	Rate	Reserve ppm	Rate	K ppm	Rate	Mg ppm	Rate	Ca ppm	Rate	Na ppm	Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
FIELD 1	23134	2.5	L	93	56 NC = 47	H			26 NC = 13	VL	65	M	737	H	20	VL	6.1	6.86	0.7	5.1
FIELD 2	23136	3.2	M	92	281 NC = 234	VH			71 NC = 36	VL	103	VL	2423	H	23	VL	6.2		1.8	15.1

Sample ID Field ID	Percent Base Saturation					Nitrate		Sulfur		Zinc		Manganese		Iron		Copper		Boron		Soluble Salts		Chloride		Aluminum
	K %	Mg %	Ca %	Na %	H %	NO_3N ppm	Rate	S ppm	Rate	Zn ppm	Rate	Mn ppm	Rate	Fe ppm	Rate	Cu ppm	Rate	B ppm	Rate	SS ms/cm	Rate	Cl ppm	Rate	Al ppm
FIELD 1	1.3	10.6	72.3	1.7	13.7			9 NC = 19	VL	4.2 NC = 105.0	H	23 NC = 144	H	216	VH	1.1 NC = 55.0	M	0.5	L	0.06	VL			
FIELD 2	1.2	5.7	80.2	0.7	12.1			14 NC = 29	L	17.2 NC = 430.0	VH	51 NC = 319	VH	274	VH	2.5 NC = 125.0	H	1.0	M	0.1	VL			

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: A&L Eastern Laboratories, Inc.

by: Pauric McGroary

Pauric McGroary

NCDA&CS Agronomic Division | Phone: (919) 733-2655 | Website: www.ncagr.gov/agronomi/ | Report No. FY14-SL009529

Predictive

Soil Report

Mehlich-3 Extraction

Client: Granville Farms
PO Box 1396
8220 NC Hwy 96
Oxford, NC 27565

Sampled County : Granville

Advisor: Scott Carpenter
Soil Plus LLC
208 Williams St.
Greenville, NC 27858

Sampled: 10/01/2013 **Received:** 10/09/2013 **Completed:** 10/21/2013 **Farm:** Hunt

Links to Helpful Information

Sample ID: 3

Lime History:

Recommendations: Crop	Lime (tons/acre)	N	P_2O_5	K_2O	Mg	S	Mn	Zn	Cu	B	More Information
		Nutrients (lb/acre)									
1 - Fescue/OGrass/Tim, I	0.7	120-200	0	110	0	25	0	0	0	0	Note: 12
2 - Bermuda hay/past., M	0.0	180-220	0	200	0	25	0	0	0	0	Note: 12

Test Results [units - W/V in g/cm³; CEC and Na in meq/100 cm³; NO_3-N in mg/dm³]: **Soil Class:** Mineral

HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	S-I	Mn-I	Mn-AI1	Mn-AI2	Zn-I	Zn-AI	Cu-I	Na	ESP	SS-I	NO_3-N
0.27	1.34	3.9	67	1.3	5.4	146	17	53	12	21	49	46	46	98	98	46	0.0			

Sample ID: 4

Lime History:

Recommendations: Crop	Lime (tons/acre)	N	P_2O_5	K_2O	Mg	S	Mn	Zn	Cu	B	More Information
		Nutrients (lb/acre)									
1 - Fescue/OGrass/Tim, I	0.7	120-200	30	80	0	0	0	0	$	0	Note: 12 Note: $
2 - Bermuda hay/past., M	0.0	180-220	30	160	0	0	0	0	$	0	Note: 12 Note: $

Test Results [units - W/V in g/cm³; CEC and Na in meq/100 cm³; NO_3-N in mg/dm³]: **Soil Class:** Mineral

HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	S-I	Mn-I	Mn-AI1	Mn-AI2	Zn-I	Zn-AI	Cu-I	Na	ESP	SS-I	NO_3-N
0.41	1.23	4.8	71	1.4	5.4	45	30	50	18	29	89	70	70	144	144	25	0.0			

North Carolina Tobacco Trust Fund Commission

Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.
- *Steve Troxler, Commissioner of Agriculture*