Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

David C. Dowling
Deputy Director of Soil and Water Conservation and Dam Safety

Thomas L. Smith
Deputy Director of Operations

August 10, 2017

Dr. Allen Grant
Virginia Tech Dairy and Animal & Poultry ScienceS
104 Hutcheson Hall (0402)
Blacksburg, VA 24061

Dear Dr. Grant,

Your nutrient management plan (NMP), dated 9/1/2017, for a 4775 head livestock operation has been approved by the Virginia Department of Conservation and Recreation for coverage under a Virginia Pollution Abatement (VPA) or Virginia Pollutant Discharge Elimination System (VPDES) permit. Only nutrient recommendations for applications to be made after the date of this letter are approved by this letter. Your NMP was written by a nutrient management planner certified by the Virginia Department of Conservation and Recreation.

A copy of this letter must be kept with your nutrient management plan. A copy of this letter and a copy of the approved plan must be sent to the Blue Ridge Regional Office of the Virginia Department of Environmental Quality (DEQ).

It should be noted that this plan expires 12/31/2018. We recommend the process of revising this nutrient management plan begin at least six months prior to the expiration date.

If you have any questions concerning this letter, please feel free to contact me at bobby.long@dcr.virginia.gov or (434) 547-8172.

Sincerely,

Bobby Long
Nutrient Management Coordinator – Animal Waste
Division of Soil and Water Conservation

cc: Tim Sexton, DCR Nutrient Management Program Manager
Jody N. Booze-Daniels
DEQ Blue Ridge Regional Office

Virginia Tech Dairy and Animal & Poultry Sciences Nutrient Management Plan Sept 1, 2017 to December 31, 2018

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NUTRIENT MANAGEMENT PLAN

VT Dairy and Animal & Poultry Sciences Departments

Operator

Dr. Allen Grant
104 Hutcheson Hall (0402)
Blacksburg, VA 24061
540-231-4152

Integrator:*None*

Farm Coordinates

Easting: 37.228363, Northing: 80.42295, zone: 17

Watershed Summary

Watershed: NE59, NE60, NE62
County: Montgomery

Nutrient Management Planner

Jody N. Booze-Daniels
909 Allendale Court
Blacksburg, VA 24060
Certification Code: 549

Acreage Use Summary		***Livestock Summary***	
Total Acreage in this plan: 1621.4		Beef Cattle	650
Cropland:	354	Milked Dairy Cattle	245
Hayland:	475	Poultry	3000
Pasture:	792	Swine	65
Specialty:	0.	Other	815

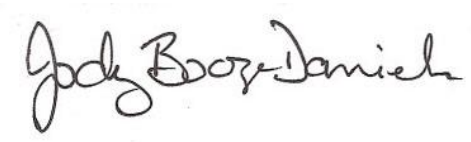
Acreage Off-farm

Total Acreage in this plan: 16
Cropland: 0
Hayland: 0
Pasture: 16 (Saville)
Specialty: 0.

Manure Production Balance

	Imported	Produced	Exported	Used	Net
Sept 2017 to Dec 2018 (5 quarters)					
Dairy Separated Liquid	0	3750	0	3702	48
Dairy Separted Solids	0	2925	0	2824	101
Swine kgal	0	1220	0	1192	28
Dry Stack	0	1420	0	1388	32

Plan written 9/1/2017
Valid until 12/31/2018



Signature: _____ **July 30, 2017**

Nutrient Management Plan for Virginia Tech, College of Agriculture and Life Sciences
September 1, 2017 to December 31, 2018
Jody N. Booze-Daniels
Certified Nutrient Management Planner 549
Permit No. VPG100013

Narrative

This Virginia Tech College of Agriculture and Life Sciences (CALS) nutrient management plan includes lands in Montgomery County, Virginia that are used for dairy, beef, swine, poultry, sheep, and horse teaching and research programs and to which manure and/or fertilizer are applied. This nutrient management plan for all fields will expire on December 31, 2018, and all revisions for the year will also expire at that time.

The dairy operation moved to its new facility at Kentland in August 2015. The creation of a nutrient management plan has been a challenge because it encompasses a wide variety of land use and animal management strategies, which in turn affect manure handling and crop production. However, this is the first plan in over 10 years that extends beyond the usual 12 months.

Overview

The CALS lands in Montgomery County are divided into several tracks: The “in-town” lands include 1) **Smithfield** (east of Rt 460 bypass) used for horses and crops; 2) **South West Fields** (west of Rt 460 bypass) used for beef production and crops; & 3) **Plantation Road Fields** (west of Rt 460 bypass) used for swine, beef, horse and sheep teaching. The “out-of-town” lands include 1) **Turkey Farm Fields** (west of Rt 460 bypass) used for poultry and hay; 2) **Moore Farm** (west of Rt 460 bypass & north of Prices Fork Rd) used for hay and beef production; 3) **Price’s Farm** (west of Rt 460 bypass & south of Prices Fork Rd) used for crop and hay production; 4) **Kentland Farm** used for dairy & beef cows, crop & hay research/production. All total, about 1,621 acres, are represented by this plan. The **Saville Farm** (off-farm) has been used in the past, adding 16 acres to the plan.

The amimals are managed for research and teaching. They are not typically used to generate cash; thus, their management is not based on a typical agribusiness model. Also, the whole system is managed by multiple stake holders, which makes the CALS system unique. Complicating matters, the animal numbers fluctuate over the year, so the maximum number of possible animals is used in this plan. This fluctuation makes it difficult to predict the total amount of manure produced, affects the actual amount of manure land applied, and alters feed production requirements year to year.

This plan was crafted as an attempt to address the uniqueness and fluidity of the CALS’ system and written with current information that will certainly change.

Manure

In general, this plan accounts for the maximum number of animals that may be on the farm at any time of the year. Due to the nature of research and teaching, the animal numbers fluctuate constantly. Since the new dairy was built two years ago, the farm manager has learned what to expect from the new dairy manure separation system (weeping wall). However, manure applications to available land still depends on ever changing variables such as the types of crops planted, movement of herds, the loss of available land and the weather. The goal is to maximize the quality of the manure as well as its nutritional value to crop production, silage and hay. To meet this goal,

several manure streams are combined which further complicates manure handling. A description of the 4 manure streams:

- **Dairy Pad** at Kentland holds 30-40 loads (1 load = 10 ton) of weeping wall separated soilids plus waste feed and bedding. It is removed from the pad approximately every 3 months.
    - March - applied directly to no-till corn silage fields
    - June - applied to no-till warm-season silage fields
    - August/September - trucked to the dry stack barn located at the Heth Farm and mixed with the Animal & Poultry Sci Barn's higher carbon manure to encourage "compost" production. This semi-composted material is then applied to hay fields in late November.
    - Dec to March - trucked to the dry stack as well as to the Lisa Barn, located near the dairy.
    - Lisa Barn at Kentland holds about 30 loads of pad solids and is used as a emergency storage when the manure can't be immediately land applied or trucked to the dry stack due to weather. It is cleaned out in March (applied to no-till corn silage fields) and in November (applied to hay fields).
- **Dry Stack Barn** at the Heth Farm holds about 56 loads of a mixture of dairy separated solids combined with beef, sheep, horse, chicken and turkey manure.
    - March - the barn contents are applied to no-till corn silage fields.
    - November - "composted" material is applied to hay fields.
- **Separated Dairy Liquid** - The two tanks hold over 4,000 kgal of liquid manure. The liquid is applied in June to warm season silage crops and hay fields and then again in August to hay/pasture fields.
- **Swine Manure Liquid** - The swine manure is applied to fields that are close to the Pig Center in the spring and fall.

Commercial Fertilizer Allocations

Only lands listed in this NMP will receive N or P. If any land that is not included in this plan is slated to receive nutrients within the span of this plan, this plan will be revised for those areas. If that being the case, soil samples must be collected prior to this revision.

The commercial fertilizer rates are assigned (last column in the Balance Sheet) at the rate the VT farm manager usually applies. Maximum allowed rates are listed in the second to last Balance Sheet column, labeled in red ink and noted as "Net = Needs - appld N-P-K (lbs/ac)." Equal to or less fertilizer than is listed in this "Net" column is acceptable.

Some of the fields are considered environmentally sensitive, as noted in the Map Key. Nutrients should be applied in a manner to reduce run-off of nutrients.

When Should this Plan Be Revised?

"The plan shall also state a need for modification prior to subsequent nutrient applications if cropping systems, rotations, or fields are changed and phosphorus will be applied at levels greater than crop nutrient needs based on soil analysis as determined from procedures in Virginia Nutrient Management Standards and Criteria, revised July 2014." In summary, the plan will be revised (field by field) when crops, rotations, fields change AND the phosphorus applied will be greater than what the crop needs.

Nutrient Recommendations for Specific Crops

Warm season annual forage and wheat silage and pearl millet will be planted late spring/early summer as forages. The following nutrient recommendations from the DCR's July 2014 Standards and Criteria[1] should be followed.

Sudangrass, Sudan-Sorghum Hybrids and Millet Plantings

Soil Test Level	Nutrient Needs (lbs/ac)		
	N	P_2O_5	K_2O
L	70*	100-120	100-120
M	70*	70-90	70-90
H	70*	40-60	40-60
VH	70*	0	0

* The N recommendation is for application at planting. If additional pasture, hay, silage production is desired, apply 40-60 lbs/A N after each cutting, or 30-40 lbs/ac. N after each grazing. Do not apply more than 130 lbs/A N per year.

Small Grain for Silage

1. Soil productivity groups are the same as for wheat and barley

2. Nitrogen recommendations:

   a. At planting - 0-30 lbs N/acre
      - use lower rate on fields, which will be timely planted, with a history of frequent manure applications, and good growing conditions are expected 10 days after planting.

   b. Late winter - a single application made in February
      (1) Triticale, Rye, Wheat silage production - 40-90 lbs N/acre
      (2) Barley, Oats silage production - 40-70 lbs N/acre
         (a) Preferred application period would be after green-up occurs and before first joint has emerged.
         (b) Use lower rates on field which are well established, have dark green color, and a history of lodging.

Soil Test Level	Nutrient Needs (lbs/ac)	
	P_2O_5	K_2O
L	80 -120	80 -120
M	40 - 80	40 - 80
H	20 - 40	20 - 40
VH	0	0

[1] http://leg5.state.va.us/reg_agent/frmView.aspx?Viewid=6ebe2003787~1&typ=40&actno=003787&mime=application/pdf

Nutrient Management Plan Balance Sheet CALS September 1, 2017 to December 31, 2018

Nutrient Management Plan Balance Sheet
(September 1, 2017 to December 31, 2018)
VA Tech Farm
Planner: Jody N. Booze-Daniels (cert. No. 549)

Notes:

- ***Plant Key: These crops can be used interchangeably - Sorg. Sudan, Millet = sorghum, sudangrass or pearl millet; Wheat (sillage) = wheat or barley silage***
- ***Manure Key: DairySolids = Dairy Separated Solids (From the Pad and Lisa Barn); DairyLiq= Dairy Liquid; Drystck = Dry Stack***
- **The "Net = Needs - appld N-P-K (lbs/ac)" column indicates the maximum amout of commercial fertilizer that can be applied. The numbers in parentheses indicate that none of that nutrient (nitrogen, phosphorus or potassium) should be applied. The "Commercial N-P-K (lbs/ac)" column presents the rate of N-P-K which the farm manager customarily applied in 2017 and most likely applies in 2018.**

Tract: Heth Farm

Location: Montgomery

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
H3/HF 3(N)	9/9	2017	Hay/Pasture	120-90-120	0/1	10.k Swine (Fa) 10.t Drystack(Fa)	>7 >7	9-9-31 35-64-84	65-10-(25)	N/A	
		2018	... ...	120-90-120	0/14	10.k Swine (Fa) 10.t Drystack(Fa)	>7 >7	9-9-31 35-64-84	60-25-(20)	N/A	50-0-0(br)
9a/HF 9a(N)	14/6	2017	Hay/Pasture	120-110-170	0/1	10.k Swine (Fa)	>7	9-9-31	100-90-110	N/A	
		2018	... ...	120-90-0	0/1	10.k Swine (Fa)	>7	9-9-31	110-170-80	N/A	100-100-50(br)
9b/HF 9b(N)	12/12	2017	Hay/Pasture	120-100-160	0/1	10.k Swine (Fa)	>7	9-9-31	100-80-100	N/A	
		2018	... ...	120-40-0	0/1	10.k Swine (Fa)	>7	9-9-31	110-110-70	N/A	100-100-50(br)
9c/HF 9c(N)	8/7	2017	Hay/Pasture	120-100-160	0/0				120-100-160	N/A	
		2018	... ...	120-60-0	0/0				120-160-160	N/A	120-100-100(br)
H8/HF 18(N)	16/16	2017	Corn (silage)	165-100-210	0/13				150-100-210	N/A	40-0-0(ba)
			Barley (cover)	0-0-0	0/0				0-100-210	N/A	100-0-0(sd)
		2018	Corn (silage)	165-100-210	0/5	10.t DairySolids(Sp)	>7	34-28-55	125-170-365	N/A	40-100-100(ba)
			Barley (cover)	0-0-0	0/0				0-70-265	N/A	85-0-0(sd)
H4/HF 21(N)	19/19	2017	Corn (silage)	165-120-210	0/13	10.k Swine (Sp)	>7	9-9-31	145-110-180	N/A	40-0-0(br)
			Barley (cover)	0-0-0	0/0				0-110-180	N/A	100-0-0(sd)
		2018	Corn (silage)	165-120-210	0/6	10.k Swine (Sp)	>7	9-9-31	115-195-305	N/A	40-100-100(ba)

			Barley (cover)	0-0-0	0/0	10.t DairySolids(Sp)	>7	34-28-55	0-95-205	N/A	75-0-0(sd)
H2/HF 40(N)	46/46	2017 2018	Hay/Pasture	120-100-170 120-100-170	0/0 0/13	10.t Drystack(Fa) 10.t Drystack(Fa)	>7 >7	35-64-84 35-64-84	85-35-85 70-70-170	N/A N/A	 70-0-100(br)
H7a/HF 54 Lower(N)	27/27	2017 2018	Alfalfa (hay), maint	0-80-300 0-80-300	0/0 0/0				0-80-300 0-160-600	N/A N/A	 0-100-100(br) 0-100-100(br) 0-0-100(br)
H7b/HF 54 Upper(N)	30/30	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-100-140 0-0-0 165-100-140 0-0-0	0/0 0/0 0/9 0/0	10.t Drystack(Sp) 10.t Drystack(Sp)	>7 >7	23-34-50 35-64-84	140-65-90 0-65-90 120-100-145 0-0-45	N/A N/A N/A N/A	40-0-0(ba) 50-0-0(sd) 40-100-100(ba) 80-0-0(sd)

Tract: Kentland Farm **Location: Montgomery**

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
Knew11/Adams House(N)	6/6	2017 2018	Fescue grass hay mt.	90-40-170 90-40-170	0/0 0/0				90-40-170 90-80-340	N/A N/A	 90-100-100(br)
K65a/Cemetery Alfalfa Strips(N)	12/12	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	155-120-140 0-0-0 155-120-140 0-0-0	0/1 0/0 0/6 0/0	10.t DairySolids(Sp) 10.t DairySolids(Sp)	>7 >7	24-32-83 34-28-55	130-90-55 0-90-55 115-180-140 0-80-40	N/A N/A N/A N/A	40-0-0(ba) 90-0-0(sd) 40-100-100(ba) 75-0-0(sd)
K65b/Cemetery Corn Strips(N)	19/19	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-120-180 0-0-0 165-120-180 0-0-0	0/1 0/0 0/6 0/0	10.t DairySolids(Sp) 10.t DairySolids(Sp)	>7 >7	24-32-83 34-28-55	140-90-95 0-90-95 125-180-220 0-80-120	N/A N/A N/A N/A	40-0-0(ba) 100-0-0(sd) 40-100-100(ba) 85-0-0(sd)
K65c/Cemetery Hay Borders(N)	10/10	2017 2018 	Fescue grass hay mt.	90-60-0 90-60-0	0/1 0/2	10.k DairyLiq(Su) 10.k DairyLiq(Fa) 10.k DairyLiq(Su) 10.k DairyLiq(Fa)	>7 >7 >7 >7	6-4-21 6-4-21 6-4-21 6-4-21	75-55-(40) 75-110-(80)	N/A N/A	 70-100-0(br)
84/Dairy1(N)	19/19	2017 2018 	Fescue grass hay mt.	90-60-0 90-60-0	0/0 0/1	10.k DairyLiq(Fa) 10.t DairySolids(Sp) 10.k DairyLiq(Fa)	>7 >7 >7	6-4-21 34-28-55 6-4-21	85-55-(20) 50-85-(95)	N/A N/A	 0-100-0(br)
85/Dairy2(N)	10/10	2017 2018	Fescue grass hay mt.	70-40-0 70-40-0	0/0 0/0				70-40-0 70-80-0	N/A N/A	 70-100-100(br)
86/Dairy3(N)	13/13	2017	Fescue grass hay mt.	90-80-185	0/0	10.k DairyLiq(Sp)	>7	6-4-21	80-75-145	N/A	

						10.k DairyLiq(Fa)	>7	6-4-21			
		2018	... ...	90-80-185	0/1	10.k DairyLiq(Sp)	>7	6-4-21	75-150-290	N/A	70-100-100(br)
						10.k DairyLiq(Fa)	>7	6-4-21			
87/Dairy4(N)	10/10	2017	Fescue grass hay mt.	90-70-170	0/0				90-70-170	N/A	
		2018	... ...	90-70-170	0/0				90-140-340	N/A	90-100-100(br)
Knew4/Dwights(N)	12/12	2017	Corn (silage)	165-100-180	0/1				165-100-180	N/A	40-0-0(ba)
											120-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-100-180	N/A	
		2018	Corn (silage)	165-100-180	0/0				165-200-360	N/A	40-100-100(ba)
											125-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-100-260	N/A	
K51a/Harlens(N)	7/7	2017	Corn (silage)	165-120-180	0/1	10.t DairySolids(Sp)	>7	24-32-83	140-90-95	N/A	40-0-0(ba)
											100-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-90-95	N/A	
		2018	Corn (silage)	165-120-180	0/6	10.t DairySolids(Sp)	>7	34-28-55	125-180-220	N/A	40-100-100(ba)
											85-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-80-120	N/A	
K51b/Harlens Buffers(N)	2/2	2017	Fescue grass hay mt.	90-90-90	0/1				90-90-90	N/A	
		2018	... ...	90-90-90	0/1				90-180-180	N/A	90-100-100(br)
K9/Horse Past 1(N)	15/13	2017	Fescue grass hay mt.	90-50-90	0/0				90-50-90	N/A	
		2018	... ...	90-50-90	0/0				90-100-180	N/A	90-100-100(br)
K13/Horse Past 2(N)	25/23	2017	Fescue grass hay mt.	90-90-90	0/1				90-90-90	N/A	
		2018	... ...	90-90-90	0/0				90-180-180	N/A	90-100-100(br)
K12/Horse Past 3(N)	18/18	2017	Corn (silage)	155-100-140	0/21	10.t DairySolids(Sp)	>7	24-32-83	110-70-55	N/A	40-0-0(ba)
											70-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-70-55	N/A	
		2018	Corn (silage)	155-100-140	0/19	10.t DairySolids(Sp)	>7	34-28-55	100-140-140	N/A	40-100-100(ba)
											60-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-40-40	N/A	
K83/Manor House(1P)	29/29	2017	Corn (silage)	155-0-170	0/9				145-0-170	90	40-0-0(ba)
											100-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-0-170	90	
		2018	Corn (silage)	155-0-170	0/4				150-0-340	179	40-0-100(ba)
											110-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-0-240	179	
K62/Manor House Front(1P)	4/4	2017	Fescue grass hay mt.	90-0-185	0/0	10.k DairyLiq(Sp)	>7	6-4-21	85-(5)-165	56	
		2018	... ...	90-0-185	0/1	10.k DairyLiq(Sp)	>7	6-4-21	85-(10)-330	112	85-0-100(br)
K82/Manor Parking(N)	23/23	2017	Fescue grass hay mt.	90-50-90	0/0	10.k DairyLiq(Su)	>7	6-4-21	85-45-70	N/A	
		2018	... ...	90-50-90	0/1	10.k DairyLiq(Su)	>7	6-4-21	85-90-140	N/A	80-100-100(br)
67c/Matt Crop Strip(N)	25/25	2017	Corn (silage)	130-80-100	0/9	10.t DairySolids(Sp)	>7	24-32-83	100-50-15	N/A	40-0-0(ba)
											55-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-50-15	N/A	
		2018	Corn (silage)	145-80-100	0/9	10.t DairySolids(Sp)	>7	34-28-55	100-100-60	N/A	40-100-100(ba)
											60-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-0-(40)	N/A	
K67b/Matt Hay Strip(N)	25/25	2017	Fescue grass hay mt.	90-70-90	0/0	10.k DairyLiq(Su)	>7	6-4-21	85-65-70	N/A	

		2018	... ...	90-70-90	0/1	10.k DairyLiq(Su)	>7	6-4-21	85-130-140	N/A	80-100-100(br)
K67a/Matt Hilltop(N)	14/13	2017	Corn (silage)	155-120-170	0/9	10.t DairySolids(Sp)	>7	24-32-83	125-90-85	N/A	40-0-0(ba)
											80-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-90-85	N/A	
		2018	Corn (silage)	165-140-210	0/9	10.t DairySolids(Sp)	>7	34-28-55	120-200-240	N/A	40-100-100(ba)
											80-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-100-140	N/A	
K46/Orchard Past(N)	30/15	2017	Fescue grass hay mt.	90-80-160	0/0				90-80-160	N/A	
		2018	... ...	90-80-160	0/0				90-160-320	N/A	90-200-200(br)
K36/Pasture #1(N)	35/33	2017	Grass Pasture	50-0-0	0/0	10.k DairyLiq(Su)	>7	6-4-21	45-(5)-(20)	N/A	
		2018	... ...	50-0-0	0/1	10.k DairyLiq(Su)	>7	6-4-21	45-(10)-(40)	N/A	45-0-0(br)
K37/Pasture #2(N)	35/32	2017	Grass Pasture	50-0-0	0/0	10.k DairyLiq(Su)	>7	6-4-21	45-(5)-(20)	N/A	
		2018	... ...	50-0-0	0/1	10.k DairyLiq(Su)	>7	6-4-21	45-(10)-(40)	N/A	45-0-0(br)
K38/Pasture #3(N)	35/32	2017	Grass Pasture	50-0-0	0/11	10.k DairyLiq(Su)	>7	6-4-21	35-(5)-(20)	N/A	
		2018	... ...	50-0-0	0/9	10.k DairyLiq(Su)	>7	6-4-21	35-(10)-(40)	N/A	35-0-0(br)
K39/Pasture #4(N)	35/34	2017	Grass Pasture	50-0-0	0/0				50-0-0	N/A	
		2018	... ...	50-0-0	0/0				50-0-0	N/A	50-0-0(br)
K40/Pasture #5(N)	40/35	2017	Grass Pasture	50-0-0	0/0				50-0-0	N/A	
		2018	... ...	50-0-0	0/0				50-0-0	N/A	50-0-0(br)
K41/Pasture #6(N)	35/30	2017	Grass Pasture	50-90-80	0/1	10.t DairySolids(Fa)	>7	34-28-55	15-60-25	N/A	
		2018	... ...	50-90-80	0/10	10.t DairySolids(Fa)	>7	34-28-55	5-120-50	N/A	0-100-100(br)
K70/Repro A(N)	20/20	2017	Grass Pasture	50-80-0	0/0	10.k DairyLiq(Su)	>7	6-4-21	45-75-(20)	N/A	
		2018	... ...	50-80-0	0/1				50-155-(20)	N/A	50-100-0(br)
K73/Repro B(N)	20/20	2017	Grass Pasture	50-80-0	0/0				50-80-0	N/A	
		2018	... ...	50-80-0	0/0	10.k DairyLiq(Su)	>7	6-4-21	45-155-(20)	N/A	45-100-0(br)
K76/Repro C(N)	20/20	2017	Grass Pasture	50-80-0	0/1				50-80-0	N/A	
		2018	... ...	50-80-0	0/0	10.k DairyLiq(Su)	>7	6-4-21	45-155-(20)	N/A	45-100-0(br)
K79/Repro D(N)	20/20	2017	Grass Pasture	50-80-0	0/1	10.k DairyLiq(Su)	>7	6-4-21	45-75-(20)	N/A	
		2018	... ...	50-80-0	0/1				50-155-(20)	N/A	50-100-0(br)
K54/Reservoir Corn(N)	6/6	2017	Corn (silage)	130-100-170	0/1	10.t DairySolids(Sp)	>7	24-32-83	105-70-85	N/A	40-0-0(ba)
											65-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-70-85	N/A	
		2018	Corn (silage)	130-100-170	0/6	10.t DairySolids(Sp)	>7	34-28-55	90-140-200	N/A	40-100-100(ba)
											50-0-0(sd)
			Barley (cover)	0-0-0	0/0				0-40-100	N/A	
K55a/Showcase & Big Barn(N)	17/15	2017	Fescue grass hay mt.	70-40-110	0/1				70-40-110	N/A	
		2018	... ...	70-40-110	0/0				70-80-220	N/A	70-100-100(br)
K16/Silo(N)	25/21	2017	Fescue grass hay mt.	90-70-185	0/0				90-70-185	N/A	
		2018	... ...	90-70-185	0/0				90-140-370	N/A	90-100-100(br)
K14/Vaughts Past(N)	16/15	2017	Fescue grass hay mt.	90-80-90	0/0				90-80-90	N/A	
		2018	... ...	90-80-90	0/0				90-160-180	N/A	90-100-100(br)

Tract: Moore

Location: Montgomery

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
M13b/Fire Dept Crop Lower(N)	12/12	2017	Grass Pasture	50-0-90	0/0	10.k Swine (Fa)	>7	9-9-31	40-(10)-60	N/A	
		2018	... ...	50-0-90	0/1	10.k Swine (Fa)	>7	9-9-31	40-(20)-120	N/A	40-0-100(br)
M13a/Fire Dept Crop Upper(N)	14/14	2017	Grass Pasture	50-0-0	0/0	10.k Swine (Fa)	>7	9-9-31	40-(10)-(30)	N/A	
		2018	... ...	50-0-0	0/1	10.k Swine (Fa)	>7	9-9-31	40-(20)-(60)	N/A	40-0-0(br)
M9c-f/Fire Dept Pst(N)	44/29	2017	Grass Pasture	50-0-0	0/0				50-0-0	N/A	
		2018	... ...	50-0-0	0/0				50-0-0	N/A	50-0-0(br)
M17-20/Observatory Pst(N)	53/30	2017	Grass Pasture	50-0-0	0/0				50-0-0	N/A	
		2018	... ...	50-0-0	0/0				50-0-0	N/A	50-0-0(br)
M23b/Pasco crop strips(N)	15/15	2017	Grass Pasture	50-40-80	0/0				50-40-80	N/A	
		2018	... ...	50-40-80	0/0				50-80-160	N/A	50-100-100(br)
M23a/Pasco hay strips(N)	27/25	2017	Grass Pasture	50-0-40	0/0				50-0-40	N/A	
		2018	... ...	50-0-40	0/0				50-0-80	N/A	50-0-100(br)
M9a-b,12/Reynolds Past(N)	25/25	2017	Grass Pasture	50-30-0	0/0				50-30-0	N/A	
		2018	... ...	50-30-0	0/0				50-60-0	N/A	50-0-0(br)

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Tract: Plantation Road

Location: Montgomery

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
PR21/Beef Barn(N)	10/10	2017	Grass Pasture	50-0-30	0/0				50-0-30	N/A	
		2018	... ...	50-0-30	0/0				50-0-60	N/A	50-0-90(br)
PR3/Bypass Crop(N)	10/10	2017	Alfalfa (Hay) estb.	0-80-130	0/0				0-80-130	N/A	
			Alfalfa (hay), maint	0-50-330	0/0				0-50-360	N/A	
		2018	... ...	0-50-330	0/0				0-100-690	N/A	0-100-100(br) 0-0-100(br)
PR24/Bypss sheep pasture(N)	9/9	2017	Grass Pasture	50-0-30	0/0				50-0-30	N/A	
		2018	... ...	50-0-30	0/0				50-0-60	N/A	50-0-90(br)
PR19/Horse Ring(N)	5/5	2017	Grass Pasture	50-0-0	0/0				50-0-0	N/A	
		2018	... ...	50-0-0	0/0				50-0-0	N/A	50-0-0(br)
PR60-61/New Barn Past(N)	10/8	2017	Grass Pasture	50-0-0	0/0				50-0-0	N/A	
		2018	... ...	50-0-0	0/0				50-0-0	N/A	50-0-0(br)
PR1/Piggry(N)	22/18	2017	Alfalfa (Hay) estb.	0-50-50	0/0				0-50-50	N/A	
			... ...	0-50-50	0/0				0-100-100	N/A	

		2018	Alfalfa (hay), maint	0-40-60	0/0				0-140-160	N/A	0-140-160(br)
PR42/Sheep Past 1(N)	29/25	2017	Grass Pasture	50-30-0	0/0				50-30-0	N/A	
		2018	... ...	50-30-0	0/0				50-60-0	N/A	50-90-0(br)

Tract: Price Farm

Location: Montgomery

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
P6/M&M(N)	13/11	2017	Sorghum (silage)	110-40-60	0/13	10.k DairyLiq(Sp)	>7	6-4-21	90-35-40	N/A	40-0-0(ba) 50-0-0(sd)
			Wheat (silage)	85-40-60	0/0	10.t DairySolids(Fa)	>7	34-28-55	50-45-45	N/A	30-50-100(td) 20-0-0(td)
		2018	Sorg. sudan, Millet	70-60-80	0/16	10.k DairyLiq(Sp)	>7	6-4-21	50-50-5	N/A	45-50-100(br)
			Wheat (silage)	85-40-60	0/0	10.t DairySolids(Fa)	>7	34-28-55	50-10-(90)	N/A	30-0-0(br) 20-0-0(td)
P-5/McCauley(N)	8/8	2017	Sorghum (silage)	110-60-40	0/13	10.k DairyLiq(Sp)	>7	6-4-21	90-55-20	N/A	40-0-0(br) 45-0-0(td)
			Wheat (silage)	85-60-40	0/0	10.t DairySolids(Fa)	>7	34-28-55	50-85-5	N/A	30-100-100(td) 20-0-0(td)
		2018	Sorg. sudan, Millet	70-80-70	0/16	10.k DairyLiq(Sp)	>7	6-4-21	50-60-(45)	N/A	45-90-40(br)
			Wheat (silage)	85-60-40	0/0	10.t DairySolids(Fa)	>7	34-28-55	50-0-(100)	N/A	30-50-0(td) 20-0-0(td)
P1a/Price Crop(N)	21/14	2017	Sorghum (silage)	100-80-60	0/13	10.t DairySolids(Sp)	>7	24-32-83	65-50-(25)	N/A	40-0-0(ba) 20-0-0(ba)
			Wheat (silage)	85-80-60	0/0	10.k DairyLiq(Fa)	>7	6-4-21	80-125-15	N/A	30-100-50(td) 30-0-0(td) 20-0-0(td)
		2018	Sorg. sudan, Millet	70-90-80	0/12	10.t DairySolids(Sp)	>7	34-28-55	25-85-(10)	N/A	25-100-50(ba)
			Wheat (silage)	85-80-60	0/0	10.k DairyLiq(Fa)	>7	6-4-21	80-60-(20)	N/A	30-100-100(td) 30-0-0(td) 20-0-0(td)
P1b/Price Hay(N)	12/12	2017	Fescue grass hay mt.	70-40-70	0/0				70-40-70	N/A	
		2018	... ...	70-40-70	0/0				70-80-140	N/A	70-120-200(br)
P3/Tower(N)	9/9	2017	Sorghum (silage)	110-40-60	0/13	10.t DairySolids(Sp)	>7	24-32-83	75-10-(25)	N/A	40-0-0(ba) 30-0-0(sd)
			Wheat (silage)	85-40-60	0/0	10.k DairyLiq(Fa)	>7	6-4-21	80-45-15	N/A	30-50-100(td) 30-0-0(td) 15-0-0(td)
		2018	Sorg. sudan, Millet	70-70-80	0/12	10.t DairySolids(Sp)	>7	34-28-55	25-35-(60)	N/A	20-0-0(br)
			Wheat (silage)	85-40-60	0/0	10.k DairyLiq(Fa)	>7	6-4-21	80-70-(20)	N/A	30-100-100(td) 30-0-0(td) 20-0-0(td)

Tract: Saville

Location: Montgomery

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
0/Crop 8(N)	6/6	2017 2018	Unimproved Pasture	50-90-0 50-90-0	0/9 0/4				10-75-(10) 45-165-(10)	N/A N/A	 45-100-0(br)
0/Crop 9(N)	3/3	2017 2018	Unimproved Pasture	50-90-80 50-90-80	0/9 0/4				10-75-70 45-165-150	N/A N/A	 45-100-100(br)
0/R1(N)	4/4	2017 2018	Unimproved Pasture	50-175-75 50-175-75	0/0 0/0				50-175-75 50-350-150	N/A N/A	 45-100-100(br)
0/R2(N)	3/3	2017 2018	Unimproved Pasture	50-175-0 50-175-0	0/0 0/0				50-175-0 50-350-0	N/A N/A	 50-100-0(br)

Tract: Smithfield

Location: Montgomery

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
SW18/HOW-1 Past(N)	36/30	2017 2018	Grass Pasture	50-0-0 50-0-0	0/0 0/0				50-0-0 50-0-0	N/A N/A	 50-0-0(br)
SW24/HOW-2 Past(N)	24/20	2017 2018	Grass Pasture	50-30-40 50-30-40	0/0 0/0				50-30-40 50-60-80	N/A N/A	45-0-0(br) 50-50-100(br)
SW12/Heth A(N)	15/13	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-70-180 0-0-0 165-70-180 0-0-0	0/0 0/0 0/0 0/0				165-70-180 0-70-180 165-140-360 0-40-260	N/A N/A N/A N/A	40-0-0(ba) 125-0-0(ba) 40-100-100(ba) 125-0-0(sd)
SW13/Heth B(N)	26/22	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-70-180 0-0-0 165-70-180 0-0-0	0/0 0/0 0/0 0/0				165-70-180 0-70-180 165-140-360 0-40-260	N/A N/A N/A N/A	40-0-0(ba) 125-0-0(sd) 40-100-100(ba) 125-0-0(sd)
SW14/Heth C(1P)	16/14	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-0-180 0-0-0 165-0-180 0-0-0	0/0 0/0 0/0 0/0				165-0-180 0-0-180 165-0-360 0-0-160	94 94 188 188	40-0-0(ba) 125-0-0(sd) 40-0-200(ba) 125-0-0(sd)
SW4/Shuff Crop(N)	25/24	2017 2018	Fescue grass hay mt.	70-40-95 70-40-95	0/1 0/1	10.k Swine (Sp) 10.k Swine (Sp)	>7 >7	9-9-31 9-9-31	60-30-65 60-60-130	N/A N/A	55-0-0(br) 60-50-100(br)
SW1/Shuff Past(N)	35/11	2017 2018	Grass Pasture	50-30-0 50-30-0	0/0 0/0				50-30-0 50-60-0	N/A N/A	 50-50-0(br)
SW5/Whitethorne 1A(1P)	20/18	2017 2018	Grass Pasture	50-0-0 50-0-0	0/0 0/0				50-0-0 50-0-0	20 40	 50-0-0(br)
SW6/Whitethorne 1B(N)	25/22	2017 2018	Grass Pasture	50-30-40 50-30-40	0/0 0/0				50-30-40 50-60-80	N/A N/A	 50-50-100(br)
SW9/Whitethorne 2(N)	25/20	2017 2018	Grass Pasture	50-30-50 50-30-50	0/0 0/0				50-30-50 50-60-100	N/A N/A	 50-50-100(br)
SW11/Whitethorne 3(N)	22/16	2017 2018	Hay/Pasture	120-70-120 120-80-160	0/1 0/0				120-70-120 120-150-280	N/A N/A	 120-100-100(br)

Tract: South West Fields **Location: Montgomery**

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
SW18/HOW-1 Past(N)	36/30	2017 2018	Grass Pasture	50-0-0 50-0-0	0/0 0/0				50-0-0 50-0-0	N/A N/A	 50-0-0(br)
SW24/HOW-2 Past(N)	24/20	2017 2018	Grass Pasture	50-30-40 50-30-40	0/0 0/0				50-30-40 50-60-80	N/A N/A	45-0-0(br) 50-50-100(br)
SW12/Heth A(N)	15/13	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-70-180 0-0-0 165-70-180 0-0-0	0/0 0/0 0/0 0/0				165-70-180 0-70-180 165-140-360 0-40-260	N/A N/A N/A N/A	40-0-0(ba) 125-0-0(sd) 40-100-100(ba) 125-0-0(sd)
SW13/Heth B(N)	26/22	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-70-180 0-0-0 165-70-180 0-0-0	0/0 0/0 0/0 0/0				165-70-180 0-70-180 165-140-360 0-40-260	N/A N/A N/A N/A	40-0-0(ba) 125-0-0(sd) 40-100-100(ba) 125-0-0(sd)
SW14/Heth C(1P)	16/14	2017 2018 	Corn (silage) Barley (cover) Corn (silage) Barley (cover)	165-0-180 0-0-0 165-0-180 0-0-0	0/0 0/0 0/0 0/0				165-0-180 0-0-180 165-0-360 0-0-160	94 94 188 188	40-0-0(ba) 125-0-0(sd) 40-0-200(ba) 125-0-0(sd)
SW4/Shuff Crop(N)	25/24	2017 2018	Fescue grass hay mt.	70-40-95 70-40-95	0/1 0/1	10.k Swine (Sp) 10.k Swine (Sp)	>7 >7	9-9-31 9-9-31	60-30-65 60-60-130	N/A N/A	55-0-0(br) 60-50-100(br)
SW1/Shuff Past(N)	35/11	2017 2018	Grass Pasture	50-30-0 50-30-0	0/0 0/0				50-30-0 50-60-0	N/A N/A	 50-50-0(br)
SW5/Whitethorne 1A(1P)	20/18	2017 2018	Grass Pasture	50-0-0 50-0-0	0/0 0/0				50-0-0 50-0-0	20 40	 50-0-0(br)
SW6/Whitethorne 1B(N)	25/22	2017 2018	Grass Pasture	50-30-40 50-30-40	0/0 0/0				50-30-40 50-60-80	N/A N/A	 50-50-100(br)
SW9/Whitethorne 2(N)	25/20	2017 2018	Grass Pasture	50-30-50 50-30-50	0/0 0/0				50-30-50 50-60-100	N/A N/A	 50-50-100(br)
SW11/Whitethorne 3(N)	22/16	2017 2018	Hay/Pasture	120-70-120 120-80-160	0/1 0/0				120-70-120 120-150-280	N/A N/A	 120-100-100(br)

Tract: Turkey Farm

Location: Montgomery

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)
T-3/T3(N)	12/11	2017 2018	Hay/Pasture	100-40-85 100-30-70	0/0 0/0				100-40-85 100-70-155	N/A N/A	 100-70-100(br)
T-4/T4(N)	10/10	2017 2018	Hay/Pasture	100-40-55 100-0-50	0/0 0/0				100-40-55 100-40-105	N/A N/A	 100-40-100(br)
T-7/T7(N)	9/9	2017 2018	Hay/Pasture	100-40-0 100-30-0	0/0 0/0				100-40-0 100-70-0	N/A N/A	 100-70-0(br)

Commercial Application Methods:
br - Broadcast ba - Banded sd - Sidedress
Notes:

Soil Test Summary and Lime Recommendation

Tract	Field	Acre	Date	P2O5	K2O	Lab	Soil pH	Lime Date	rec. lime tons/Ac
Heth Farm	HF 3	9	2016-Sp	M- (17 P lbs/acre)	M (109 K lbs/acre)	Virginia Tech	6.2	2017 fa	1.0
Heth Farm	HF 9a	6	2017-Sp	M- (19 P lbs/acre)	VH (340 K lbs/acre)	Virginia Tech	6.9	2017 fa	0
Heth Farm	HF 9b	12	2017-Sp	H+ (88 P lbs/acre)	VH (590 K lbs/acre)	Virginia Tech	6.7	2017 fa	0
Heth Farm	HF 9c	7	2017-Sp	H- (43 P lbs/acre)	VH (366 K lbs/acre)	Virginia Tech	6.1	2017 fa	1.0
Heth Farm	HF 18	16	2015-Sp	H- (49 P lbs/acre)	M (118 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Heth Farm	HF 21	19	2017-Sp	M (29 P lbs/acre)	M (137 K lbs/acre)	Virginia Tech	6.9	2017 fa	0
Heth Farm	HF 40	46	2015-Sp	L+ (12 P lbs/acre)	M (119 K lbs/acre)	Virginia Tech	6.2	2017 fa	1.0
Heth Farm	HF 54 Lower	27	2017-Sp	M (26 P lbs/acre)	M+ (155 K lbs/acre)	Virginia Tech	7.	2017 fa	0
Heth Farm	HF 54 Upper	30	2017-Sp	H- (38 P lbs/acre)	H (228 K lbs/acre)	Virginia Tech	7.3	2017 fa	0
Kentland Farm	Adams House	6	2016-Sp	H+ (88 P lbs/acre)	M (118 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Cemetery Alfalfa Strips	12	2016-Sp	M- (18 P lbs/acre)	M+ (157 K lbs/acre)	Virginia Tech	6.9	2017 fa	0
Kentland Farm	Cemetery Corn Strips	19	2015-Sp	M (21 P lbs/acre)	H- (195 K lbs/acre)	Virginia Tech	6.9	2017 fa	0
Kentland Farm	Cemetery Hay Borders	10	2017-Sp	H- (41 P lbs/acre)	VH (382 K lbs/acre)	Virginia Tech	7.	2017 fa	0
Kentland Farm	Dairy1	19	2016-Fa	H- (55 P lbs/acre)	VH (432 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Dairy2	10	2016-Fa	H+ (90 P lbs/acre)	VH (465 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Dairy3	13	2016-Fa	M (30 P lbs/acre)	M- (98 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Kentland Farm	Dairy4	10	2016-Fa	M+ (35 P lbs/acre)	M (147 K lbs/acre)	Virginia Tech	6.3	2017 fa	.5
Kentland Farm	Dwights	12	2016-Sp	H- (52 P lbs/acre)	M+ (169 K lbs/acre)	Virginia Tech	6.5	2017 fa	.5
Kentland Farm	Harlens	7	2016-Sp	M (24 P lbs/acre)	M+ (171 K lbs/acre)	Virginia Tech	7.3	2017 fa	0
Kentland Farm	Harlens Buffers	2	2016-Sp	M- (18 P lbs/acre)	H (218 K lbs/acre)	Virginia Tech	7.	2017 fa	0
Kentland Farm	Horse Past 1	13	2016-Sp	H (70 P lbs/acre)	H (244 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Kentland Farm	Horse Past 2	23	2016-Sp	M- (14 P lbs/acre)	H (269 K lbs/acre)	Virginia Tech	6.2	2017 fa	1.0
Kentland Farm	Horse Past 3	18	2016-Sp	M (26 P lbs/acre)	M+ (164 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Manor House	29	2016-Sp	VH (192 P lbs/acre)	M (122 K lbs/acre)	Virginia Tech	6.3	2017 fa	1.0
Kentland Farm	Manor House Front	4	2016-Sp	VH (243 P lbs/acre)	M- (80 K lbs/acre)	Virginia Tech	7.	2017 fa	0
Kentland Farm	Manor Parking	23	2016-Sp	H (67 P lbs/acre)	H (234 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Kentland Farm	Matt Crop Strip	25	2016-Sp	M+ (35 P lbs/acre)	H (249 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Matt Hay Strip	25	2016-Sp	M+ (35 P lbs/acre)	H (249 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Matt Hilltop	13	2015-Sp	M- (14 P lbs/acre)	M (146 K lbs/acre)	Virginia Tech	6.9	2017 fa	0
Kentland Farm	Orchard Past	15	2016-Sp	M (21 P lbs/acre)	M+ (166 K lbs/acre)	Virginia Tech	6.7	2017 fa	0
Kentland Farm	Pasture #1	33	2015-Sp	H (65 P lbs/acre)	VH (354 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Pasture #2	32	2015-Sp	H- (43 P lbs/acre)	H (233 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5

Kentland Farm	Pasture #3	32	2015-Sp	H- (37 P lbs/acre)	H (234 K lbs/acre)	Virginia Tech	6.7	2017 fa	0
Kentland Farm	Pasture #4	34	2016-Sp	H- (49 P lbs/acre)	H (273 K lbs/acre)	Virginia Tech	6.5	2017 fa	.5
Kentland Farm	Pasture #5	35	2015-Sp	H (76 P lbs/acre)	VH (342 K lbs/acre)	Virginia Tech	6.7	2017 fa	0
Kentland Farm	Pasture #6	30	2015-Sp	M- (16 P lbs/acre)	M (122 K lbs/acre)	Virginia Tech	6.2	2017 fa	1.0
Kentland Farm	Repro A	20	2015-Sp	M (27 P lbs/acre)	H+ (306 K lbs/acre)	Virginia Tech	6.3	2017 fa	.5
Kentland Farm	Repro B	20	2015-Sp	M (22 P lbs/acre)	H (215 K lbs/acre)	Virginia Tech	6.2	2017 fa	.5
Kentland Farm	Repro C	20	2015-Sp	M (26 P lbs/acre)	H- (195 K lbs/acre)	Virginia Tech	6.3	2017 fa	.5
Kentland Farm	Repro D	20	2015-Sp	M (23 P lbs/acre)	H- (187 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Reservoir Corn	6	2015-Sp	M (24 P lbs/acre)	M (111 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Kentland Farm	Showcase & Big Barn	15	2016-Sp	H- (44 P lbs/acre)	M- (78 K lbs/acre)	Virginia Tech	6.2	2017 fa	1.0
Kentland Farm	Silo	21	2016-Sp	M+ (31 P lbs/acre)	M- (99 K lbs/acre)	Virginia Tech	6.2	2017 fa	.5
Kentland Farm	Vaughts Past	15	2015-Sp	M (29 P lbs/acre)	H (226 K lbs/acre)	Virginia Tech	6.8	2017 fa	0
Moore	Fire Dept Crop Lower	12	2015-Sp	H- (38 P lbs/acre)	M- (91 K lbs/acre)	Virginia Tech	6.3	2017 fa	.5
Moore	Fire Dept Crop Upper	14	2015-Sp	H- (52 P lbs/acre)	H- (177 K lbs/acre)	Virginia Tech	7.2	2017 fa	0
Moore	Fire Dept Pst	29	2016-Sp	H- (53 P lbs/acre)	VH (411 K lbs/acre)	Virginia Tech	6.3	2017 fa	1.0
Moore	Observatory Pst	30	2016-Sp	H- (51 P lbs/acre)	VH (444 K lbs/acre)	Virginia Tech	7.1	2017 fa	0
Moore	Pasco crop strips	15	2015-Sp	M+ (33 P lbs/acre)	M (128 K lbs/acre)	Virginia Tech	6.5	2017 fa	.5
Moore	Pasco hay strips	25	2015-Sp	H- (38 P lbs/acre)	M+ (174 K lbs/acre)	Virginia Tech	7.2	2017 fa	0
Moore	Reynolds Past	25	2016-Sp	M (28 P lbs/acre)	VH (311 K lbs/acre)	Virginia Tech	6.5	2017 fa	.5
Plantation Road	Beef Barn	10	2016-Sp	H (83 P lbs/acre)	M+ (166 K lbs/acre)	Virginia Tech	6.7	2017 fa	0
Plantation Road	Bypass Crop	10	2015-Sp	H (61 P lbs/acre)	M (118 K lbs/acre)	Virginia Tech	7.2	2017 fa	0
Plantation Road	Bypss sheep pasture	9	2016-Sp	H (58 P lbs/acre)	M+ (165 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Plantation Road	Horse Ring	5	2016-Sp	H (58 P lbs/acre)	VH (430 K lbs/acre)	Virginia Tech	6.8	2017 fa	0
Plantation Road	New Barn Past	8	2016-Sp	H- (42 P lbs/acre)	VH (314 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Plantation Road	Piggry	18	2016-Sp	H+ (100 P lbs/acre)	H+ (289 K lbs/acre)	Virginia Tech	7.	2017 fa	0
Plantation Road	Sheep Past 1	25	2016-Sp	M+ (32 P lbs/acre)	H (225 K lbs/acre)	Virginia Tech	5.8	2017 fa	1.5
Price Farm	M&M	11	2015-Sp	H- (41 P lbs/acre)	M (116 K lbs/acre)	Virginia Tech	7.	2017 fa	0
Price Farm	McCauley	8	2016-Sp	M (24 P lbs/acre)	M+ (168 K lbs/acre)	Virginia Tech	7.1	2017 fa	0
Price Farm	Price Crop	14	2015-Sp	M- (18 P lbs/acre)	M (102 K lbs/acre)	Virginia Tech	6.8	2017 fa	0
Price Farm	Price Hay	12	2015-Sp	M+ (32 P lbs/acre)	H- (186 K lbs/acre)	Virginia Tech	6.9	2017 fa	0
Price Farm	Tower	9	2015-Sp	M+ (31 P lbs/acre)	M (101 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Saville	Crop 8	6	2015-Sp	M- (18 P lbs/acre)	H (247 K lbs/acre)	Virginia Tech	5.9	2017 fa	1.0
Saville	Crop 9	3	2015-Sp	M- (17 P lbs/acre)	M (115 K lbs/acre)	Virginia Tech	5.9	2017 fa	1.0
Saville	R1	4	2015-Sp	L (5 P lbs/acre)	M+ (155 K lbs/acre)	Virginia Tech	5.8	2017 fa	1.0
Saville	R2	3	2015-Sp	L (6 P lbs/acre)	H (234 K lbs/acre)	Virginia Tech	6.2	2017 fa	.5
Smithfield	Bike Path Pasture	7	2016-Sp	H (61 P lbs/acre)	H (230 K lbs/acre)	Virginia Tech	6.8	2017 fa	0
Smithfield	Horse Pasture	16	2016-Sp	H (66 P lbs/acre)	VH (533 K lbs/acre)	Virginia Tech	6.3	2017 fa	1.0
Smithfield	Lower Pasture	6	2016-Sp	H- (51 P lbs/acre)	H (222 K lbs/acre)	Virginia Tech	6.5	2017 fa	.5
Smithfield	Middle Pasture	25	2016-Sp	VH (126 P lbs/acre)	H+ (299 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Smithfield	Smithfield Exit	14	2016-Sp	M (29 P lbs/acre)	M+ (164 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Smithfield	Smithfield	12	2016-Sp	H- (38 P lbs/acre)	H- (204 K lbs/acre)	Virginia Tech	6.7	2017 fa	0

	Plantation								
Smithfield	Upper Pasture	10	2016-Sp	H (65 P lbs/acre)	H- (179 K lbs/acre)	Virginia Tech	6.3	2017 fa	.5
South West Fields	HOW-1 Past	30	2016-Sp	H- (50 P lbs/acre)	VH (439 K lbs/acre)	Virginia Tech	6.8	2017 fa	0
South West Fields	HOW-2 Past	20	2016-Sp	M+ (35 P lbs/acre)	M (134 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
South West Fields	Heth A	13	2016-Sp	H (62 P lbs/acre)	H- (210 K lbs/acre)	Virginia Tech	6.5	2017 fa	.5
South West Fields	Heth B	22	2015-Sp	H (77 P lbs/acre)	H- (179 K lbs/acre)	Virginia Tech	6.9	2017 fa	0
South West Fields	Heth C	14	2015-Sp	VH (122 P lbs/acre)	H- (185 K lbs/acre)	Virginia Tech	7.4	2017 fa	0
South West Fields	Shuff Crop	24	2016-Sp	H (79 P lbs/acre)	M (132 K lbs/acre)	Virginia Tech	7.1	2017 fa	0
South West Fields	Shuff Past	11	2016-Sp	M- (17 P lbs/acre)	H- (209 K lbs/acre)	Virginia Tech	5.8	2017 fa	1.5
South West Fields	Whitethorne 1A	18	2016-Sp	VH (113 P lbs/acre)	H (250 K lbs/acre)	Virginia Tech	7.2	2017 fa	0
South West Fields	Whitethorne 1B	22	2015-Sp	M (30 P lbs/acre)	M (120 K lbs/acre)	Virginia Tech	6.6	2017 fa	0
South West Fields	Whitethorne 2	20	2016-Sp	M+ (33 P lbs/acre)	M- (79 K lbs/acre)	Virginia Tech	6.7	2017 fa	0
South West Fields	Whitethorne 3	16	2015-Sp	M (27 P lbs/acre)	L+ (75 K lbs/acre)	Virginia Tech	6.5	2017 fa	.5
Turkey Farm	T3	11	2017-Sp	H- (46 P lbs/acre)	M+ (172 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5
Turkey Farm	T4	10	2017-Sp	H+ (106 P lbs/acre)	H (273 K lbs/acre)	Virginia Tech	6.4	2017 fa	.5
Turkey Farm	T7	9	2017-Sp	H- (39 P lbs/acre)	VH (387 K lbs/acre)	Virginia Tech	6.6	2017 fa	.5

Manure Spreading Summary

Please note that the seasons are broken down as the following: Wi = January through March; Sp = April through June; Su = July through September; Fa = October through December.

Season	Manure	Rate/ac	Tract	Field	Acres	Crop	Total in Field	Running Total
2017Fa	Swine Lagoon	10.0 kgals	Heth Farm	HF 3	9	Hay/Pasture	89 kgals	89 kgals
		10.0 kgals	Heth Farm	HF 9a	6	Hay/Pasture	60 kgals	149 kgals
		10.0 kgals	Heth Farm	HF 9b	12	Hay/Pasture	118 kgals	267 kgals
		10.0 kgals	Moore	Fire Dept Crop Lower	12	Orchard grass/fescue past	120 kgals	387 kgals
		10.0 kgals	Moore	Fire Dept Crop Upper	14	Orchard grass/fescue past	140 kgals	527 kgals
	Drystack Shed	10.0 tons	Heth Farm	HF 3	9	Hay/Pasture	89 tons	89 tons
		10.0 tons	Heth Farm	HF 40	46	Hay/Pasture	458 tons	547 tons
	Dairy Liquid	10.0 kgals	Kentland F	Cemetery Hay Borders	10	Fescue grass (hay), maint	100 kgals	100 kgals
		10.0 kgals	Kentland F	Dairy1 East	19	Fescue grass (hay), maint	191 kgals	291 kgals
		10.0 kgals	Kentland F	Dairy3 East	13	Fescue grass (hay), maint	131 kgals	422 kgals
		10.0 kgals	Price Farm	Price Crop	14	Wheat (silage)	141 kgals	563 kgals
		10.0 kgals	Price Farm	Tower	9	Wheat (silage)	93 kgals	656 kgals
	Dairy Sep Solids	10.0 tons	Kentland F	Pasture #6	30	Orchard grass/fescue past	300 tons	300 tons
		10.0 tons	Price Farm	M&M	11	Wheat (silage)	105 tons	405 tons
		10.0 tons	Price Farm	McCauley	8	Wheat (silage)	80 tons	485 tons
2017Sp	Swine Lagoon	10.0 kgals	Heth Farm	HF 21	19	Corn (silage)	187 kgals	187 kgals
		10.0 kgals	South West	Shuff Crop	24	Fescue grass (hay), maint	240 kgals	427 kgals
	Drystack Shed	10.0 tons	Heth Farm	HF 54 Upper	30	Corn (silage)	300 tons	300 tons
		10.0 tons	Smithfield	Smithfield Exit	14	Corn (silage)	143 tons	443 tons
		10.0 tons	Smithfield	Smithfield Plantatio	12	Corn (silage)	120 tons	563 tons
	Dairy Sep Solids	10.0 tons	Kentland F	Cemetery Alfalfa Str	12	Corn (silage)	120 tons	120 tons
		10.0 tons	Kentland F	Cemetery Corn Strips	19	Corn (silage)	190 tons	310 tons
		10.0 tons	Kentland F	Harlens	7	Corn (silage)	70 tons	380 tons
		10.0 tons	Kentland F	Horse Past 3	18	Corn (silage)	180 tons	560 tons
		10.0 tons	Kentland F	Matt Crop Strip	25	Corn (silage)	250 tons	810 tons
		10.0 tons	Kentland F	Matt Hilltop	13	Corn (silage)	130 tons	940 tons
		10.0 tons	Kentland F	Reservoir Corn	6	Corn (silage)	60 tons	1000 tons
		10.0 tons	Price Farm	Price Crop	14	Sorghum (silage)	141 tons	1141 tons
		10.0 tons	Price Farm	Tower	9	Sorghum (silage)	93 tons	1234 tons
	Dairy Liquid	10.0 kgals	Kentland F	Dairy3 East	13	Fescue grass (hay), maint	131 kgals	131 kgals
		10.0 kgals	Kentland F	Manor House Front	4	Fescue grass (hay), maint	40 kgals	171 kgals
		10.0 kgals	Price Farm	M&M	11	Sorghum (silage)	105 kgals	276 kgals
		10.0 kgals	Price Farm	McCauley	8	Sorghum (silage)	80 kgals	356 kgals
2017Su	Dairy Liquid	10.0 kgals	Kentland F	Cemetery Hay Borders	10	Fescue grass (hay), maint	100 kgals	100 kgals
		10.0 kgals	Kentland F	Manor Parking	23	Fescue grass (hay), maint	230 kgals	330 kgals
		10.0 kgals	Kentland F	Matt Hay Strip	25	Fescue grass (hay), maint	250 kgals	580 kgals
		10.0 kgals	Kentland F	Pasture #1	33	Orchard grass/fescue past	330 kgals	910 kgals
		10.0 kgals	Kentland F	Pasture #2	32	Orchard grass/fescue past	320 kgals	1230 kgals
		10.0 kgals	Kentland F	Pasture #3	32	Orchard grass/fescue past	320 kgals	1550 kgals
		10.0 kgals	Kentland F	Repro A	20	Orchard grass/fescue past	200 kgals	1750 kgals
		10.0 kgals	Kentland F	Repro D	20	Orchard grass/fescue past	200 kgals	1950 kgals

Season	Manure	Rate/ac	Tract	Field	Acres	Crop	Total in Field	Running Total
2018Fa	Swine Lagoon	10.0 kgals	Heth Farm	HF 3	9	Hay/Pasture	89 kgals	89 kgals
		10.0 kgals	Heth Farm	HF 9a	6	Hay/Pasture	60 kgals	149 kgals
		10.0 kgals	Heth Farm	HF 9b	12	Hay/Pasture	118 kgals	267 kgals
		10.0 kgals	Moore	Fire Dept Crop Lower	12	Orchard grass/fescue past	120 kgals	387 kgals
		10.0 kgals	Moore	Fire Dept Crop Upper	14	Orchard grass/fescue past	140 kgals	527 kgals

	Drystack Shed	10.0 tons	Heth Farm	HF 3	9	Hay/Pasture	89 tons	89 tons
		10.0 tons	Heth Farm	HF 40	46	Hay/Pasture	458 tons	547 tons
	Dairy Liquid	10.0 kgals	Kentland F	Cemetery Hay Borders	10	Fescue grass (hay), maint	100 kgals	100 kgals
		10.0 kgals	Kentland F	Dairy1 East	19	Fescue grass (hay), maint	191 kgals	291 kgals
		10.0 kgals	Kentland F	Dairy3 East	13	Fescue grass (hay), maint	131 kgals	422 kgals
		10.0 kgals	Price Farm	Price Crop	14	Wheat (silage)	141 kgals	563 kgals
		10.0 kgals	Price Farm	Tower	9	Wheat (silage)	93 kgals	656 kgals
	Dairy Sep Solids	10.0 tons	Kentland F	Pasture #6	30	Orchard grass/fescue past	300 tons	300 tons
		10.0 tons	Price Farm	M&M	11	Wheat (silage)	105 tons	405 tons
		10.0 tons	Price Farm	McCauley	8	Wheat (silage)	80 tons	485 tons
2018Sp	Dairy Sep Solids	10.0 tons	Heth Farm	HF 18	16	Corn (silage)	162 tons	162 tons
		10.0 tons	Heth Farm	HF 21	19	Corn (silage)	187 tons	349 tons
		10.0 tons	Kentland F	Cemetery Alfalfa Str	12	Corn (silage)	120 tons	469 tons
		10.0 tons	Kentland F	Cemetery Corn Strips	19	Corn (silage)	190 tons	659 tons
		10.0 tons	Kentland F	Dairy1 East	19	Fescue grass (hay), maint	191 tons	850 tons
		10.0 tons	Kentland F	Harlens	7	Corn (silage)	70 tons	920 tons
		10.0 tons	Kentland F	Horse Past 3	18	Corn (silage)	180 tons	1100 tons
		10.0 tons	Kentland F	Matt Crop Strip	25	Corn (silage)	250 tons	1350 tons
		10.0 tons	Kentland F	Matt Hilltop	13	Corn (silage)	130 tons	1480 tons
		10.0 tons	Kentland F	Reservoir Corn	6	Corn (silage)	60 tons	1540 tons
		10.0 tons	Price Farm	Price Crop	14	Sorghum-sudan, millet, su	141 tons	1681 tons
		10.0 tons	Price Farm	Tower	9	Sorghum-sudan, millet, su	93 tons	1774 tons
	Swine Lagoon	10.0 kgals	Heth Farm	HF 21	19	Corn (silage)	187 kgals	187 kgals
		10.0 kgals	South West	Shuff Crop	24	Fescue grass (hay), maint	240 kgals	427 kgals
	Drystack Shed	10.0 tons	Heth Farm	HF 54 Upper	30	Corn (silage)	300 tons	300 tons
		10.0 tons	Smithfield	Smithfield Exit	14	Corn (silage)	143 tons	443 tons
		10.0 tons	Smithfield	Smithfield Plantatio	12	Corn (silage)	120 tons	563 tons
	Dairy Liquid	10.0 kgals	Kentland F	Dairy3 East	13	Fescue grass (hay), maint	131 kgals	131 kgals
		10.0 kgals	Kentland F	Manor House Front	4	Fescue grass (hay), maint	40 kgals	171 kgals
		10.0 kgals	Price Farm	M&M	11	Sorghum-sudan, millet, su	105 kgals	276 kgals
		10.0 kgals	Price Farm	McCauley	8	Sorghum-sudan, millet, su	80 kgals	356 kgals
2018Su	Dairy Liquid	10.0 kgals	Kentland F	Cemetery Hay Borders	10	Fescue grass (hay), maint	100 kgals	100 kgals
		10.0 kgals	Kentland F	Manor Parking	23	Fescue grass (hay), maint	230 kgals	330 kgals
		10.0 kgals	Kentland F	Matt Hay Strip	25	Fescue grass (hay), maint	250 kgals	580 kgals
		10.0 kgals	Kentland F	Pasture #1	33	Orchard grass/fescue past	330 kgals	910 kgals
		10.0 kgals	Kentland F	Pasture #2	32	Orchard grass/fescue past	320 kgals	1230 kgals
		10.0 kgals	Kentland F	Pasture #3	32	Orchard grass/fescue past	320 kgals	1550 kgals
		10.0 kgals	Kentland F	Repro B	20	Orchard grass/fescue past	200 kgals	1750 kgals
		10.0 kgals	Kentland F	Repro C	20	Orchard grass/fescue past	200 kgals	1950 kgals

Estimated Mass of Manure Applied to Land vs Nutman Estimate of Production by Season and Year

Season of Application	Manure Type Dairy Separated Solids (Pad & Lisa Barn) (Total Tons)	Dry Stack (Pad + A&PS) (Total Tons)	Dairy Separated Liquids (Total Kgal)	Swine (Total Kgal)
Fall 2017	485	547	656	527
Sp 2018	1774	563	356	427
Su 2018	0	0	1950	0
Fa 2018	485	547	656	527
Estimated land application per qtr based on past applications	564.75	277.5	740.5	238.5
Nutman estimate of production per qtr	585	284	750	244
Estimated land manure application per 1 year based on past applications	2259	1110	2962	954
Nutman estimate of production per 1 yr	2342	1136	3000	975
Estimated land manure application For 5 quarters based on past applications	2824	1388	3703	1193
Nutman estimate of production For 5 quarters	2925	1420	3750	1220

Manure Production Summary

Animal Waste Average

Kentland Dairy Separated Liquid lbs/gal	Date Test	Am N	TKN	P_2O_5	K_2O
	Fall 2015	0.92	1.42	0.36	2.10
Average		0.92	1.42	0.36	2.10
Dairy Separated Solids lbs/ton					
	Winter 2016	0.60	5.76	1.59	1.15
	Spring 2016	1.40	11.00	0.93	0.90
	Spring 2017	1.80	10.88	5.96	14.41
Average		1.27	9.21	2.83	5.49
Dry Stack Barn lbs/ton					
	Spring 2016	3.00	13.64	5	3.78
	Spring 2017	0.80	11.31	7.83	12.96
Average		1.90	12.47	6.41	8.37
Swine Liquid lb/gal					
	Spring 2013	1.8	2.3	0.7	2.6
	Spring 2014	1.0	1.3	0.6	1.3
	Winter 2016	1.5	2.2	0.9	4.0
	Spring 2017	1.2	1.8	1.5	4.5
Average		1.4	1.9	0.9	3.1

Drystack Shed Manure off Plantation Road

The VT dry stack barn consists of manure which is trucked in from the various VT barns (Dairy, horse, beef, sheep and poultry) and consists of mainly spent hay, sawdust bedding, manure and waste feed. Dairy separated soild dairy manure, which tends to hold more water, is hauled and folded into the drier manure to encourage composting.

Manure Storage Capacity: 700 tons

Beef Cattle: 650
Other: 815
Turkey Hen: 2000
Poultry: 1000
Dairy Cow: 44

Manure Analysis:

TKN: 12.47
P2O5: 6.41
NH4: 1.9
K2O: 8.39

Plant Available Nutrients:

Immediate Incorporation:
4.30 lbs N
6.41 lbs P2O5
8.39 lbs K2O

Surface Applied:
3.54 lbs N
6.41 lbs P2O5
8.39 lbs K2O

Residual N:
yr 1: 1.27 lbs
yr 2: .53 lbs
yr 3: .21 lbs

Manure Production

Dec-Feb	284
Mar-May	284
Jun-Aug	284
Sep-Nov	284

Total Produced: 1136/yr

Solid Manure Production Calculation Details

Production [tons/yr] = (# confined)[animals] * (avg. wt) [animal-lbs/animal] * (prod factor)[lbs-manure/day/K-animal-lbs] * (0.001)[K-animal-lbs/animal-lb] * (365)[days/yr] * (1/2000)[tons/lbs-manure]

Group Name	Animal	%(#) confined	avg wt	prod factor	produced
Beef Manure	Beef Cattle	2(10)	1000.	60.	107
Horse	Other	57(37)	1000.	45.	304
Sheep Center	Other	9(68)	100.	40.	49
Dairy Solids	Dairy Cow	100(44)	1000.	82.	658

Poultry Manure Production Calculation Details

production[tons/yr] = (# confined)[birds] * (# cycles)[cycles] * (prod factor)[tons/cycle/K-bird] * (0.001)[K-bird/bird]

Group Name	animal	%(#) confined	avg wt	prod factor	produced
Turkey Litter	Turkey Hen	100(2000)	4.00	1.25	12.5
Chicken Litter	Poultry	100(1000)	0.00	1.	5.

Kentland Dairy Liquid Manure

The flexible dual tank system receives the separated liquid manure from the weeping wall system. The two tanks (2,000 kgal each) can be switched from primary to secondary as needed. The primary holds a gradient of cleaner water at the top that drains into the secondary tank. The secondary tank provides flush water for the barns and must remain at least half full to recharge that flush system.

Animal Summary
Dairy Cow: 269 (Maximum number, but usually between 225-240)

Manure Storage Capacity: 4000. kgals

Manure Analysis:
- TKN: 1.42
- P2O5: .36
- NH4: .92
- K2O: 2.1

Plant Available Nutrients:
- Immediate Incorporation:
  - 1.00 lbs N
  - .36 lbs P2O5
  - 2.10 lbs K2O
- Surface Applied:
  - .59 lbs N
  - .36 lbs P2O5
  - 2.10 lbs K2O
- Residual N:
  - yr 1: .06 lbs
  - yr 2: .03 lbs
  - yr 3: .01 lbs

Manure Production

Dec-Feb	750
Mar-May	750
Jun-Aug	750
Sep-Nov	750

Total Produced: 2999/yr

Liquid Manure Production Details

production [kgal/yr] = (# confined)[animals] * (avg wt)[animal-lbs/animal] * (prod factor)[gal/yr/animal-lb] * (0.001)[kgal/gal] + (# confined)[animals] * (waste-water)[gal/day/animal] * (365)[day/yr] * (0.001)[kgal/gal]

Group Name	animal type	%(#) confined	avg wt	prod factor	waste water	production
Dairy Cow	Dairy Cow	100(269)	1400.0	3.65	13.0	2651.0

Net Precipitation Excess

NPE [kgal/yr] = {precip (37.[in/yr]) - evap (34.[in/yr])} * pit/lagoon factor (0.3) * surface area (20857.[sq-ft]) * (1/12)[ft/in] * (7.48)[gal/cu-ft] * (0.001)[kgal/gal] = 348.42[kgal/yr]

Kentland Separated Solid Manure

The dairy separating weeping wall system consists of three cells that are cleaned out about every 21 days. 300-400 tons are removed from the pad every three months to the town dry stack, Lisa barn or corn fields in the spring. The separated solids will be applied to only silage production lands until production of a more uniform and stable product can be attained.

Manure Name: Dairy Sep Solids

Animal Summary
Dairy Cow: 225 (see note for cow numbers for dairy liquid)

Manure Analysis:
TKN: 9.21
P2O5: 2.83
NH4: 1.27
K2O: 5.49

Plant Available Nutrients:
Immediate Incorporation:
3.92 lbs N
2.83 lbs P2O5
5.49 lbs K2O
Surface Applied:
3.41 lbs N
2.83 lbs P2O5
5.49 lbs K2O
Residual N:
yr 1: .95 lbs
yr 2: .40 lbs
yr 3: .16 lbs

Manure Production

Dec-Feb	585
Mar-May	585
Jun-Aug	585
Sep-Nov	585

Total Produced: 2342/yr

Solid Manure Production Calculation Details
Production [tons/yr] = (# confined)[animals] * (avg. wt) [animal-lbs/animal] * (prod factor)[lbs-manure/day/K-animal-lbs] * (0.001)[K-animal-lbs/animal-lb] * (365)[days/yr] * (1/2000)[tons/lbs-manure]

Group Name	Animal	%(#) confined	avg wt	prod factor	produced
Dairy Cow	Dairy Cow	100(225)	1050.	52.	2242

Swine Center Manure

Manure Name: Swine Lagoon

Animal Summary
Swine: 65

Manure Storage Capacity: 800. kgals

Manure Analysis:
- *TKN: 1.9*
- *P2O5: .9*
- *NH4: 1.4*
- *K2O: 3.1*

Plant Available Nutrients:
- *Immediate Incorporation:*
  - *1.51 lbs N*
  - *.90 lbs P2O5*
  - *3.10 lbs K2O*
- *Surface Applied:*
  - *.88 lbs N*
  - *.90 lbs P2O5*
  - *3.10 lbs K2O*
- *Residual N:*
  - *yr 1: .06 lbs*
  - *yr 2: .03 lbs*
  - *yr 3: .01 lbs*

Manure Production

Dec-Feb	*244*
Mar-May	*244*
Jun-Aug	*244*
Sep-Nov	*244*

Total Produced: 975

Liquid Manure Production Details
*production [kgal/yr] = (# confined)[animals] * (avg wt)[animal-lbs/animal] * (prod factor)[gal/yr/animal-lb] * (0.001)[kgal/gal] + (# confined)[animals] * (waste-water)[gal/day/animal] * (365)[day/yr] * (0.001)[kgal/gal]*

Group Name	animal type	%(#) confined	avg wt	prod factor	waste water	production
Swine Lagoon	Swine	100(65)	375.0	4.0	26.0	714.4

Animal Waste Reports

Swine Liquid

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Agricultural Service Laboratory
LAB No. 40734 Clemson University

SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1001703
DATE 04/25/2013
JODANIEL@VT.EDU
CONSULTANT JODY DANIELS

SAMPLE NO. VTSWINE
MANURE: SWINE - LIQUID INTEGRATOR: STORAGE: LAGOON

----------RESULTS REPORTED ON AN AS-SAMPLED BASIS----------

ANALYST				lbs/1000gal
pj	Ammonium Nitrogen	0.022	%	1.84
pj	Total Nitrogen	0.027	%	2.25
	INCORPORATED AVAILABLE NITROGEN ESTIMATE			1.86
	SURFACE AVAILABLE NITROGEN ESTIMATE			1.03
dw/km	Phosphorus as P2O5	0.0082	%	0.69
dw/km	Potassium as K2O	0.0315	%	2.62
dw/km	Calcium	0.0061	%	0.51
dw/km	Magnesium	0.0034	%	0.28
	Sulfur	0.0016	%	0.13
	Zinc	0.25	ppm	0.00
	Copper	1.13	ppm	0.01
	Manganese	0.26	ppm	0.00
	Sodium	55.34	ppm	0.46
	Aluminum	0.73	ppm	0.01
jp	Moisture	99.78	%	

A N I M A L W A S T E A N A L Y S I S R E P O R T
Agricultural Service Laboratory
LAB No. 60886 Clemson University

SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1002115
DATE 06/12/2014

PREPAID

SAMPLE NO. VTSWINE MANURE: SWINE STORAGE: LAGOON

----------RESULTS REPORTED ON AN AS-SAMPLED BASIS----------

				lbs/1000gal
	Ammonium Nitrogen	0.013	%	1.08
	Organic Nitrogen	0.002	%	0.17
	TOTAL KJELDAHL NITROGEN	0.015	%	1.25
	INCORPORATED AVAILABLE NITROGEN ESTIMATE			0.97
	SURFACE AVAILABLE NITROGEN ESTIMATE			0.64
	Phosphorus as P2O5	0.0069	%	0.57
	Potassium as K2O	0.0158	%	1.32
	Calcium	0.0082	%	0.68
	Magnesium	0.0038	%	0.32
	Sulfur	0.0010	%	0.08
	Zinc	0.26	ppm	0.00
	Copper	0.18	ppm	0.00
	Manganese	2.18	ppm	0.02
	Sodium	29.22	ppm	0.24
	Moisture	99.98	%	

ANIMAL WASTE ANALYSIS REPORT

Agricultural Service Laboratory

LAB No. 30324 Clemson University

SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1001703
DATE 03/08/2017
JODANIEL@VT.EDU
CONSULTANT JODY DANIELS

SAMPLE NO. SWINE000
MANURE: SWINE - LIQUID INTEGRATOR: STORAGE: LAGOON

----------RESULTS REPORTED ON AN AS-SAMPLED BASIS----------

ANALYST				lbs/1000gal
pj	Ammonium Nitrogen	0.014	%	1.17
pj	Total Nitrogen	0.021	%	1.75
	INCORPORATED AVAILABLE NITROGEN ESTIMATE			1.34
	SURFACE AVAILABLE NITROGEN ESTIMATE			0.82
dw/sa	Phosphorus as P2O5	0.0176	%	1.47
dw/sa	Potassium as K2O	0.0540	%	4.50
dw/sa	Calcium	0.0087	%	0.73
dw/sa	Magnesium	0.0068	%	0.57
	Sulfur	0.0027	%	0.23
	Zinc	0.53	ppm	0.00
	Copper	0.19	ppm	0.00
	Manganese	0.90	ppm	0.01
	Sodium	93.91	ppm	0.78
	Aluminum	11.22	ppm	0.09
dw	Moisture	99.92	%	

ANIMAL WASTE ANALYSIS REPORT

Agricultural Service Laboratory

LAB No. 20213 Clemson University

SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG SC 24060

ACCOUNT 1002115
DATE 02/05/2016

PREPAID

SAMPLE NO. SWINE-15 MANURE: OTHER STORAGE: LAGOON

----------RESULTS REPORTED ON AN AS-SAMPLED BASIS----------

				lbs/1000gal
	Ammonium Nitrogen	0.018	%	1.50
	Organic Nitrogen	0.008	%	0.67
	TOTAL KJELDAHL NITROGEN	0.026	%	2.17
	INCORPORATED AVAILABLE NITROGEN ESTIMATE			1.60
	SURFACE AVAILABLE NITROGEN ESTIMATE			1.15
	Phosphorus as P2O5	0.0108	%	0.90
	Potassium as K2O	0.0484	%	4.04
	Calcium	0.0107	%	0.89
	Magnesium	0.0052	%	0.43
	Sulfur	0.0022	%	0.18
	Zinc	1.17	ppm	0.01
	Copper	0.13	ppm	0.00
	Manganese	0.24	ppm	0.00
	Sodium	94.74	ppm	0.79
	Moisture	99.86	%	

Dry Stack Barn- Combination of beef, horse, sheep and poultry -

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BLACKSBURG VA 24060

ACCOUNT 1002312
DATE 06/16/2016
JODANIEL@VT.EDU

SAMPLE NO. TOWNDRY MANURE: OTHER STORAGE: COVERED
----------RESULTS REPORTED ON AN AS-SAMPLED BASIS----------

			lbs/ton
Ammonium Nitrogen	0.15	%	3.00
Organic Nitrogen	0.53	%	10.64
INCORPORATED AVAILABLE NITROGEN ESTIMATE			8.78
SURFACE AVAILABLE NITROGEN ESTIMATE			7.88
Phosphorus as P2O5	0.25	%	5.00
Potassium as K2O	0.19	%	3.78
Calcium	0.86	%	17.26
Magnesium	0.26	%	5.12
Sulfur	0.05	%	1.09
Zinc	36.15	ppm	0.07
Copper	6.82	ppm	0.01
Manganese	43.32	ppm	0.09
Sodium	151.44	ppm	0.30
Moisture	65.89	%	

INCORPORATED PLANT AVAILABLE NITROGEN ESTIMATE - 80% of ammonium-N, 60% of organic-N, and 100% of nitrate-N (if determined). Assumes the manure will be incorporated into the soil within hours of application. Assumes some loss of ammonium-N during application and prior to incorporation.

SURFACE PLANT AVAILABLE NITROGEN ESTIMATE - 50% of ammonium-N, 60% of organic-N, and 100% of nitrate-N (if determined). Assumes the manure will be left on the surface of the soil with no incorporation by plowing or irrigation.

Available nitrogen calculations are estimates and if nitrate-N was not requested the amount of available nitrogen may be slightly more than reported. Also, the actual amount may be more or less than the estimate depending on the composition of the manure, soil type, and environmental conditions.

All of the potash in the animal waste should be plant available in the first year of application. Although not all of the phosphorous is available in the first year, its availability should be comparable to that in commercial fertilizers.

The rate of animal waste to apply for crop production is dependent on the nutrient content of the waste, method of application and incorporation, soil test, crop to be grown, and previous manure applications. In most cases, the plant available nitrogen content of the waste is used to determine the rate of application.

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Agricultural Service Laboratory
LAB No. 50726 Clemson University

SAVILE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1002317
DATE 05/15/2017
JODANIEL@VT.EDU

SAMPLE NO. DRYTOWN0 MANURE: DAIRY, SOLID STORAGE: COVERED
----------RESULTS REPORTED ON AN AS-SAMPLED BASIS----------

			lbs/ton
Ammonium Nitrogen	0.04	%	0.80
Organic Nitrogen	0.53	%	10.51
INCORPORATED AVAILABLE NITROGEN ESTIMATE			6.94
SURFACE AVAILABLE NITROGEN ESTIMATE			6.70
Phosphorus as P2O5	0.39	%	7.83
Potassium as K2O	0.65	%	12.96
Calcium	0.87	%	17.35
Magnesium	0.45	%	9.09
Sulfur	0.10	%	2.08
Zinc	58.38	ppm	0.12
Copper	17.93	ppm	0.04
Manganese	138.86	ppm	0.28
Sodium	475.79	ppm	0.95
Moisture	58.30	%	

INCORPORATED PLANT AVAILABLE NITROGEN ESTIMATE - 80% of ammonium-N, 60% of organic-N, and 100% of nitrate-N (if determined). Assumes the manure will be incorporated into the soil within hours of application. Assumes some loss of ammonium-N during application and prior to incorporation.

SURFACE PLANT AVAILABLE NITROGEN ESTIMATE - 50% of ammonium-N, 60% of organic-N, and 100% of nitrate-N (if determined). Assumes the manure will be left on the surface of the soil with no incorporation by plowing or irrigation.

Available nitrogen calculations are estimates and if nitrate-N was not requested the amount of available nitrogen may be slightly more than reported. Also, the actual amount may be more or less than the estimate depending on the composition of the manure, soil type, and environmental conditions.

All of the potash in the animal waste should be plant available in the first year of application. Although not all of the phosphorous is available in the first year, its availability should be comparable to that in commercial fertilizers.

The rate of animal waste to apply for crop production is dependent on the nutrient content of the waste, method of application and incorporation, soil test, crop to be grown, and previous manure applications. In most cases, the plant available nitrogen content of the waste is used to determine the rate of application.

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Kentland Dairy Separated Liquid - Fall 2015

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Agricultural Service Laboratory
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SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1001703
DATE 02/05/2016
JODANIEL@VT.EDU
CONSULTANT JODY DANIELS

SAMPLE NO. DAIRYLIQ
MANURE: DAIRY, LIQUID INTEGRATOR: STORAGE: HOLDING PIT

RESULTS REPORTED ON AN AS-SAMPLED BASIS

ANALYST				lbs/1000gal
pj	Ammonium Nitrogen	0.011	%	0.92
pj	Total Nitrogen	0.017	%	1.42
	INCORPORATED AVAILABLE NITROGEN ESTIMATE			0.86
	SURFACE AVAILABLE NITROGEN ESTIMATE			0.40
dw/km	Phosphorus as P2O5	0.0044	%	0.36
dw/km	Potassium as K2O	0.0252	%	2.10
dw/km	Calcium	0.0083	%	0.69
dw/km	Magnesium	0.0060	%	0.50
	Sulfur	0.0010	%	0.08
	Zinc	0.55	ppm	0.00
	Copper	0.18	ppm	0.00
	Manganese	0.57	ppm	0.00
	Sodium	41.53	ppm	0.35
	Aluminum	3.89	ppm	0.03
jp	Moisture	99.94	%	

INCORPORATED PLANT AVAILABLE NITROGEN ESTIMATE - 75% of ammonium-N and 35% of organic-N. Assumes the manure will be incorporated into the soil within hours of application. Assumes some loss of ammonium-N during application and prior to incorporation.

SURFACE PLANT AVAILABLE NITROGEN ESTIMATE - 25% of ammonium-N and 35% of organic-N. Assumes the manure will be left on the surface of the soil with no incorporation by plowing or irrigation.

All of the potash in the animal waste should be plant available in the first year of application. Although not all of the phosphorous is available in the first year, its availability should be comparable to that in commercial fertilizers.

The rate of animal waste to apply for crop production is dependent on the nutrient content of the waste, method of application and incorporation, soil test, crop to be grown, and previous manure applications. In most cases, the plant available nitrogen content of the waste is used to determine the rate of application.

APPROVED BY _____

Analysis performed in accordance with Clemson Laboratory Manure Analysis procedures, February, 2004.

Manure analysis in Virginia is funded by the Dept. of Conservation and, Recreation, Div. of Soil and Water Conservation.

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Kentland Dairy Separated Solids

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SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1001703
DATE 02/05/2016
JODANIEL@VT.EDU
CONSULTANT JODY DANIELS

SAMPLE NO. DAIRYSOL
MANURE: DAIRY, SOLID INTEGRATOR: STORAGE: UNCOVERED

RESULTS REPORTED ON AN AS-SAMPLED BASIS

ANALYST				lbs/ton
pj	Ammonium Nitrogen	0.03	%	0.60
pj	Total Nitrogen	0.29	%	5.76
	INCORPORATED AVAILABLE NITROGEN ESTIMATE			2.26
	SURFACE AVAILABLE NITROGEN ESTIMATE			1.96
dw/km	Phosphorus as P2O5	0.08	%	1.59
dw/km	Potassium as K2O	0.06	%	1.15
dw/km	Calcium	0.12	%	2.34
dw/km	Magnesium	0.03	%	0.56
	Sulfur	0.03	%	0.69
	Zinc	26.01	ppm	0.05
	Copper	9.54	ppm	0.02
	Manganese	13.44	ppm	0.03
	Sodium	102.94	ppm	0.21
	Aluminum	237.74	ppm	0.48
jp	Moisture	78.33	%	

INCORPORATED PLANT AVAILABLE NITROGEN ESTIMATE - 75% of ammonium-N and 35% of organic-N. Assumes the manure will be incorporated into the soil within hours of application. Assumes some loss of ammonium-N during application and prior to incorporation.

SURFACE PLANT AVAILABLE NITROGEN ESTIMATE - 25% of ammonium-N and 35% of organic-N. Assumes the manure will be left on the surface of the soil with no incorporation by plowing or irrigation.

All of the potash in the animal waste should be plant available in the first year of application. Although not all of the phosphorous is available in the first year, its availability should be comparable to that in commercial fertilizers.

The rate of animal waste to apply for crop production is dependent on the nutrient content of the waste, method of application and incorporation, soil test, crop to be grown, and previous manure applications. In most cases, the plant available nitrogen content of the waste is used to determine the rate of application.

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SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1002312
DATE 06/16/2016
JODANIEL@VT.EDU

SAMPLE NO. DAIRYDRY MANURE: DAIRY, SOLID STORAGE: UNCOVERED

RESULTS REPORTED ON AN AS-SAMPLED BASIS

			lbs/ton
Ammonium Nitrogen	0.07	%	1.40
Organic Nitrogen	0.48	%	9.60
INCORPORATED AVAILABLE NITROGEN ESTIMATE			6.88
SURFACE AVAILABLE NITROGEN ESTIMATE			6.46
Phosphorus as P2O5	0.05	%	0.93
Potassium as K2O	0.04	%	0.90
Calcium	0.08	%	1.69
Magnesium	0.03	%	0.54
Sulfur	0.02	%	0.34
Zinc	16.56	ppm	0.03
Copper	5.74	ppm	0.01
Manganese	9.12	ppm	0.02
Sodium	66.22	ppm	0.13
Moisture	66.21	%	

INCORPORATED PLANT AVAILABLE NITROGEN ESTIMATE - 80% of ammonium-N, 60% of organic-N, and 100% of nitrate-N (if determined). Assumes the manure will be incorporated into the soil within hours of application. Assumes some loss of ammonium-N during application and prior to incorporation.

SURFACE PLANT AVAILABLE NITROGEN ESTIMATE - 50% of ammonium-N, 60% of organic-N, and 100% of nitrate-N (if determined). Assumes the manure will be left on the surface of the soil with no incorporation by plowing or irrigation.

Available nitrogen calculations are estimates and if nitrate-N was not requested the amount of available nitrogen may be slightly more than reported. Also, the actual amount may be more or less than the estimate depending on the composition of the manure, soil type, and environmental conditions.

All of the potash in the animal waste should be plant available in the first year of application. Although not all of the phosphorous is available in the first year, its availability should be comparable to that in commercial fertilizers.

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Agricultural Service Laboratory

LAB No. 50725 Clemson University

SAVILLE, BROOKS
1020 OLD MILL RD
BLACKSBURG VA 24060

ACCOUNT 1001703
DATE 05/15/2017
JODANIEL@VT.EDU
CONSULTANT JODY DANIELS

SAMPLE NO. LISABARN
MANURE: DAIRY, SOLID INTEGRATOR: STORAGE: COVERED

RESULTS REPORTED ON AN AS-SAMPLED BASIS

ANALYST				lbs/ton
pj	Ammonium Nitrogen	0.09	%	1.80
pj	Total Nitrogen	0.54	%	10.88
	INCORPORATED AVAILABLE NITROGEN ESTIMATE			4.53
	SURFACE AVAILABLE NITROGEN ESTIMATE			3.63
dw/sa	Phosphorus as P2O5	0.30	%	5.96
dw/sa	Potassium as K2O	0.72	%	14.41
dw/sa	Calcium	2.38	%	47.63
dw/sa	Magnesium	1.51	%	30.11
	Sulfur	0.07	%	1.41
	Zinc	25.68	ppm	0.05
	Copper	13.72	ppm	0.03
	Manganese	68.59	ppm	0.14
	Sodium	274.72	ppm	0.55
	Aluminum	2013.79	ppm	4.03
dw	Moisture	64.82	%	

INCORPORATED PLANT AVAILABLE NITROGEN ESTIMATE - 75% of ammonium-N and 35% of organic-N. Assumes the manure will be incorporated into the soil within hours of application. Assumes some loss of ammonium-N during application and prior to incorporation.

SURFACE PLANT AVAILABLE NITROGEN ESTIMATE - 25% of ammonium-N and 35% of organic-N. Assumes the manure will be left on the surface of the soil with no incorporation by plowing or irrigation.

All of the potash in the animal waste should be plant available in the first year of application. Although not all of the phosphorous is available in the first year, its availability should be comparable to that in commercial fertilizers.

The rate of animal waste to apply for crop production is dependent on the nutrient content of the waste, method of application and incorporation, soil test, crop to be grown, and previous manure applications. In most cases, the plant available nitrogen content of the waste is used to determine the rate of application.

APPROVED BY _____

Analysis performed in accordance with Clemson Laboratory Manure Analysis procedures, February, 2004.

Manure analysis in Virginia is funded by the Dept. of Conservation and, Recreation, Div. of Soil and Water Conservation.

Soil Productivity Summary

Tract Name	Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
Dairy	D15	Crumpacker P	9	Groseclose	IIb	I	I	II	
	D17	Crumpacker W	7	Groseclose	IIb	I	I	II	
	D19c	Resch Past 1	7	Groseclose	IIIb	II	III	III	
	D19b	Resch Past 2	7	Berks	IIIb	II	III	II	Shallow soil, Flood plain
	D19a	Resch Past 3	6	WEAVER	IIb	II	II	II	Shallow soil, High Slope,
Heth Farm	H3	HF 3	9	Groseclose	IIb	I	I	II	
	9a	HF 9a	6	Groseclose	IIb	I	I	II	
	9b	HF 9b	12	Groseclose	IIb	I	I	II	
	9c	HF 9c	7	Groseclose	IIb	I	I	II	
	H8	HF 18	16	Groseclose	IIb	I	I	II	
	H4	HF 21	19	Groseclose	IIb	I	I	II	
	H2	HF 40	46	Groseclose	IIb	I	I	II	
	H7a	HF 54 Lower	27	Groseclose	IIb	I	I	II	
	H7b	HF 54 Upper	30	Groseclose	IIb	I	I	II	
Kentland Farm	Knew11	Adams House	6	Hayter	IIb	I	III	II	
	K65a	Cemetery Alf	12	Unison	IIIa	I	II	II	
	K65b	Cemetery Cor	19	Unison	IIb	I	III	II	
	K65c	Cemetery Hay	10	Unison	IIIa	I	II	II	
	Dairy1	Dairy East 1	19	Hayter	IIb	I	II	II	
	Dairy2	Dairy East 2*	10	Hayter	IIIb	II	III	III	Shallow soil, High Slope
	Dairy3	DairyEast 3	13	Hayter	IIb	I	III	II	
	Dairy4	DairyEast 4	10	Unison	IIb	II	III	II	
	K1	Dwights	12	Hayter	IIb	I	III	II	
	K25a-b	Hagoods	10	ROSS	Ib	I	II	II	
	K51a	Harlens	7	Unison	IIb	I	II	II	
	K51b	Harlens Buff	2	Unison	IIb	I	III	II	
	K9	Horse Past 1	13	ROSS	IIb	I	II	II	
	K13	Horse Past 2	23	Guernsey	IIIa	I	II	II	
	K12	Horse Past 3	18	Unison	IIIa	II	III	II	Shallow soil, High Slope
	K83	Manor House*	29	Unison	IIIa	I	II	II	Sink holes
	K62	Manor House	4	Unison	IIb	I	III	II	
	K82	Manor Parkin	23	Unison	IIb	I	III	II	
	K67c	Matt Crop St	25	Unison	IIIa	II	III	III	High Slope, Sink holes
	K67b	Matt Hay Str	25	Unison	IIIa	II	III	III	High Slope, Sink holes
	K67a	Matt Hilltop	13	Unison	IIb	I	III	II	Sink holes
	K46	Orchard Past	15	Unison	IIIa	II	III	III	High Slope

	K36	Pasture #1*	33	Unison	IIb	I	III	II	High Slope, Sink holes
	K37	Pasture #2*	32	Unison	IIIa	I	II	II	High Slope, Sink holes
	K38	Pasture #3*	32	Unison	IIb	I	II	II	High Slope, Sink holes
	K39	Pasture #4*	34	Unison	IIIa	II	III	III	High Slope, Sink holes
	K40	Pasture #5*	35	Unison	IIIa	II	III	II	Shallow soil, High Slope,
	K41	Pasture #6*	30	Unison	IIIa	II	III	III	Shallow soil, High Slope
	K70	Repro A*	20	Unison	IIIa	II	III	III	High Slope, Sink holes
	K73	Repro B*	20	Unison	IIIa	II	III	III	High Slope, Sink holes
	K76	Repro C*	20	Unison	IIIa	II	III	III	High Slope, Sink holes
	K79	Repro D*	20	Unison	IIIa	II	III	III	High Slope, Sink holes
	K54	Reservoir Co	6	Unison	IIIb	II	III	III	
	K55a	Showcase & B	15	Unison	IIIa	II	III	III	
	K16	Silo*	21	Unison	IIIb	II	III	III	Sink holes
	K14	Vaughts Past	15	Unison	IIb	I	III	II	
Moore	M13b	Fire Dept Cr	12	Groseclose	IIb	I	I	II	
	M13a	Fire Dept Cr	14	Groseclose	IIb	I	I	II	
	M9c-f	Fire Dept Ps	29	Groseclose	IIIb	II	II	III	Shallow soil, High Slope
	M17-20	Observatory	30	Groseclose	IIIa	II	II	II	Shallow soil, High Slope
	M23b	Pasco crop s	15	Groseclose	IIIa	II	II	II	
	M23a	Pasco hay st	25	Groseclose	IIIa	II	II	II	
	M9a-b,1	Reynolds Pas	25	Groseclose	IVa	II	II	III	Shallow soil, High Slope
Plantation R	PR21	Beef Barn	10	Duffield	IIIa	II	II	II	
	PR3	Bypass Crop	10	Groseclose	IIb	I	I	II	
	PR24	Bypss sheep	9	Groseclose	IIIb	II	II	III	
	PR19	Horse Ring	5	Groseclose	IIIa	II	II	II	
	PR60-61	New Barn Pas	8	Duffield	IIIa	II	III	III	
	PR1	Piggry corn	8	Groseclose	IIIa	II	II	II	
	PR2	Piggry hay #	10	Groseclose	IIIa	II	II	II	
	PR42	Sheep Past 1	25	Groseclose	IIIa	II	II	II	
Price Farm	P6	M&M	11	Groseclose	IIIa	I	I	II	
	P-5	McCauley	8	Groseclose	IIb	I	I	II	
	P1a	Price Crop*	14	Duffield	IIIb	II	III	III	Shallow soil, High Slope
	P1b	Price Hay*	12	Duffield	IIIb	II	III	III	Shallow soil, High Slope
	P3	Tower	9	Groseclose	IIIa	I	II	II	
Saville	0	Crop 8*	6	Groseclose	IIIb	II	II	III	Shallow soil, High Slope
	0	Crop 9*	3	Groseclose	IIIb	II	II	III	Shallow soil, High Slope
	0	R1	4	Groseclose	IIb	I	I	II	
	0	R2	3	Groseclose	IIb	I	I	II	
Smithfield	SM7	Bike Path Pa	7	Guernsey	IIIb	III	III	IV	
	SM13-15	Horse Pastur	16	Guernsey	IIIb	III	III	IV	
	SM8	Lower Pastur	6	Duffield	IIb	II	II	II	
	SM9, 11	Middle Pastu	25	Groseclose	IIb	I	I	II	
	SM1	Smithfield E	14	Duffield	IIb	II	II	II	

	SM3	Smithfield P	12	Guernsey	IIIa	II	II	III	
	SM10	Upper Pastur	10	Groseclose	IIIa	I	II	II	
South West F	SW18	HOW-1 Past	30	Groseclose	IVa	III	III	IV	
	SW24	HOW-2 Past*	20	WEAVER	IIIb	III	III	III	Shallow soil, High Slope
	SW12	Heth A	13	Groseclose	IIb	I	I	II	
	SW13	Heth B	22	Groseclose	IIb	I	I	II	
	SW14	Heth C	14	Groseclose	IIb	I	I	II	
	SW4	Shuff Crop	24	Groseclose	IIIa	II	II	III	
	SW1	Shuff Past*	11	Berks	IVb	IV	Not Suited	IV	Shallow soil, High Slope
	SW5	Whitethorne	18	Groseclose	IIb	I	I	II	
	SW6	Whitethorne	22	Groseclose	IIIb	II	II	III	
	SW9	Whitethorne	20	Groseclose	IVa	II	II	III	Shallow soil, High Slope,
	SW11	Whitethorne	16	Groseclose	IIIa	I	I	II	
Turkey Farm	T-3	T3*	11	Berks	IIIb	II	III	III	Shallow soil, High Slope
	T-4	T4*	10	Berks	IIIb	II	III	III	Shallow soil, High Slope
	T-7	T7*	9	Berks	IIIb	II	III	III	Shallow soil, High Slope

* Do not apply manure or biosolids more than 30 days prior to planting. Apply commercial fertilizer nitrogen to row crops in split spring applicaions.

Yield Range

Field Productivity Group	**Corn Grain Bu/Acre**	**Barley/Intensive Wheat Bu/Acre**	**Std. Wheat Bu/Acre**	**Alfalfa Tons/Acre**	**Grass/Hay Tons/Acre**
I	>170	>80	>64	>6	>4.0
II	150-170	70-80	56-64	4-6	3.5-4.0
III	130-150	60-70	48-56	<4	3.0-3.5
IV	100-130	50-60	40-48	NA	<3.0
V	<100	<50	<40	NA	NA

Farm Summary

Plan: **VA Tech Farm** **September 2017 - December 2018**
Farm Name: **VA Tech Farm**
Location: Montgomery
Specialist: Jody N. Booze-Daniels
N-based Acres: 1358.1
P-based Acres: 89.8
Tract Name: **Heth Farm**
FSA Number: none
Location: Montgomery
Field Name: **HF 3**
Total Acres: 8.90 Usable Acres: 8.90
FSA Number: H3
Tract: Heth Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K		Lab
Sp-2013	6.2	M-(13 P lbs/acre)	M(101 K lbs/acre)		Virginia Tech	
Sp-2016	6.2	M-(17 P lbs/acre)	M(109 K lbs/acre)		Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
10	11C	Duffield Ernest
50	16C	Groseclose Poplimento
40	16B	Groseclose Poplimento

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	2.5 ton	Hay/Pasture - No Till
2015-Sp	2.5 ton	Hay/Pasture - No Till
2016-Sp	2.5 * ton	Hay/Pasture - No Till
2018-Sp	2.5 * ton	Hay/Pasture - No Till

Field Name: **HF 9a**
Total Acres: 13.80 Usable Acres: 6.00
FSA Number: 9a
Tract: Heth Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K		Lab
Wi-2014	7.6	L(7 P lbs/acre)	M(113 K lbs/acre)		Virginia Tech	
Sp-2017	6.9	M-(19 P lbs/acre)	VH(340 K lbs/acre)		Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
65	16B	Groseclose Poplimento
35	16C	Groseclose Poplimento

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	2.5 ton	Hay/Pasture - No Till
2015-Sp	2.5 ton	Hay/Pasture - No Till
2016-Sp	2.5 ton	Hay/Pasture - No Till
2018-Sp	2.5 ton	Hay/Pasture - No Till

Field Name: **HF 9b**

Total Acres: 11.80 Usable Acres: 11.80
FSA Number: 9b
Tract: Heth Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-2014	6.0	L+(10 P lbs/acre)	M+(172 K lbs/acre)		Virginia Tech
Sp-2017	6.7	H+(88 P lbs/acre)	VH(590 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
57	16B	Groseclose Poplimento
43	16C	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	2.5 ton	Hay/Pasture - No Till
2015-Sp	2.5 ton	Hay/Pasture - No Till
2016-Sp	2.5 ton	Hay/Pasture - No Till
2018-Sp	2.5 ton	Hay/Pasture - No Till

Field Name: **HF 9c**

Total Acres: 8.10 Usable Acres: 7.00
FSA Number: 9c
Tract: Heth Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-2014	6.0	L+(10 P lbs/acre)	M+(172 K lbs/acre)		Virginia Tech
Sp-2017	6.1	H-(43 P lbs/acre)	VH(366 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	16B	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	2.5 ton	Hay/Pasture - No Till
2015-Sp	2.5 ton	Hay/Pasture - No Till
2016-Sp	2.5 ton	Hay/Pasture - No Till
2018-Sp	2.5 ton	Hay/Pasture - No Till

Field Name: **HF 18**

Total Acres: 16.20 Usable Acres: 16.20
FSA Number: H8
Tract: Heth Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	6.4	L+(9 P lbs/acre)	M-(85 K lbs/acre)		Virginia Tech
Wi-2012	6.8	M-(18 P lbs/acre)	H(244 K lbs/acre)		Virginia Tech

Sp-2015	6.6	H-(49 P lbs/acre)	M(118 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES	
50	16C	Groseclose	Poplimento
40	16B	Groseclose	Poplimento
10	11C	Duffield	Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	22.4 * tons	Corn (silage) - No Till
2014-Fa	0.0	Barley (cover) - No Till
2015-Sp	22.4 * tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	22.4 * tons	Corn (silage) - No Till
2016-Fa	0.0	Wheat (cover) - Tilled
2017-Sp	22.4 * tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.4 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **HF 21**

Total Acres: 18.70 Usable Acres: 18.70
FSA Number: H4
Tract: Heth Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-2011	5.9	L+(9 P lbs/acre)	L+(66 K lbs/acre)		Virginia Tech
Sp-2014	6.8	M(21 P lbs/acre)	M(117 K lbs/acre)		Virginia Tech
Sp-2017	6.9	M(29 P lbs/acre)	M(137 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES	
10	11C	Duffield	Ernest
50	16C	Groseclose	Poplimento
40	16B	Groseclose	Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.4 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	22.4 tons	Corn (silage) - No Till
2016-Fa	0.0	Wheat (cover) - Tilled
2017-Sp	22.4 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.4 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **HF 40**

Total Acres: 45.80 Usable Acres: 45.80
FSA Number: H2
Tract: Heth Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	6.1	L(8 P lbs/acre)	L+(70 K lbs/acre)		Virginia Tech
Wi-2012	6.7	L+(10 P lbs/acre)	M-(98 K lbs/acre)		Virginia Tech
Sp-2015	6.2	L+(12 P lbs/acre)	M(119 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES	
50	16C	Groseclose	Poplimento

	40	16B	Groseclose Poplimento
	10	11C	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	2.5 ton	Hay/Pasture - No Till
2015-Sp	2.5 ton	Hay/Pasture - No Till
2016-Sp	2.5 ton	Hay/Pasture - No Till
2018-Sp	2.5 ton	Hay/Pasture - No Till

Field Name: **HF 54 Lower**

Total Acres: 27.00 Usable Acres: 27.00
FSA Number: H7a
Tract: Heth Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	6.7	M(27 P lbs/acre)	H-(179 K lbs/acre)		Virginia Tech
Sp-2011	6.9	M(27 P lbs/acre)	H-(181 K lbs/acre)		Virginia Tech
Sp-2014	6.8	M-(15 P lbs/acre)	M(105 K lbs/acre)		Virginia Tech
Sp-2017	7.0	M(26 P lbs/acre)	M+(155 K lbs/acre)		Virginia Tech

Soils:

	PERCENT	SYMBOL	SOIL SERIES
	10	11C	Duffield Ernest
	50	16C	Groseclose Poplimento
	40	16B	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	6.6 tons	Alfalfa (hay), estab. - No Till
2015-Sp	6.6 tons	Alfalfa (hay), maint. - No Till
2016-Sp	6.6 tons	Alfalfa (hay), maint. - No Till
2017-Sp	6.6 tons	Alfalfa (hay), maint. - No Till
2018-Sp	6.6 tons	Alfalfa (hay), maint. - No Till

Field Name: **HF 54 Upper**

Total Acres: 30.00 Usable Acres: 30.00
FSA Number: H7b
Tract: Heth Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	6.7	M(27 P lbs/acre)	H-(179 K lbs/acre)		Virginia Tech
Sp-2011	7.4	H-(44 P lbs/acre)	H(269 K lbs/acre)		Virginia Tech
Sp-2014	7.0	M-(18 P lbs/acre)	M(149 K lbs/acre)		Virginia Tech
Sp-2017	7.3	H-(38 P lbs/acre)	H(228 K lbs/acre)		Virginia Tech

Soils:

	PERCENT	SYMBOL	SOIL SERIES
	50	16C	Groseclose Poplimento
	40	16B	Groseclose Poplimento
	10	11C	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.4 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	22.4 tons	Corn (silage) - No Till
2016-Fa	0.0	Wheat (cover) - Tilled
2017-Sp	22.4 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled

2018-Sp	22.4 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Tract Name: **Kentland Farm**
FSA Number: none
Location: Montgomery

***Field Name*:** **Adams House**
Total Acres: 6.00 Usable Acres: 6.00
FSA Number: Knew11
Tract: entland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: B
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2004	6.5	VH(270 P lbs/acre)	VH(400 K lbs/acre)		Virginia Tech
Sp-2007	6.5	H+(105 P lbs/acre)	H(233 K lbs/acre)		Virginia Tech
Sp-2010	6.5	H(59 P lbs/acre)	H(211 K lbs/acre)		Virginia Tech
Sp-2013	6.5	H(73 P lbs/acre)	H(270 K lbs/acre)		Virginia Tech
Sp-2016	6.4	H+(88 P lbs/acre)	M(118 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
70	20B	Hayter
20	19B	Guernsey
10	11B	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till

***Field Name*:** **Cemetery Alfalfa Strips**
Total Acres: 12.00 Usable Acres: 12.00
FSA Number: K65a
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.4	M-(13 P lbs/acre)	M(127 K lbs/acre)		Virginia Tech
Sp-2010	7.0	L(7 P lbs/acre)	L(45 K lbs/acre)		Virginia Tech
Sp-2013	7.1	L+(11 P lbs/acre)	M(137 K lbs/acre)		Virginia Tech
Sp-2016	6.9	M-(18 P lbs/acre)	M+(157 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	30B	Braddock Unison
30	31C	Braddock Unison
25	30C	Braddock Unison
15	19B	Guernsey

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	21.5 tons	Corn (silage) - No Till
2015-Fa	13.2 tons	Wheat (silage) - Tilled
2016-Sp	3.3 tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	13.2 tons	Wheat (silage) - Tilled
2017-Sp	21.5 * tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	21.5 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

***Field Name*:** **Cemetery Corn Strips**

Total Acres: 19.00 Usable Acres: 19.00
FSA Number: K65b
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.5	M(58 P lbs/acre)	H(295 K lbs/acre)		Virginia Tech
Sp-2006	6.6	M-(17 P lbs/acre)	H(239 K lbs/acre)		Virginia Tech
Sp-2009	6.8	L+(11 P lbs/acre)	M(143 K lbs/acre)		Virginia Tech
Wi-2012	6.6	M-(14 P lbs/acre)	H-(183 K lbs/acre)		Virginia Tech
Sp-2015	6.9	M(21 P lbs/acre)	H-(195 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	30C	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.5 tons	Corn (silage) - No Till
2015-Fa	13.2 tons	Wheat (silage) - Tilled
2016-Sp	3.5 tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	13.2 tons	Wheat (silage) - Tilled
2017-Sp	22.5 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.5 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

***Field Name*: Cemetery Hay Borders**
Total Acres: 10.00 Usable Acres: 10.00
FSA Number: K65c
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2005	6.7	M-(37 P lbs/acre)	H(295 K lbs/acre)		Virginia Tech
Sp-2008	7.0	M(24 P lbs/acre)	H(268 K lbs/acre)		Virginia Tech
Wi-2011	7.2	M-(19 P lbs/acre)	H(231 K lbs/acre)		Virginia Tech
Sp-2014	7.0	M-(16 P lbs/acre)	M+(155 K lbs/acre)		Virginia Tech
Sp-2017	7.0	H-(41 P lbs/acre)	VH(382 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	30B	Braddock Unison
30	31C	Braddock Unison
25	30C	Braddock Unison
15	19B	Guernsey

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.3 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.3 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.3 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.3 tons	Fescue grass (hay), maint. - No Till

***Field Name*: Dairy1 East**
Total Acres: 19.10 Usable Acres: 19.10
FSA Number: 84
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Fa-2016	6.4	H-(55 P lbs/acre)	VH(432 K lbs/acre)	Virginia Tech	

Soils:

	PERCENT	SYMBOL	SOIL SERIES
	40	30B	Braddock Unison
	30	21C	Hayter
	4	20B	Hayter
	26	19B	Guernsey

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.5 tons	Fescue grass (hay), maint. - No Till

Field Name: **Dairy2 East**
Total Acres: 9.63 Usable Acres: 9.63
FSA Number: 85
Tract: Kentland Farm
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Fa-2016	6.4	H+(90 P lbs/acre)	VH(465 K lbs/acre)	Virginia Tech	

Soils:

	PERCENT	SYMBOL	SOIL SERIES
	10	30B	Braddock Unison
	6	30C	Braddock Unison
	19	30D	Braddock Unison
	25	34E	Caneyville Wurno
	11	20B	Hayter
	29	21C	Hayter

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over ractured or limestone bedrock Soils with pecrent slope in excess of 15%*
Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.0 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.0 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.0 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.0 tons	Fescue grass (hay), maint. - No Till

Field Name: **Dairy3 East**
Total Acres: 13.14 Usable Acres: 13.14
FSA Number: 86
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Fa-2016	6.6	M(30 P lbs/acre)	M-(98 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES	
23	30B	Braddock Unison	
30	30C	Braddock Unison	
47	20B	Hayter	

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.5 tons	Fescue grass (hay), maint. - No Till

***Field Name*:** **Dairy4 East**

Total Acres: 10.40 Usable Acres: 10.40
FSA Number: 87
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2016	6.3	M+(35 P lbs/acre)	M(147 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES	
49	30C	Braddock Unison	
33	30B	Braddock Unison	
18	30D	Braddock Unison	

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till

***Field Name*:** **Dwights**

Total Acres: 12.00 Usable Acres: 12.00
FSA Number: Knew4
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: B
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.0	H-(48 P lbs/acre)	H-(178 K lbs/acre)	Virginia Tech	
Sp-2009	6.6	H-(37 P lbs/acre)	M(140 K lbs/acre)	Virginia Tech	
Sp-2010	6.5	M(29 P lbs/acre)	M(113 K lbs/acre)	Virginia Tech	
Sp-2013	6.4	H-(44 P lbs/acre)	H(219 K lbs/acre)	Virginia Tech	
Sp-2016	6.5	H-(52 P lbs/acre)	M+(169 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES	
100	20B	Hayter	

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.5 tons	Corn (silage) - No Till
2015-Fa	14.0 tons	Wheat (silage) - Tilled
2016-Sp	3.5 tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	0.0	Wheat (cover) - Tilled
2017-Sp	22.5 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.5 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

***Field Name*:** **Harlens**

Total Acres: 7.00 Usable Acres: 7.00
FSA Number: K51a
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.2	M(24 P lbs/acre)	H(212 K lbs/acre)		Virginia Tech
Sp-2009	6.7	L(8 P lbs/acre)	M-(91 K lbs/acre)		Virginia Tech
Sp-2010	6.4	M(28 P lbs/acre)	M+(164 K lbs/acre)		Virginia Tech
Sp-2013	6.9	M(21 P lbs/acre)	M+(165 K lbs/acre)		Virginia Tech
Sp-2016	7.3	M(24 P lbs/acre)	M+(171 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	30C	Braddock Unison
30	30B	Braddock Unison
8	31C	Braddock Unison
15	19B	Guernsey
7	30D	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.1 tons	Corn (silage) - No Till
2015-Fa	13.3 tons	Wheat (silage) - Tilled
2016-Sp	3.4 * tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	13.3 tons	Wheat (silage) - Tilled
2017-Sp	22.1 * tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.1 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

***Field Name*: Harlens Buffers**
Total Acres: 2.00 Usable Acres: 2.00
FSA Number: K51b
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.3	M-(19 P lbs/acre)	H(214 K lbs/acre)		Virginia Tech
Sp-2010	6.9	L+(10 P lbs/acre)	M(116 K lbs/acre)		Virginia Tech
Sp-2013	6.7	M-(20 P lbs/acre)	M(132 K lbs/acre)		Virginia Tech
Sp-2016	7.0	M-(18 P lbs/acre)	H(218 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	30C	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.5 tons	Fescue grass (hay), maint. - No Till

***Field Name*: Horse Past 1**
Total Acres: 15.00 Usable Acres: 13.00
FSA Number: K9
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: C
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2007	6.8	H(59 P lbs/acre)	H+(297 K lbs/acre)		Virginia Tech
Sp-2010	6.2	H-(56 P lbs/acre)	M(143 K lbs/acre)		Virginia Tech
Sp-2013	6.7	H(62 P lbs/acre)	H(219 K lbs/acre)		Virginia Tech
Sp-2016	6.6	H(70 P lbs/acre)	H(244 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
25	28A	ROSS
25	20B	Hayter
20	19B	Guernsey
20	3E	Berks Lowell Rayne
10	11C	Duffield Ernest

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.5 * tons	Fescue grass (hay), maint. - No Till

Field Name: **Horse Past 2**
Total Acres: 25.00 Usable Acres: 23.00
FSA Number: K13
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: C
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2007	6.6	M(30 P lbs/acre)	H-(195 K lbs/acre)		Virginia Tech
Sp-2010	6.7	L+(11 P lbs/acre)	M-(78 K lbs/acre)		Virginia Tech
Sp-2013	6.7	M(29 P lbs/acre)	M+(166 K lbs/acre)		Virginia Tech
Sp-2016	6.2	M-(14 P lbs/acre)	H(269 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
60	19B	Guernsey
25	20B	Hayter
10	8E	Caneyville Opequon
5	25A	MCGARY PURDY

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.2 tons	Fescue grass (hay), maint. - No Till

Field Name: **Horse Past 3**
Total Acres: 18.00 Usable Acres: 18.00
FSA Number: K12
Tract: Kentland Farm
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2007	6.5	M-(18 P lbs/acre)	H-(186 K lbs/acre)	Virginia Tech	
Sp-2010	6.0	M-(14 P lbs/acre)	M-(77 K lbs/acre)	Virginia Tech	
Sp-2013	6.4	M-(20 P lbs/acre)	M+(154 K lbs/acre)	Virginia Tech	
Sp-2016	6.4	M(26 P lbs/acre)	M+(164 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
65	30C	Braddock Unison
20	30D	Braddock Unison
15	8E	Caneyville Opequon

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with perent slope in excess of 15%*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.2 tons	Orchard grass (hay), maint. - No Till
2016-Sp	3.2 tons	Orchard grass (hay), maint. - No Till
2017-Sp	21.4 * tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	21.4 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Manor House**

Total Acres: 29.00 Usable Acres: 29.00
FSA Number: K83
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
P-based(1.0)
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.4	H-(53 P lbs/acre)	H(240 K lbs/acre)	Virginia Tech	
Sp-2010	6.8	M-(20 P lbs/acre)	H(222 K lbs/acre)	Virginia Tech	
Sp-2013	6.7	M+(32 P lbs/acre)	H(212 K lbs/acre)	Virginia Tech	
Sp-2016	6.3	VH(192 P lbs/acre)	M(122 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	30B	Braddock Unison
25	19B	Guernsey
35	31C	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Sink holes*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	21.3 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	21.3 tons	Corn (silage) - No Till
2016-Fa	13.3 * tons	Wheat (silage) - Tilled
2017-Sp	21.3 tons	Corn (silage) - Tilled
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	21.3 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Manor House Front**

Total Acres: 4.00 Usable Acres: 4.00
FSA Number: K62
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
P-based(1.0)
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2008	6.9	H-(46 P lbs/acre)	M+(164 K lbs/acre)	Virginia Tech	
Sp-2010	7.4	H+(105 P lbs/acre)	M-(91 K lbs/acre)	Virginia Tech	
Sp-2013	6.4	H+(89 P lbs/acre)	M+(157 K lbs/acre)	Virginia Tech	
Sp-2016	7.0	VH(243 P lbs/acre)	M-(80 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	30B	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.5 tons	Fescue grass (hay), maint. - No Till

Field Name: **Manor Parking**

Total Acres: 23.00 Usable Acres: 23.00
FSA Number: K82
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2004	6.4	H-(104 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech	
Sp-2007	6.3	M(23 P lbs/acre)	M(134 K lbs/acre)	Virginia Tech	
Sp-2010	6.2	M-(13 P lbs/acre)	L+(65 K lbs/acre)	Virginia Tech	
Sp-2013	6.7	M+(34 P lbs/acre)	M(147 K lbs/acre)	Virginia Tech	
Sp-2016	6.6	H(67 P lbs/acre)	H(234 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	30B	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.5 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.5 tons	Fescue grass (hay), maint. - No Till

Field Name: **Matt Crop Strip**

Total Acres: 25.00 Usable Acres: 25.00
FSA Number: 67c
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2016	6.4	M+(35 P lbs/acre)	H(249 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
35	31C	Braddock Unison
35	30C	Braddock Unison
30	30D	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	20.6 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	20.6 tons	Corn (silage) - No Till
2016-Fa	0.0	Barley (cover) - No Till
2017-Sp	19.5 tons	Corn (silage) - Tilled
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	20.6 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Matt Hay Strip**

Total Acres: 25.00 Usable Acres: 25.00

FSA Number: K67b
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.3	M(22 P lbs/acre)	H(254 K lbs/acre)		Virginia Tech
Sp-2010	6.6	M-(19 P lbs/acre)	M+(170 K lbs/acre)		Virginia Tech
Sp-2013	6.6	H-(41 P lbs/acre)	M+(151 K lbs/acre)		Virginia Tech
Sp-2016	6.4	M+(35 P lbs/acre)	H(249 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	30D	Braddock Unison
35	30C	Braddock Unison
35	31C	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes
Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.2 * tons	Fescue grass (hay), maint. - No Till

Field Name: **Matt Hilltop**
Total Acres: 14.00 Usable Acres: 13.00
FSA Number: K67a
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.7	M-(15 P lbs/acre)	H-(197 K lbs/acre)		Virginia Tech
Sp-2009	6.7	L+(11 P lbs/acre)	M-(85 K lbs/acre)		Virginia Tech
Wi-2012	6.7	L+(9 P lbs/acre)	M+(152 K lbs/acre)		Virginia Tech
Sp-2015	6.9	M-(14 P lbs/acre)	M(146 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	30C	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes
Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.5 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	22.5 tons	Corn (silage) - No Till
2016-Fa	0.0	Barley (cover) - No Till
2017-Sp	21.2 tons	Corn (silage) - Tilled
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.5 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Orchard Past**
Total Acres: 30.00 Usable Acres: 15.00
FSA Number: K46
Tract: Kentland Farm
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.3	M-(14 P lbs/acre)	M(147 K lbs/acre)		Virginia Tech
Sp-2010	6.4	M-(13 P lbs/acre)	M+(174 K lbs/acre)		Virginia Tech
Sp-2013	6.2	M-(17 P lbs/acre)	M+(164 K lbs/acre)		Virginia Tech
Sp-2016	6.7	M(21 P lbs/acre)	M+(166 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	30D	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.2 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.2 tons	Fescue grass (hay), maint. - No Till

Field Name: **Pasture #1**
Total Acres: 35.00 Usable Acres: 33.00
FSA Number: K36
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.8	M(58 P lbs/acre)	M+(196 K lbs/acre)		Virginia Tech
Sp-2006	6.7	M(22 P lbs/acre)	H-(192 K lbs/acre)		Virginia Tech
Sp-2009	6.7	M-(16 P lbs/acre)	M(106 K lbs/acre)		Virginia Tech
Wi-2012	6.4	H-(39 P lbs/acre)	H(242 K lbs/acre)		Virginia Tech
Sp-2015	6.4	H(65 P lbs/acre)	VH(354 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
85	30C	Braddock Unison
15	30D	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Pasture #2**
Total Acres: 35.00 Usable Acres: 32.00
FSA Number: K37
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.8	M-(37 P lbs/acre)	H(295 K lbs/acre)		Virginia Tech
Sp-2006	6.2	H-(40 P lbs/acre)	H(240 K lbs/acre)		Virginia Tech

Sp-2009	6.0	M-(13 P lbs/acre)	M-(89 K lbs/acre)	Virginia Tech
Wi-2012	6.2	M(27 P lbs/acre)	H-(184 K lbs/acre)	Virginia Tech
Sp-2015	6.4	H-(43 P lbs/acre)	H(233 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	30C	Braddock Unison
15	19B	Guernsey
35	30D	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Pasture #3**

Total Acres:	35.00	Usable Acres:	32.00
FSA Number:	K38		
Tract:	Kentland Farm		
Location:	Montgomery		
Slope Class:	C	Hydrologic Group:	D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.8	H-(104 P lbs/acre)	M(151 K lbs/acre)	Virginia Tech	
Sp-2006	6.8	M(24 P lbs/acre)	M+(154 K lbs/acre)	Virginia Tech	
Sp-2009	6.3	M-(17 P lbs/acre)	M-(83 K lbs/acre)	Virginia Tech	
Wi-2012	6.4	M(28 P lbs/acre)	H-(183 K lbs/acre)	Virginia Tech	
Sp-2015	6.7	H-(37 P lbs/acre)	H(234 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	30C	Braddock Unison
30	30D	Braddock Unison
30	19B	Guernsey

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.3 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Pasture #4**

Total Acres:	35.00	Usable Acres:	34.00
FSA Number:	K39		
Tract:	Kentland Farm		
Location:	Montgomery		
Slope Class:	C	Hydrologic Group:	D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.1	H-(40 P lbs/acre)	M+(169 K lbs/acre)	Virginia Tech	
Sp-2009	6.0	M-(15 P lbs/acre)	L+(66 K lbs/acre)	Virginia Tech	
Sp-2010	6.1	M(24 P lbs/acre)	M-(87 K lbs/acre)	Virginia Tech	
Sp-2013	6.6	H-(38 P lbs/acre)	H(213 K lbs/acre)	Virginia Tech	
Sp-2016	6.5	H-(49 P lbs/acre)	H(273 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	30C	Braddock Unison

20	25A	MCGARY PURDY
15	30D	Braddock Unison
15	19B	Guernsey
10	30B	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	3.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	3.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	3.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Pasture #5**

Total Acres: 40.00 Usable Acres: 35.00
FSA Number: K40
Tract: Kentland Farm
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.0	M+(31 P lbs/acre)	M+(162 K lbs/acre)	Virginia Tech	
Sp-2009	6.6	M(28 P lbs/acre)	M-(92 K lbs/acre)	Virginia Tech	
Wi-2012	6.7	M-(13 P lbs/acre)	M(135 K lbs/acre)	Virginia Tech	
Sp-2015	6.7	H(76 P lbs/acre)	VH(342 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
35	30C	Braddock Unison
25	3E	Berks Lowell Rayne
15	19B	Guernsey
25	30D	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Pasture #6**

Total Acres: 35.00 Usable Acres: 30.00
FSA Number: K41
Tract: Kentland Farm
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.9	H-(104 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2006	6.3	M(22 P lbs/acre)	H-(195 K lbs/acre)	Virginia Tech	
Sp-2009	6.5	L+(11 P lbs/acre)	M(133 K lbs/acre)	Virginia Tech	
Wi-2012	6.6	M-(20 P lbs/acre)	M+(163 K lbs/acre)	Virginia Tech	
Sp-2015	6.2	M-(16 P lbs/acre)	M(122 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
60	30D	Braddock Unison
30	30C	Braddock Unison
10	3E	Berks Lowell Rayne

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located overured or limestone bedrock*

Soils with perent slope in excess of 15%

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Repro A**

Total Acres: 20.00 Usable Acres: 20.00
FSA Number: K70
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-1999	5.5	H-(104 P lbs/acre)	H-(232 K lbs/acre)	Virginia Tech	
Fa-2002	7.0	H+(224 P lbs/acre)	H+(356 K lbs/acre)	Virginia Tech	
Sp-2006	6.4	M+(31 P lbs/acre)	H-(192 K lbs/acre)	Virginia Tech	
Sp-2009	6.4	H-(47 P lbs/acre)	H-(182 K lbs/acre)	Virginia Tech	
Wi-2012	6.7	H-(44 P lbs/acre)	VH(340 K lbs/acre)	Virginia Tech	
Sp-2015	6.3	M(27 P lbs/acre)	H+(306 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	30C	Braddock Unison
20	30D	Braddock Unison
40	31C	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Repro B**

Total Acres: 20.00 Usable Acres: 20.00
FSA Number: K73
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.2	H(161 P lbs/acre)	H+(356 K lbs/acre)	Virginia Tech	
Sp-2006	6.3	M+(34 P lbs/acre)	H-(203 K lbs/acre)	Virginia Tech	
Sp-2009	6.1	M(28 P lbs/acre)	H-(181 K lbs/acre)	Virginia Tech	
Wi-2012	6.2	H-(45 P lbs/acre)	H(232 K lbs/acre)	Virginia Tech	
Sp-2015	6.2	M(22 P lbs/acre)	H(215 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	31C	Braddock Unison
40	30C	Braddock Unison
20	30D	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

2017-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Repro C**

Total Acres: 20.00 Usable Acres: 20.00
FSA Number: K76
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.8	H(161 P lbs/acre)	VH(400 K lbs/acre)		Virginia Tech
Sp-2006	6.3	H-(37 P lbs/acre)	VH(337 K lbs/acre)		Virginia Tech
Sp-2009	6.4	M(22 P lbs/acre)	H(249 K lbs/acre)		Virginia Tech
Wi-2012	6.1	M(29 P lbs/acre)	H(215 K lbs/acre)		Virginia Tech
Sp-2015	6.3	M(26 P lbs/acre)	H-(195 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	31C	Braddock Unison
40	30C	Braddock Unison
20	30D	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Repro D**

Total Acres: 20.00 Usable Acres: 20.00
FSA Number: K79
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.6	M-(37 P lbs/acre)	M(151 K lbs/acre)		Virginia Tech
Sp-2006	6.0	M-(18 P lbs/acre)	H(214 K lbs/acre)		Virginia Tech
Sp-2009	6.1	L+(10 P lbs/acre)	M(117 K lbs/acre)		Virginia Tech
Wi-2012	6.0	M(28 P lbs/acre)	H(256 K lbs/acre)		Virginia Tech
Sp-2015	6.4	M(23 P lbs/acre)	H-(187 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	30C	Braddock Unison
40	31C	Braddock Unison
20	30D	Braddock Unison

Field Warnings: *Environmentally Sensitive Soils due to: Soils with perent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.4 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Reservoir Corn**

Total Acres: 6.00 Usable Acres: 6.00
FSA Number: K54
Tract: Kentland Farm

Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.5	M-(37 P lbs/acre)	M(151 K lbs/acre)		Virginia Tech
Sp-2006	6.2	H-(39 P lbs/acre)	H(241 K lbs/acre)		Virginia Tech
Sp-2009	6.5	M(23 P lbs/acre)	M(130 K lbs/acre)		Virginia Tech
Wi-2012	6.7	M-(13 P lbs/acre)	M(142 K lbs/acre)		Virginia Tech
Sp-2015	6.4	M(24 P lbs/acre)	M(111 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	31C	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	19.1 tons	Corn (silage) - No Till
2015-Fa	11.9 tons	Wheat (silage) - Tilled
2016-Sp	3.0 tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	11.9 tons	Wheat (silage) - Tilled
2017-Sp	19.1 * tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	19.1 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Showcase & Big Barn**
Total Acres: 17.00 Usable Acres: 15.00
FSA Number: K55a
Tract: Kentland Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	5.7	H-(46 P lbs/acre)	M-(86 K lbs/acre)		Virginia Tech
Sp-2010	6.2	M-(19 P lbs/acre)	L+(68 K lbs/acre)		Virginia Tech
Sp-2013	6.4	M+(36 P lbs/acre)	H-(186 K lbs/acre)		Virginia Tech
Sp-2016	6.2	H-(44 P lbs/acre)	M-(78 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	31C	Braddock Unison
30	30B	Braddock Unison
20	19B	Guernsey
10	25A	MCGARY PURDY

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	2.9 tons	Fescue grass (hay), maint. - No Till
2016-Sp	2.9 tons	Fescue grass (hay), maint. - No Till
2017-Sp	2.9 tons	Fescue grass (hay), maint. - No Till
2018-Sp	2.9 tons	Fescue grass (hay), maint. - No Till

Field Name: **Silo**
Total Acres: 25.00 Usable Acres: 21.00
FSA Number: K16
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2006	6.6	H(59 P lbs/acre)	M(135 K lbs/acre)		Virginia Tech
Sp-2009	7.0	M-(17 P lbs/acre)	M-(88 K lbs/acre)		Virginia Tech
Sp-2010	7.5	M-(14 P lbs/acre)	M(109 K lbs/acre)		Virginia Tech
Sp-2013	6.5	H-(42 P lbs/acre)	H(214 K lbs/acre)		Virginia Tech
Sp-2016	6.2	M+(31 P lbs/acre)	M-(99 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
95	31C	Braddock Unison
5	19B	Guernsey

Field Warnings: *Environmentally Sensitive Soils due to: Sink holes*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.0 * tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.0 * tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.0 * tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.0 * tons	Fescue grass (hay), maint. - No Till

Field Name: **Vaughts Past**
Total Acres: 16.00 Usable Acres: 15.00
FSA Number: K14
Tract: Kentland Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.7	M-(37 P lbs/acre)	M-(106 K lbs/acre)		Virginia Tech
Sp-2006	6.5	M-(17 P lbs/acre)	M-(94 K lbs/acre)		Virginia Tech
Sp-2009	6.5	M-(13 P lbs/acre)	M(146 K lbs/acre)		Virginia Tech
Wi-2012	6.5	L+(11 P lbs/acre)	M+(154 K lbs/acre)		Virginia Tech
Sp-2015	6.8	M(29 P lbs/acre)	H(226 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	30C	Braddock Unison
30	30D	Braddock Unison
30	30B	Braddock Unison

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till
2016-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till
2017-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.4 * tons	Fescue grass (hay), maint. - No Till

Tract Name: **Moore**
FSA Number: none
Location: Montgomery

Field Name: **Fire Dept Crop Lower**
Total Acres: 12.00 Usable Acres: 12.00
FSA Number: M13b
Tract: Moore
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.0	H(161 P lbs/acre)	H(295 K lbs/acre)		Virginia Tech

Sp-2006	6.4	H-(52 P lbs/acre)	M(108 K lbs/acre)	Virginia Tech
Sp-2009	7.7	M-(18 P lbs/acre)	M-(93 K lbs/acre)	Virginia Tech
Wi-2012	6.8	H-(43 P lbs/acre)	M(139 K lbs/acre)	Virginia Tech
Sp-2015	6.3	H-(38 P lbs/acre)	M-(91 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16C	Groseclose Poplimento
50	16B	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Fire Dept Crop Upper**

Total Acres: 14.00 Usable Acres: 14.00
FSA Number: M13a
Tract: Moore
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.0	H(161 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech	
Sp-2006	6.5	H-(41 P lbs/acre)	H(218 K lbs/acre)	Virginia Tech	
Sp-2009	6.7	M(23 P lbs/acre)	L(47 K lbs/acre)	Virginia Tech	
Wi-2012	7.1	H-(51 P lbs/acre)	H(254 K lbs/acre)	Virginia Tech	
Sp-2015	7.2	H-(52 P lbs/acre)	H-(177 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16C	Groseclose Poplimento
50	16B	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Fire Dept Pst**

Total Acres: 44.00 Usable Acres: 29.10
FSA Number: M9c-f
Tract: Moore
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2007	6.6	L(8 P lbs/acre)	H-(188 K lbs/acre)	Virginia Tech	
Sp-2010	7.0	M(26 P lbs/acre)	H(216 K lbs/acre)	Virginia Tech	
Sp-2013	6.7	H-(45 P lbs/acre)	VH(332 K lbs/acre)	Virginia Tech	
Sp-2016	6.3	H-(53 P lbs/acre)	VH(411 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	3E	Berks Lowell Rayne
30	16D	Groseclose Poplimento
15	11C	Duffield Ernest

15	16C	Groseclose Poplimento
10	25A	MCGARY PURDY

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	2.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	2.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	2.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	2.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Observatory Pst**

Total Acres: 53.00 Usable Acres: 30.00
FSA Number: M17-20
Tract: Moore
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2007	7.1	M(28 P lbs/acre)	H(218 K lbs/acre)	Virginia Tech	
Sp-2010	6.9	M-(17 P lbs/acre)	VH(323 K lbs/acre)	Virginia Tech	
Sp-2013	6.8	H-(52 P lbs/acre)	VH(375 K lbs/acre)	Virginia Tech	
Sp-2016	7.1	H-(51 P lbs/acre)	VH(444 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
35	16D	Groseclose Poplimento
25	16C	Groseclose Poplimento
15	11B	Duffield Ernest
15	3E	Berks Lowell Rayne
10	16B	Groseclose Poplimento

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Pasco crop strips**

Total Acres: 15.00 Usable Acres: 15.00
FSA Number: M23b
Tract: Moore
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-2001	5.7	M+(75 P lbs/acre)	H+(356 K lbs/acre)	Virginia Tech	
Fa-2002	7.0	H-(104 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech	
Sp-2006	6.5	M(27 P lbs/acre)	M(130 K lbs/acre)	Virginia Tech	
Sp-2009	7.7	M-(16 P lbs/acre)	M-(89 K lbs/acre)	Virginia Tech	
Sp-2012	6.8	M-(18 P lbs/acre)	H-(190 K lbs/acre)	Virginia Tech	
Sp-2015	6.5	M+(33 P lbs/acre)	M(128 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	11B	Duffield Ernest
20	16B	Groseclose Poplimento
25	16C	Groseclose Poplimento

	25	16D	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Pasco hay strips**

Total Acres: 27.00 Usable Acres: 25.00
FSA Number: M23a
Tract: Moore
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.0	H-(104 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech	
Sp-2006	6.5	M+(31 P lbs/acre)	M(116 K lbs/acre)	Virginia Tech	
Sp-2009	7.2	M(24 P lbs/acre)	L+(75 K lbs/acre)	Virginia Tech	
Wi-2012	7.0	M(28 P lbs/acre)	M(132 K lbs/acre)	Virginia Tech	
Sp-2015	7.2	H-(38 P lbs/acre)	M+(174 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
25	16D	Groseclose Poplimento
20	16B	Groseclose Poplimento
25	16C	Groseclose Poplimento
30	11B	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Reynolds Past**

Total Acres: 24.70 Usable Acres: 24.70
FSA Number: M9a-b,12
Tract: Moore
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2007	6.2	M-(13 P lbs/acre)	H-(198 K lbs/acre)	Virginia Tech	
Sp-2010	7.5	L+(9 P lbs/acre)	M+(160 K lbs/acre)	Virginia Tech	
Sp-2013	6.6	M(27 P lbs/acre)	H(213 K lbs/acre)	Virginia Tech	
Sp-2016	6.5	M(28 P lbs/acre)	VH(311 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	3E	Berks Lowell Rayne
20	16D	Groseclose Poplimento
15	16C	Groseclose Poplimento
10	16B	Groseclose Poplimento
15	25A	MCGARY PURDY

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	3.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	3.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	3.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	3.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	3.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Tract Name: **Plantation Road**
FSA Number: none
Location: Montgomery

***Field Name*:** **Beef Barn**
Total Acres: 10.00 Usable Acres: 10.00
FSA Number: PR21
Tract: ntation Road
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary
N-based
Phosphorus Limit method: VA P-Index Calulation
P-Index value = 59.91
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 6.06 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.1	H(161 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech	
Sp-2004	7.1	VH(270 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2007	7.0	H-(54 P lbs/acre)	M+(162 K lbs/acre)	Virginia Tech	
Sp-2010	6.7	H(60 P lbs/acre)	H-(204 K lbs/acre)	Virginia Tech	
Sp-2013	6.7	H+(104 P lbs/acre)	VH(317 K lbs/acre)	Virginia Tech	
Sp-2016	6.7	H(83 P lbs/acre)	M+(166 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	11B	Duffield Ernest
30	16B	Groseclose Poplimento
15	16C	Groseclose Poplimento
5	2C	Berks Groseclose

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.9 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Bypass Crop**
Total Acres: 10.00 Usable Acres: 10.00
FSA Number: PR3
Tract: Plantation Road
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	7.2	H(75 P lbs/acre)	M(142 K lbs/acre)	Virginia Tech	
Wi-2012	6.5	H(83 P lbs/acre)	M(111 K lbs/acre)	Virginia Tech	
Sp-2015	7.2	H(61 P lbs/acre)	M(118 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
65	16B	Groseclose Poplimento
15	16C	Groseclose Poplimento
10	11C	Duffield Ernest
10	2C	Berks Groseclose

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME

2013-Fa	0.0	Barley (cover) - No Till
2014-Sp	22.0 tons	Corn (silage) - No Till
2014-Fa	0.0	Barley (cover) - No Till
2015-Sp	22.0 tons	Corn (silage) - No Till
2015-Fa	13.0 tons	Wheat (silage) - Tilled
2016-Sp	3.3 tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	6.2 tons	Alfalfa (hay), estab. - No Till
2017-Fa	6.2 tons	Alfalfa (hay), maint. - No Till
2018-Sp	6.2 tons	Alfalfa (hay), maint. - No Till

***Field Name*:** **Bypss sheep pasture**

Total Acres: 9.00 Usable Acres: 9.00
FSA Number: PR24
Tract: Plantation Road
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	6.2	H(161 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2004	6.4	H-(104 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech	
Sp-2007	6.7	H-(37 P lbs/acre)	H(251 K lbs/acre)	Virginia Tech	
Sp-2010	6.9	M(30 P lbs/acre)	H(270 K lbs/acre)	Virginia Tech	
Sp-2013	6.7	H(66 P lbs/acre)	VH(327 K lbs/acre)	Virginia Tech	
Sp-2016	6.6	H(58 P lbs/acre)	M+(165 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
25	25A	MCGARY PURDY
25	16C	Groseclose Poplimento
20	16B	Groseclose Poplimento
20	11B	Duffield Ernest
10	2C	Berks Groseclose

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

***Field Name*:** **Horse Ring**

Total Acres: 5.00 Usable Acres: 5.00
FSA Number: PR19
Tract: Plantation Road
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	6.1	H-(104 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2004	6.5	M(58 P lbs/acre)	H-(232 K lbs/acre)	Virginia Tech	
Sp-2007	7.0	M(29 P lbs/acre)	H+(288 K lbs/acre)	Virginia Tech	
Sp-2010	6.6	M(28 P lbs/acre)	H(222 K lbs/acre)	Virginia Tech	
Sp-2013	6.8	H(85 P lbs/acre)	VH(359 K lbs/acre)	Virginia Tech	
Sp-2016	6.8	H(58 P lbs/acre)	VH(430 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	11B	Duffield Ernest
30	16B	Groseclose Poplimento
15	17C	Groseclose Poplimento
15	2C	Berks Groseclose

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.0 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	2.0 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	2.0 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	2.0 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	2.0 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **New Barn Past**

Total Acres: 10.00 Usable Acres: 8.00
FSA Number: PR60-61
Tract: Plantation Road
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	6.3	VH(270 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2004	6.9	VH(270 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2007	6.9	M+(33 P lbs/acre)	H+(283 K lbs/acre)	Virginia Tech	
Sp-2010	7.2	H-(43 P lbs/acre)	H-(201 K lbs/acre)	Virginia Tech	
Sp-2013	6.3	H-(50 P lbs/acre)	H(240 K lbs/acre)	Virginia Tech	
Sp-2016	6.4	H-(42 P lbs/acre)	VH(314 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	11B	Duffield Ernest
25	25A	MCGARY PURDY
18	19B	Guernsey
17	16C	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	3.9 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Piggry**

Total Acres: 22.00 Usable Acres: 18.40
FSA Number: PR1
Tract: Plantation Road
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.8	H(161 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2006	6.3	VH(126 P lbs/acre)	VH(347 K lbs/acre)	Virginia Tech	
Sp-2010	6.7	H-(47 P lbs/acre)	M-(80 K lbs/acre)	Virginia Tech	
Sp-2013	6.3	H-(49 P lbs/acre)	M-(98 K lbs/acre)	Virginia Tech	
Sp-2016	7.0	H+(100 P lbs/acre)	H+(289 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16B	Groseclose Poplimento
30	2C	Berks Groseclose
15	11B	Duffield Ernest
5	16C	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME

2013-Fa	0.0	Barley (cover) - No Till
2014-Sp	21.2 tons	Corn (silage) - No Till
2014-Fa	0.0	Barley (cover) - No Till
2015-Sp	21.2 tons	Corn (silage) - No Till
2015-Fa	11.9 tons	Wheat (silage) - Tilled
2016-Sp	3.0 * tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	5.1 tons	Alfalfa (hay), estab. - No Till
2017-Fa	5.1 tons	Alfalfa (hay), estab. - No Till
2018-Sp	5.1 tons	Alfalfa (hay), maint. - No Till

***Field Name*:** **Sheep Past 1**

Total Acres: 29.00 Usable Acres: 25.00
FSA Number: PR42
Tract: Plantation Road
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	5.9	H+(224 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2004	5.6	M(58 P lbs/acre)	M+(196 K lbs/acre)	Virginia Tech	
Sp-2007	6.2	H-(43 P lbs/acre)	VH(322 K lbs/acre)	Virginia Tech	
Sp-2010	5.5	M-(14 P lbs/acre)	H(247 K lbs/acre)	Virginia Tech	
Sp-2013	6.3	H-(43 P lbs/acre)	H+(286 K lbs/acre)	Virginia Tech	
Sp-2016	5.8	M+(32 P lbs/acre)	H(225 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16B	Groseclose Poplimento
25	11B	Duffield Ernest
25	2C	Berks Groseclose

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.0 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	2.0 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	2.0 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	2.0 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	2.0 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Tract Name: **Price Farm**

FSA Number: none
Location: Montgomery

***Field Name*:** **M&M**

Total Acres: 13.00 Usable Acres: 10.50
FSA Number: P6
Tract: Price Farm
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-2012	6.6	H+(102 P lbs/acre)	H-(193 K lbs/acre)	Virginia Tech	
Sp-2015	7.0	H-(41 P lbs/acre)	M(116 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
60	16B	Groseclose Poplimento
20	16C	Groseclose Poplimento
10	3D	Berks Lowell Rayne
10	11B	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	21.9 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till

2016-Sp	21.9 tons	Corn (silage) - No Till
2016-Fa	12.9 tons	Wheat (silage) - Tilled
2017-Sp	15.2 * tons	Sorghum (silage) - No Till
2017-Fa	12.9 * tons	Wheat (silage) - Tilled
2018-Sp	3.3 * tons	Sorghum-sudan, millet, sudan (hay) - No Till
2018-Fa	12.9 * tons	Wheat (silage) - Tilled

***Field Name*:** **McCauley**

Total Acres: 8.00 Usable Acres: 8.00
FSA Number: P-5
Tract: Price Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE	PH	P	K	Lab
Wi-1999	6.5	H-(104 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech
Fa-2002	6.9	M-(37 P lbs/acre)	M(151 K lbs/acre)	Virginia Tech
Sp-2006	6.8	M+(32 P lbs/acre)	H(215 K lbs/acre)	Virginia Tech
Sp-2010	7.3	M(28 P lbs/acre)	M(107 K lbs/acre)	Virginia Tech
Sp-2013	7.1	H-(55 P lbs/acre)	H-(185 K lbs/acre)	Virginia Tech
Sp-2016	7.1	M(24 P lbs/acre)	M+(168 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	16B	Groseclose Poplimento
30	16C	Groseclose Poplimento
20	11B	Duffield Ernest
20	12C	Frederick Vertrees

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	22.4 tons	Corn (silage) - No Till
2014-Fa	0.0	Barley (cover) - No Till
2015-Sp	22.4 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	22.4 tons	Corn (silage) - No Till
2016-Fa	12.9 tons	Wheat (silage) - Tilled
2017-Sp	15.5 * tons	Sorghum (silage) - No Till
2017-Fa	12.9 tons	Wheat (silage) - Tilled
2018-Sp	3.4 * tons	Sorghum-sudan, millet, sudan (hay) - No Till
2018-Fa	12.9 tons	Wheat (silage) - Tilled

***Field Name*:** **Price Crop**

Total Acres: 21.00 Usable Acres: 14.10
FSA Number: P1a
Tract: Price Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE	PH	P	K	Lab
Fa-2002	6.7	H-(104 P lbs/acre)	M(151 K lbs/acre)	Virginia Tech
Sp-2006	6.0	L+(11 P lbs/acre)	M(108 K lbs/acre)	Virginia Tech
Sp-2009	6.4	M(28 P lbs/acre)	M-(85 K lbs/acre)	Virginia Tech
Wi-2012	6.6	H-(41 P lbs/acre)	M+(153 K lbs/acre)	Virginia Tech
Sp-2015	6.8	M-(18 P lbs/acre)	M(102 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	11B	Duffield Ernest
25	3D	Berks Lowell Rayne
20	16B	Groseclose Poplimento
10	16C	Groseclose Poplimento
5	25A	MCGARY PURDY

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	20.6 tons	Corn (silage) - No Till
2014-Fa	0.0	Barley (cover) - No Till
2015-Sp	20.6 tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	20.6 tons	Corn (silage) - No Till
2016-Fa	10.6 * tons	Wheat (silage) - Tilled
2017-Sp	14.4 * tons	Sorghum (silage) - No Till
2017-Fa	10.6 * tons	Wheat (silage) - Tilled
2018-Sp	2.8 * tons	Sorghum-sudan, millet, sudan (hay) - No Till
2018-Fa	10.6 * tons	Wheat (silage) - Tilled

***Field Name*:** **Price Hay**

Total Acres: 12.10 Usable Acres: 12.10
FSA Number: P1b
Tract: Price Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.7	M-(37 P lbs/acre)	M(151 K lbs/acre)	Virginia Tech	
Sp-2006	6.7	M-(14 P lbs/acre)	M(121 K lbs/acre)	Virginia Tech	
Sp-2009	6.1	M-(14 P lbs/acre)	M(132 K lbs/acre)	Virginia Tech	
Wi-2012	6.4	M(29 P lbs/acre)	H-(196 K lbs/acre)	Virginia Tech	
Sp-2015	6.9	M+(32 P lbs/acre)	H-(186 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	11B	Duffield Ernest
20	16B	Groseclose Poplimento
10	16C	Groseclose Poplimento
5	25A	MCGARY PURDY
25	3D	Berks Lowell Rayne

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	3.4 * tons	Fescue grass (hay), estab. - No Till
2015-Sp	2.8 * tons	Fescue grass (hay), maint. - No Till
2016-Sp	2.8 * tons	Fescue grass (hay), maint. - No Till
2017-Sp	2.8 * tons	Fescue grass (hay), maint. - No Till
2018-Sp	2.8 * tons	Fescue grass (hay), maint. - No Till

***Field Name*:** **Tower**

Total Acres: 9.29 Usable Acres: 9.29
FSA Number: P3
Tract: Price Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2012	6.6	M(30 P lbs/acre)	M-(90 K lbs/acre)	Virginia Tech	
Sp-2015	6.6	M+(31 P lbs/acre)	M(101 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	16B	Groseclose Poplimento
30	16C	Groseclose Poplimento
20	11B	Duffield Ernest
10	3D	Berks Lowell Rayne

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	21.8 * tons	Corn (silage) - No Till

2014-Fa	0.0	Barley (cover) - No Till
2015-Sp	21.8 * tons	Corn (silage) - No Till
2015-Fa	0.0	Barley (cover) - No Till
2016-Sp	21.8 * tons	Corn (silage) - No Till
2016-Fa	12.5 tons	Wheat (silage) - Tilled
2017-Sp	15.1 * tons	Sorghum (silage) - No Till
2017-Fa	12.5 tons	Wheat (silage) - Tilled
2018-Sp	3.3 * tons	Sorghum-sudan, millet, sudan (hay) - No Till
2018-Fa	12.5 tons	Wheat (silage) - Tilled

Tract Name: **Saville**
FSA Number: none
Location: Montgomery
***Field Name*:** **Crop 8**
Total Acres: 5.80 Usable Acres: 5.80
FSA Number: 0
Tract: Saville
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE	PH	P	K	Lab
Sp-2015	5.9	M-(18 P lbs/acre)	H(247 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
64	16B	Groseclose Poplimento
36	3D	Berks Lowell Rayne

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2015-Sp	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2016-Sp	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2018-Sp	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till

***Field Name*:** **Crop 9**
Total Acres: 2.80 Usable Acres: 2.80
FSA Number: 0
Tract: Saville
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE	PH	P	K	Lab
Sp-2015	5.9	M-(17 P lbs/acre)	M(115 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
39	3D	Berks Lowell Rayne
44	16C	Groseclose Poplimento
17	16B	Groseclose Poplimento

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2015-Sp	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2016-Sp	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2018-Sp	2.0 * acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till

***Field Name*:** **R1**
Total Acres: 4.40 Usable Acres: 4.40
FSA Number: 0

Tract: Saville
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2015	5.8	L(5 P lbs/acre)	M+(155 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
24	16B	Groseclose Poplimento
76	16C	Groseclose Poplimento

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2015-Sp	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2016-Sp	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2018-Sp	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till

Field Name: **R2**
Total Acres: 2.50 Usable Acres: 2.50
FSA Number: 0
Tract: Saville
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2015	6.2	L(6 P lbs/acre)	H(234 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
10	16C	Groseclose Poplimento
90	16B	Groseclose Poplimento

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Fa	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2015-Sp	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2016-Sp	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till
2018-Sp	1.3 acres/AU	Native/unimproved pastures <=25% legume, maint. - No Till

Tract Name: **Smithfield**
FSA Number: none
Location: Montgomery
Field Name: **Bike Path Pasture**
Total Acres: 7.00 Usable Acres: 7.00
FSA Number: SM7
Tract: Smithfield
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0 K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2010	7.6	VH(133 P lbs/acre)	H(231 K lbs/acre)	Virginia Tech	

Sp-2013	7.1	H+(95 P lbs/acre)		H+(294 K lbs/acre)	Virginia Tech
Sp-2016	6.8	H(61 P lbs/acre)		H(230 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
35	19B	Guernsey
35	25A	MCGARY PURDY
30	11B	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	4.7 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	4.7 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	4.7 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	4.7 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	4.7 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Horse Pasture**

Total Acres: 16.00 Usable Acres: 16.00
FSA Number: SM13-15
Tract: Smithfield
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2010	6.5	M-(18 P lbs/acre)	H(214 K lbs/acre)		Virginia Tech
Sp-2013	6.6	H(68 P lbs/acre)	H+(302 K lbs/acre)		Virginia Tech
Sp-2016	6.3	H(66 P lbs/acre)	VH(533 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	25A	MCGARY PURDY
25	19B	Guernsey
10	16C	Groseclose Poplimento
15	11B	Duffield Ernest
10	9C	Carbo Chilhowie

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	5.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	5.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	5.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	5.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	5.1 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Lower Pasture**

Total Acres: 6.00 Usable Acres: 6.00
FSA Number: SM8
Tract: Smithfield
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	7.4	M+(31 P lbs/acre)	M-(86 K lbs/acre)		Virginia Tech
Sp-2010	6.7	M-(18 P lbs/acre)	L+(76 K lbs/acre)		Virginia Tech
Sp-2013	6.6	H(60 P lbs/acre)	H+(282 K lbs/acre)		Virginia Tech
Sp-2016	6.5	H-(51 P lbs/acre)	H(222 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	11B	Duffield Ernest
25	16B	Groseclose Poplimento
25	16C	Groseclose Poplimento

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.8 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Middle Pasture**

Total Acres: 25.00 Usable Acres: 25.00
FSA Number: SM9, 11-12
Tract: Smithfield
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	6.1	H-(39 P lbs/acre)	M-(95 K lbs/acre)	Virginia Tech	
Sp-2010	6.4	M(22 P lbs/acre)	L+(65 K lbs/acre)	Virginia Tech	
Sp-2013	6.3	H-(51 P lbs/acre)	M+(167 K lbs/acre)	Virginia Tech	
Sp-2016	6.6	VH(126 P lbs/acre)	H+(299 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16B	Groseclose Poplimento
25	16C	Groseclose Poplimento
25	11B	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Smithfield Exit**

Total Acres: 14.30 Usable Acres: 14.30
FSA Number: SM1
Tract: Smithfield
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Sp-2010	7.3	H-(52 P lbs/acre)	M(136 K lbs/acre)	Virginia Tech	
Sp-2013	6.7	H(57 P lbs/acre)	M(142 K lbs/acre)	Virginia Tech	
Sp-2016	6.6	M(29 P lbs/acre)	M+(164 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	11B	Duffield Ernest
30	16B	Groseclose Poplimento
10	16C	Groseclose Poplimento
10	33A	WEAVER

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	5.0 tons	Alfalfa (hay), maint. - No Till
2015-Sp	5.0 tons	Alfalfa (hay), maint. - No Till
2016-Sp	5.0 tons	Alfalfa (hay), maint. - No Till
2017-Sp	22.5 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.5 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

***Field Name*:** **Smithfield Plantation**
Total Acres: 12.00 Usable Acres: 12.00
FSA Number: SM3
Tract: Smithfield
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.0	VH(270 P lbs/acre)	H-(232 K lbs/acre)	Virginia Tech	
Sp-2006	7.0	M(28 P lbs/acre)	M(131 K lbs/acre)	Virginia Tech	
Sp-2010	6.9	H(63 P lbs/acre)	H-(181 K lbs/acre)	Virginia Tech	
Sp-2013	7.0	M(27 P lbs/acre)	M+(156 K lbs/acre)	Virginia Tech	
Sp-2016	6.7	H-(38 P lbs/acre)	H-(204 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	19B	Guernsey
30	16C	Groseclose Poplimento
25	25A	MCGARY PURDY
15	12C	Frederick Vertrees

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	5.3 tons	Alfalfa (hay), maint. - No Till
2015-Sp	5.3 tons	Alfalfa (hay), maint. - No Till
2016-Sp	5.3 tons	Alfalfa (hay), maint. - No Till
2017-Sp	21.4 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	21.4 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

***Field Name*:** **Upper Pasture**
Total Acres: 10.00 Usable Acres: 10.00
FSA Number: SM10
Tract: Smithfield
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Sp-2009	6.6	H-(40 P lbs/acre)	M(136 K lbs/acre)	Virginia Tech	
Sp-2010	6.1	M+(31 P lbs/acre)	M+(155 K lbs/acre)	Virginia Tech	
Sp-2013	6.5	H(71 P lbs/acre)	H(255 K lbs/acre)	Virginia Tech	
Sp-2016	6.3	H(65 P lbs/acre)	H-(179 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16B	Groseclose Poplimento
20	16C	Groseclose Poplimento
15	11B	Duffield Ernest
15	2C	Berks Groseclose

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.7 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Tract Name: **South West Fields**
FSA Number: none
Location: Montgomery
***Field Name*:** **HOW-1 Past**
Total Acres: 36.00 Usable Acres: 30.00

FSA Number: SW18
Tract: South West Fields
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	6.3	H+(224 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2004	6.5	H+(224 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2007	6.9	H+(92 P lbs/acre)	VH(416 K lbs/acre)	Virginia Tech	
Sp-2010	6.9	H-(45 P lbs/acre)	H+(298 K lbs/acre)	Virginia Tech	
Sp-2013	6.3	H-(49 P lbs/acre)	H(271 K lbs/acre)	Virginia Tech	
Sp-2016	6.8	H-(50 P lbs/acre)	VH(439 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
25	25A	MCGARY PURDY
25	11B	Duffield Ernest
20	16B	Groseclose Poplimento
30	2C	Berks Groseclose

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	4.3 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	4.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	4.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	4.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	4.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **HOW-2 Past**
Total Acres: 24.00 Usable Acres: 20.00
FSA Number: SW24
Tract: South West Fields
Location: Montgomery
Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	6.9	M(58 P lbs/acre)	M+(196 K lbs/acre)	Virginia Tech	
Sp-2004	6.1	M+(75 P lbs/acre)	H(295 K lbs/acre)	Virginia Tech	
Sp-2007	6.9	M(29 P lbs/acre)	H-(201 K lbs/acre)	Virginia Tech	
Sp-2010	7.1	M-(13 P lbs/acre)	M+(154 K lbs/acre)	Virginia Tech	
Sp-2013	6.3	M-(14 P lbs/acre)	H(232 K lbs/acre)	Virginia Tech	
Sp-2016	6.4	M+(35 P lbs/acre)	M(134 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
35	3E	Berks Lowell Rayne
25	16D	Groseclose Poplimento
20	25A	MCGARY PURDY
20	33A	WEAVER

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	3.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	3.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	3.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	3.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	3.5 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Heth A**
Total Acres: 15.00 Usable Acres: 12.90
FSA Number: SW12

Tract: South West Fields
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.0	VH(270 P lbs/acre)	H(295 K lbs/acre)		Virginia Tech
Sp-2006	6.8	H(70 P lbs/acre)	M(117 K lbs/acre)		Virginia Tech
Sp-2009	7.4	H+(87 P lbs/acre)	H(233 K lbs/acre)		Virginia Tech
Sp-2010	7.0	H(66 P lbs/acre)	H(233 K lbs/acre)		Virginia Tech
Sp-2013	6.9	H(64 P lbs/acre)	H(252 K lbs/acre)		Virginia Tech
Sp-2016	6.5	H(62 P lbs/acre)	H-(210 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16C	Groseclose Poplimento
40	16B	Groseclose Poplimento
10	11C	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.4 tons	Corn (silage) - No Till
2015-Fa	13.2 tons	Wheat (silage) - Tilled
2016-Sp	3.5 tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	0.0	Barley (cover) - Tilled
2017-Sp	22.4 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.4 * tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Heth B**
Total Acres: 26.00 Usable Acres: 22.40
FSA Number: SW13
Tract: South West Fields
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.6	VH(270 P lbs/acre)	VH(400 K lbs/acre)		Virginia Tech
Sp-2006	7.0	H+(107 P lbs/acre)	H(274 K lbs/acre)		Virginia Tech
Sp-2009	7.2	H(69 P lbs/acre)	H(218 K lbs/acre)		Virginia Tech
Wi-2012	6.6	H+(91 P lbs/acre)	H(236 K lbs/acre)		Virginia Tech
Sp-2015	6.9	H(77 P lbs/acre)	H-(179 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
60	16B	Groseclose Poplimento
20	12B	Frederick Vertrees
10	16C	Groseclose Poplimento
10	11B	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.4 tons	Corn (silage) - No Till
2015-Fa	13.6 * tons	Wheat (silage) - Tilled
2016-Sp	3.5 * tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	0.0	Barley (cover) - Tilled
2017-Sp	22.4 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.4 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Heth C**
Total Acres: 16.00 Usable Acres: 13.80
FSA Number: SW14
Tract: South West Fields
Location: Montgomery

Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
P-based(1.0)
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	7.1	H+(224 P lbs/acre)	M(151 K lbs/acre)	Virginia Tech	
Sp-2006	6.8	H+(105 P lbs/acre)	M+(173 K lbs/acre)	Virginia Tech	
Sp-2009	7.6	VH(121 P lbs/acre)	H(249 K lbs/acre)	Virginia Tech	
Wi-2012	6.6	H(62 P lbs/acre)	H(240 K lbs/acre)	Virginia Tech	
Sp-2015	7.4	VH(122 P lbs/acre)	H-(185 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
75	16C	Groseclose Poplimento
20	16B	Groseclose Poplimento
5	11B	Duffield Ernest

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	22.5 tons	Corn (silage) - No Till
2015-Fa	13.2 tons	Wheat (silage) - Tilled
2016-Sp	3.5 tons	Sorghum-sudan, millet, sudan (hay) - No Till
2016-Fa	0.0	Barley (cover) - Tilled
2017-Sp	22.5 tons	Corn (silage) - No Till
2017-Fa	0.0	Barley (cover) - Tilled
2018-Sp	22.5 tons	Corn (silage) - No Till
2018-Fa	0.0	Barley (cover) - Tilled

Field Name: **Shuff Crop**
Total Acres: 25.00 Usable Acres: 24.00
FSA Number: SW4
Tract: South West Fields
Location: Montgomery
Slope Class: B Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	6.6	VH(270 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2004	6.7	H(76 P lbs/acre)	H-(210 K lbs/acre)	Virginia Tech	
Sp-2007	6.6	H(69 P lbs/acre)	H(268 K lbs/acre)	Virginia Tech	
Sp-2010	6.9	H-(56 P lbs/acre)	M-(92 K lbs/acre)	Virginia Tech	
Sp-2013	7.1	H(64 P lbs/acre)	M+(170 K lbs/acre)	Virginia Tech	
Sp-2016	7.1	H(79 P lbs/acre)	M(132 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
25	12B	Frederick Vertrees
20	16B	Groseclose Poplimento
20	16C	Groseclose Poplimento
20	11B	Duffield Ernest
5	25A	MCGARY PURDY
10	5D	Berks Weikert

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2015-Sp	2.9 * tons	Sorghum-sudan, millet, sudan (hay) - Tilled
2015-Fa	11.8 * tons	Wheat (silage) - Tilled
2016-Sp	2.9 * tons	Sorghum-sudan, millet, sudan (hay) - Tilled
2016-Fa	3.5 * tons	Fescue grass (hay), estab. - No Till
2017-Sp	3.0 tons	Fescue grass (hay), maint. - No Till
2018-Sp	3.0 tons	Fescue grass (hay), maint. - No Till

Field Name: **Shuff Past**
Total Acres: 35.00 Usable Acres: 10.80
FSA Number: SW1
Tract: South West Fields
Location: Montgomery

Slope Class: D Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	5.6	M-(37 P lbs/acre)	M(151 K lbs/acre)	Virginia Tech	
Sp-2004	5.2	L+(11 P lbs/acre)	M-(86 K lbs/acre)	Virginia Tech	
Sp-2007	6.8	M(27 P lbs/acre)	M(131 K lbs/acre)	Virginia Tech	
Sp-2010	6.0	L(6 P lbs/acre)	M(137 K lbs/acre)	Virginia Tech	
Sp-2013	6.2	M-(15 P lbs/acre)	M(141 K lbs/acre)	Virginia Tech	
Sp-2016	5.8	M-(17 P lbs/acre)	H-(209 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
65	1C	Berks Clymer
20	6E	Berks Weikert
15	5D	Berks Weikert

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	3.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	3.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	3.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	3.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	3.6 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Whitethorne 1A**
Total Acres: 20.00 Usable Acres: 18.00
FSA Number: SW5
Tract: South West Fields
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:
Pasture (>75% cover)
P-Index Summary
P-based(1.0)
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre
Soil Test Results:

DATE		PH	P	K	Lab
Wi-1999	6.1	M(58 P lbs/acre)	H-(232 K lbs/acre)	Virginia Tech	
Fa-2002	6.2	H(161 P lbs/acre)	H-(232 K lbs/acre)	Virginia Tech	
Su-2007	5.9	M-(17 P lbs/acre)	H(260 K lbs/acre)	Virginia Tech	
Sp-2010	6.0	L+(12 P lbs/acre)	M(131 K lbs/acre)	Virginia Tech	
Sp-2013	6.5	H-(43 P lbs/acre)	H(241 K lbs/acre)	Virginia Tech	
Sp-2016	7.2	VH(113 P lbs/acre)	H(250 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16B	Groseclose Poplimento
50	16C	Groseclose Poplimento

Field Warnings:
Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	1.3 acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Whitethorne 1B**
Total Acres: 25.00 Usable Acres: 22.00
FSA Number: SW6
Tract: South West Fields
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft
Conservation Practices:

Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.2	H(161 P lbs/acre)	H-(232 K lbs/acre)	Virginia Tech	
Sp-2006	6.5	H(61 P lbs/acre)	H+(304 K lbs/acre)	Virginia Tech	
Sp-2009	6.4	M-(18 P lbs/acre)	L+(64 K lbs/acre)	Virginia Tech	
Wi-2012	6.7	M-(19 P lbs/acre)	M-(88 K lbs/acre)	Virginia Tech	
Sp-2015	6.6	M(30 P lbs/acre)	M(120 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16C	Groseclose Poplimento
50	2C	Berks Groseclose

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	2.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	2.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	2.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	2.2 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Whitethorne 2**
Total Acres: 25.00 Usable Acres: 20.00
FSA Number: SW9
Tract: South West Fields
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2001	6.2	H(161 P lbs/acre)	VH(400 K lbs/acre)	Virginia Tech	
Sp-2004	6.0	M(21 P lbs/acre)	H+(303 K lbs/acre)	Virginia Tech	
Sp-2007	6.1	M(28 P lbs/acre)	H(254 K lbs/acre)	Virginia Tech	
Sp-2010	6.5	M-(19 P lbs/acre)	M(116 K lbs/acre)	Virginia Tech	
Sp-2013	6.9	M+(35 P lbs/acre)	H+(293 K lbs/acre)	Virginia Tech	
Sp-2016	6.7	M+(33 P lbs/acre)	M-(79 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
40	2C	Berks Groseclose
30	16D	Groseclose Poplimento
20	16C	Groseclose Poplimento
10	25A	MCGARY PURDY

Field Warnings: *Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%*
Sink holes

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.9 * acres/AU	Orchard grass/fescue pastures<=25% legume, estab. - No Till
2015-Sp	2.9 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2016-Sp	2.9 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2017-Sp	2.9 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till
2018-Sp	2.9 * acres/AU	Orchard grass/fescue pastures<=25% legume, maint. - No Till

Field Name: **Whitethorne 3**
Total Acres: 22.00 Usable Acres: 16.00
FSA Number: SW11
Tract: South West Fields
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-2002	6.7	H-(104 P lbs/acre)	M+(196 K lbs/acre)		Virginia Tech
Sp-2006	6.4	M(24 P lbs/acre)	H-(192 K lbs/acre)		Virginia Tech
Sp-2009	6.6	M-(19 P lbs/acre)	L+(60 K lbs/acre)		Virginia Tech
Wi-2012	6.5	M+(34 P lbs/acre)	M(105 K lbs/acre)		Virginia Tech
Sp-2015	6.5	M(27 P lbs/acre)	L+(75 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
50	16C	Groseclose Poplimento
25	16B	Groseclose Poplimento
10	16D	Groseclose Poplimento
8	2B	Berks Groseclose
7	1C	Berks Clymer

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.4 * ton	Hay/Pasture - No Till
2015-Sp	2.4 * ton	Hay/Pasture - No Till
2016-Sp	2.4 * ton	Hay/Pasture - No Till
2017-Sp	2.4 * ton	Hay/Pasture - No Till
2018-Sp	2.4 * ton	Hay/Pasture - No Till

Tract Name: **Turkey Farm**
FSA Number: none
Location: Montgomery

Field Name: **T3**
Total Acres: 11.60 Usable Acres: 11.00
FSA Number: T-3
Tract: Turkey Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Fa-1998	5.6	VH(270 P lbs/acre)	VH(400 K lbs/acre)		Virginia Tech
Fa-2001	6.0	H+(224 P lbs/acre)	H-(232 K lbs/acre)		Virginia Tech
Sp-2004	5.8	L+(23 P lbs/acre)	M(151 K lbs/acre)		Virginia Tech
Sp-2007	6.6	H(64 P lbs/acre)	VH(339 K lbs/acre)		Virginia Tech
Sp-2010	6.4	H-(45 P lbs/acre)	M(139 K lbs/acre)		Virginia Tech
Wi-2011	6.3	H(61 P lbs/acre)	H+(290 K lbs/acre)		Virginia Tech
Sp-2014	6.4	M(24 P lbs/acre)	M-(95 K lbs/acre)		Virginia Tech
Sp-2017	6.6	H-(46 P lbs/acre)	M+(172 K lbs/acre)		Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	11B	Duffield Ernest
20	16C	Groseclose Poplimento
20	3D	Berks Lowell Rayne
30	2B	Berks Groseclose

Field Warnings:
Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.2 ton	Hay/Pasture - No Till
2015-Sp	2.2 ton	Hay/Pasture - No Till
2016-Sp	2.2 ton	Hay/Pasture - No Till
2017-Sp	2.2 ton	Hay/Pasture - No Till
2018-Sp	2.2 * ton	Hay/Pasture - No Till

Field Name: **T4**
Total Acres: 10.30 Usable Acres: 10.30
FSA Number: T-4
Tract: Turkey Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-2011	6.4	H-(50 P lbs/acre)	H-(189 K lbs/acre)	Virginia Tech	
Sp-2014	6.6	H(60 P lbs/acre)	M(138 K lbs/acre)	Virginia Tech	
Sp-2017	6.4	H+(106 P lbs/acre)	H(273 K lbs/acre)	Virginia Tech	

Soils:

PERCENT	SYMBOL	SOIL SERIES
30	11B	Duffield Ernest
20	16C	Groseclose Poplimento
20	3D	Berks Lowell Rayne
30	2B	Berks Groseclose

Field Warnings:
Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.2 ton	Hay/Pasture - No Till
2015-Sp	2.2 ton	Hay/Pasture - No Till
2016-Sp	2.2 ton	Hay/Pasture - No Till
2017-Sp	2.2 ton	Hay/Pasture - No Till
2018-Sp	2.2 * ton	Hay/Pasture - No Till

Field Name: T7
Total Acres: 9.00 Usable Acres: 9.00
FSA Number: T-7
Tract: Turkey Farm
Location: Montgomery
Slope Class: C Hydrologic Group: D
Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
%slope: 0.0 Slope Len: 0. R factor: 0.0K factor: 0.0
T factor: 0.0 P factor: 1.0 Cmax: 0.000 Erosion: 0.0 tons/acre

Soil Test Results:

DATE		PH	P	K	Lab
Wi-2011	6.7	H-(54 P lbs/acre)	VH(336 K lbs/acre)	Virginia Tech	
Sp-2014	6.3	M(21 P lbs/acre)	H-(189 K lbs/acre)	Virginia Tech	
Sp-2017	6.6	H-(39 P lbs/acre)	VH(387 K lbs/acre)	Virginia Tech	

Soils:

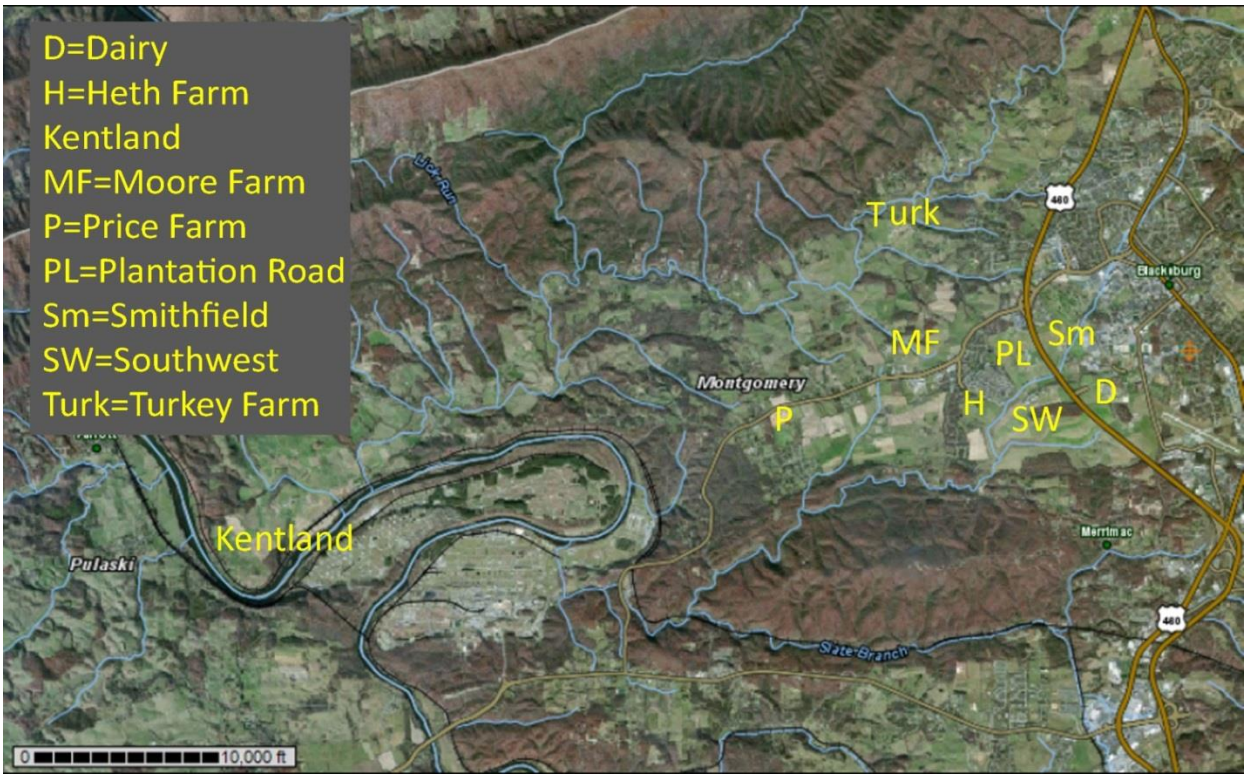
PERCENT	SYMBOL	SOIL SERIES
30	11B	Duffield Ernest
20	16C	Groseclose Poplimento
20	3D	Berks Lowell Rayne
30	2B	Berks Groseclose

Field Warnings:
Environmentally Sensitive Soils due to: Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock Soils with parent slope in excess of 15%

Crop Rotation:

PLANTED	YIELD	CROP NAME
2014-Sp	2.2 ton	Hay/Pasture - No Till
2015-Sp	2.2 ton	Hay/Pasture - No Till
2016-Sp	2.2 ton	Hay/Pasture - No Till
2017-Sp	2.2 ton	Hay/Pasture - No Till
2018-Sp	2.2 * ton	Hay/Pasture - No Till

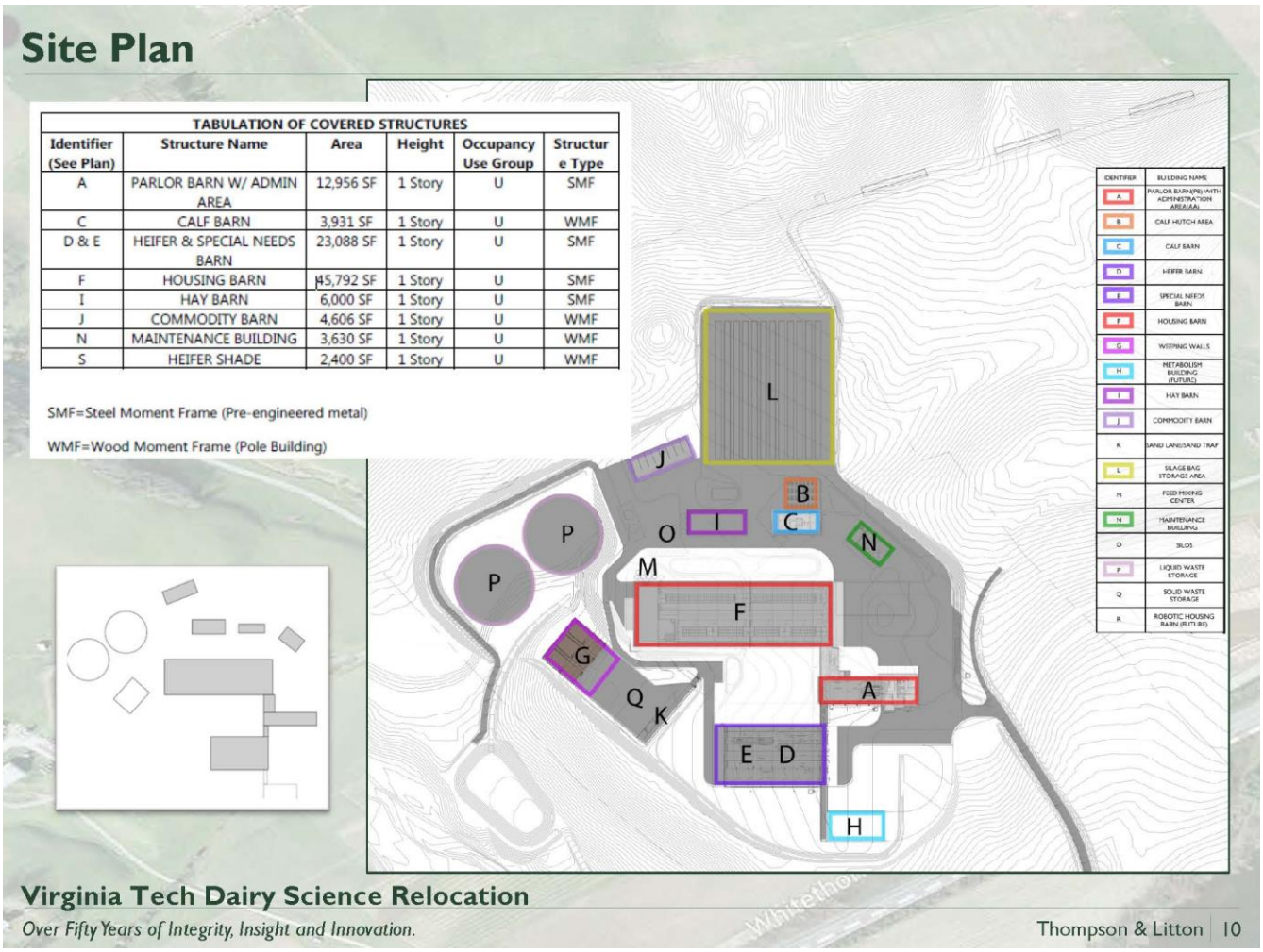
Farm Location Map


D=Dairy
H=Heth Farm
Kentland
MF=Moore Farm
P=Price Farm
PL=Plantation Road
Sm=Smithfield
SW=Southwest
Turk=Turkey Farm
Turk
MF
PL
Sm
D
H
SW
P
Kentland
Montgomery
Pulaski
Blacksburg
Merrimac
Slate Branch
480
480
0
10,000 ft

Manure Storage Maps

Kentland Dairy Liquid & Separated Solids Manure Storage (Pad)

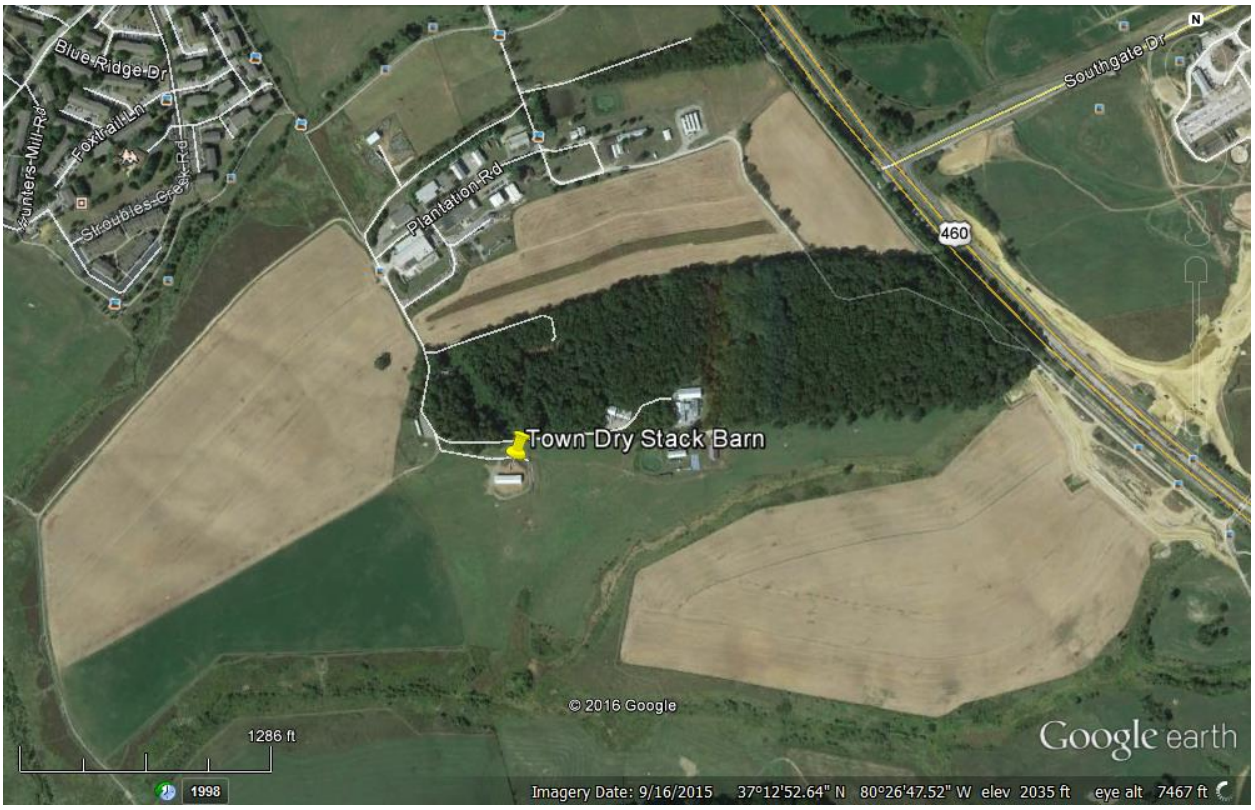
The dairy liquid and separated solids manure is stored at the Kentland Dairy Complex. The map below shows the location of the storage facility. The site plan identifies the two liquid tanks are marked, P for pit. The weeping wall system is marked G. The separated solid storage pad is marked Q and the sand separation area is marked K.




Lisa Barn: Pad manure, bedding and waste feed storage
© 2016 Google
686 ft
1996
Imagery Date: 9/16/2015 37°12'04.79" N 80°34'28.45" W elev 1772 ft eye alt 4860 ft
Google earth

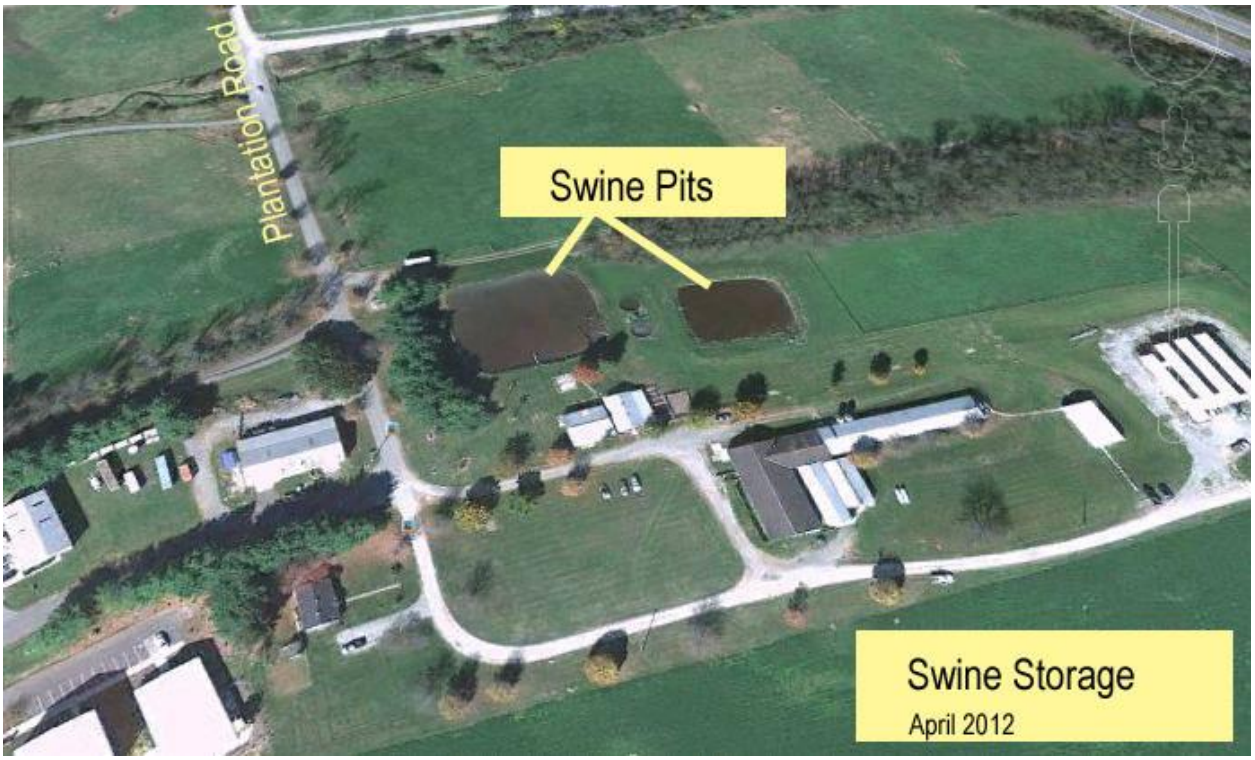
Dry Stack Barn - Dairy and Animal & Poultry Sciences Solid Manure Storage

Dry Stack manure consists of comingled Dairy separated solids (Pad), horse, sheep, beef and poultry manures that are collected from various sites on campus. The dry stack barn is cleaned out twice a year. It measures 125’ x 40’.



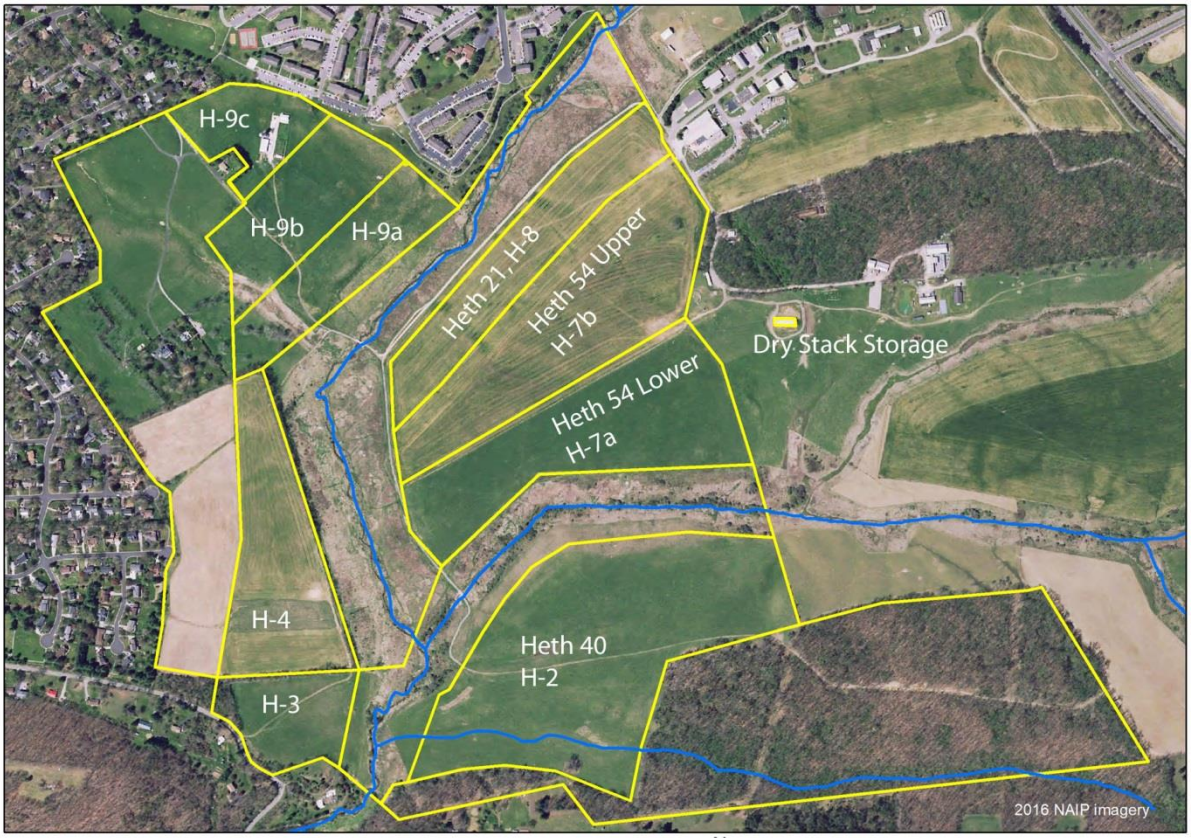
Liquid Swine Manure Storage

Manure is stored in earthen pits that are located next to the Swine Center



Field Maps

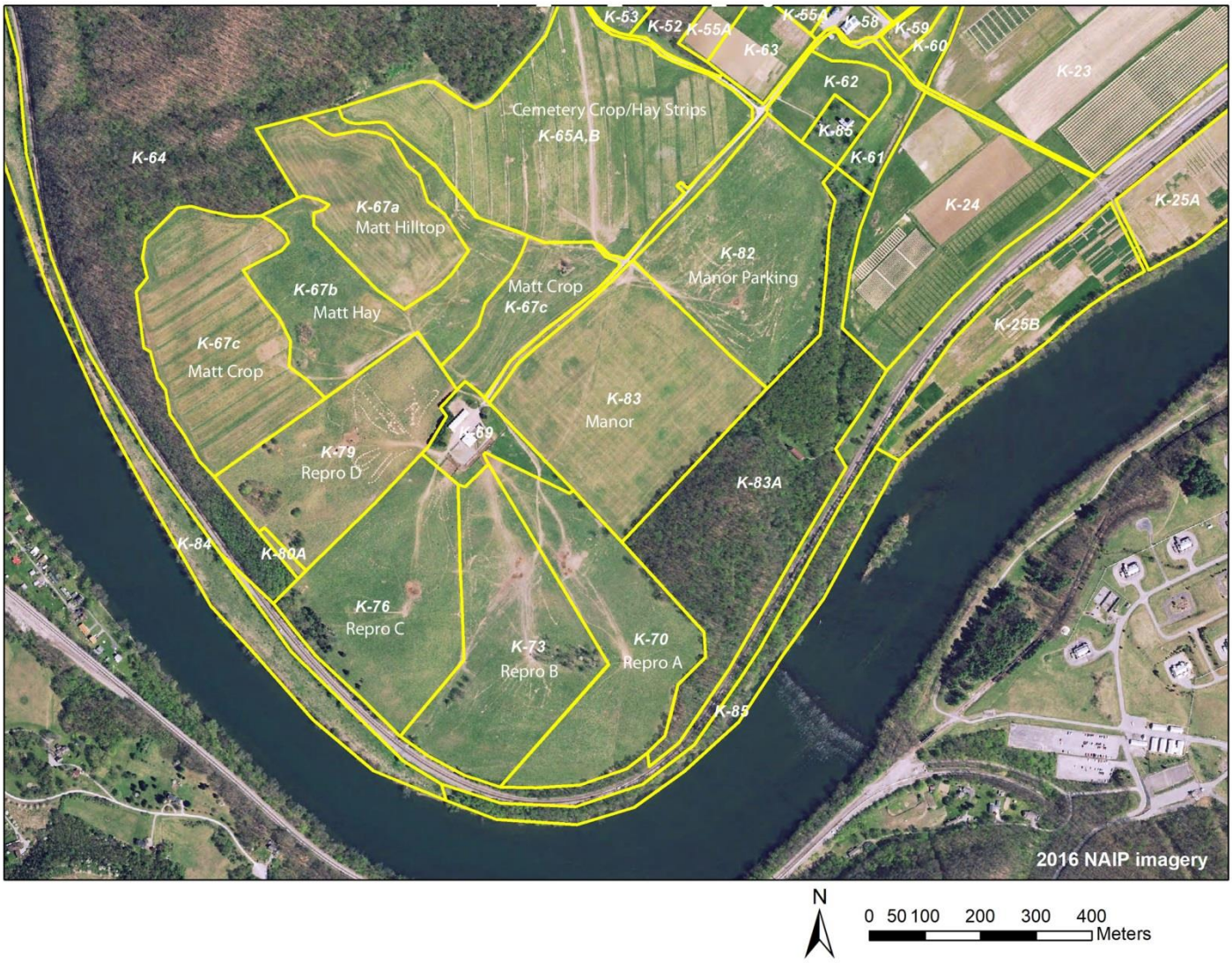
Heth Farm



Heth Farm

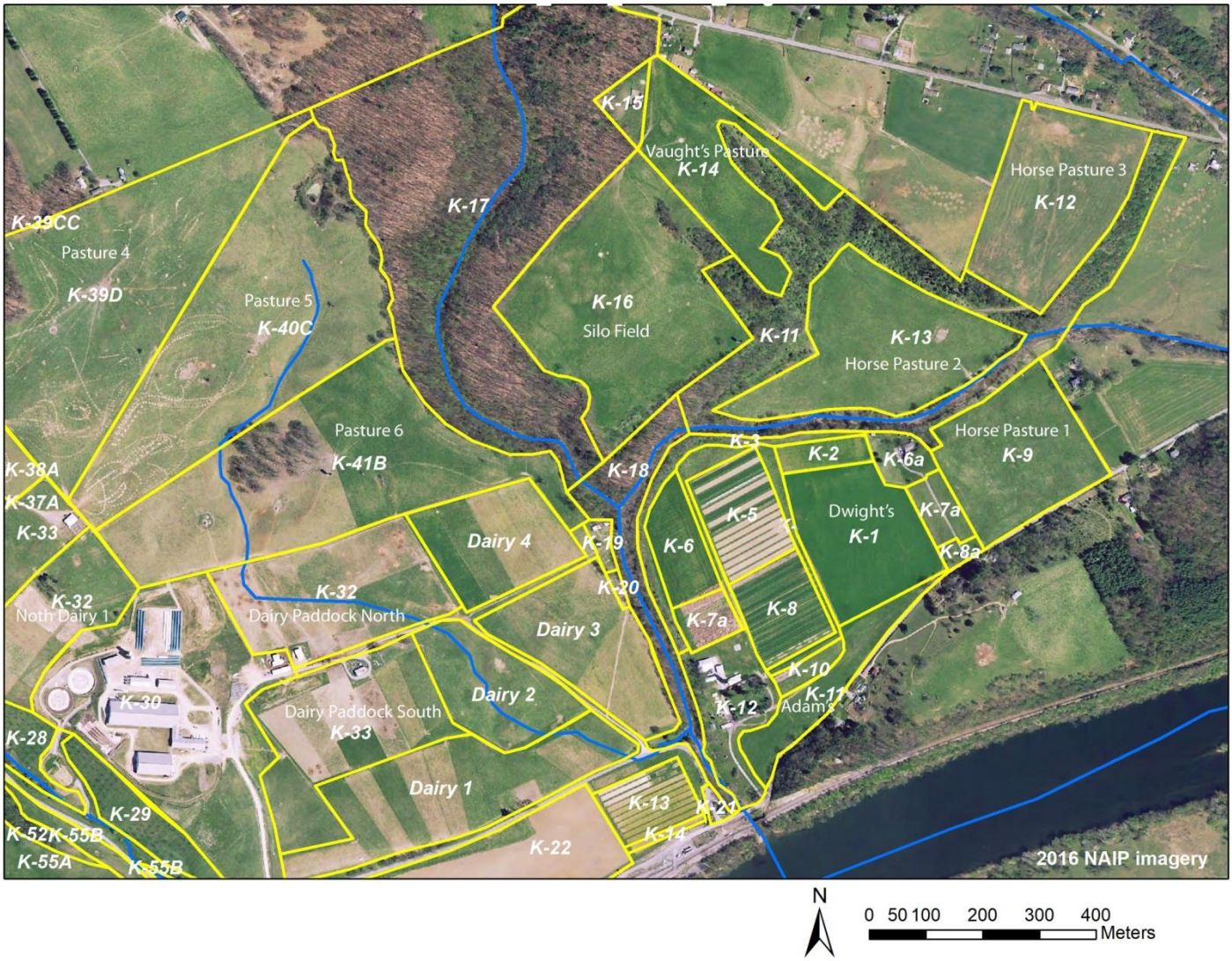
Kentland Fields

South-Western Fields



Central Fields - Dairy located as K-30

Eastern Fields - Dairy located as K-30



Moore Farm Field

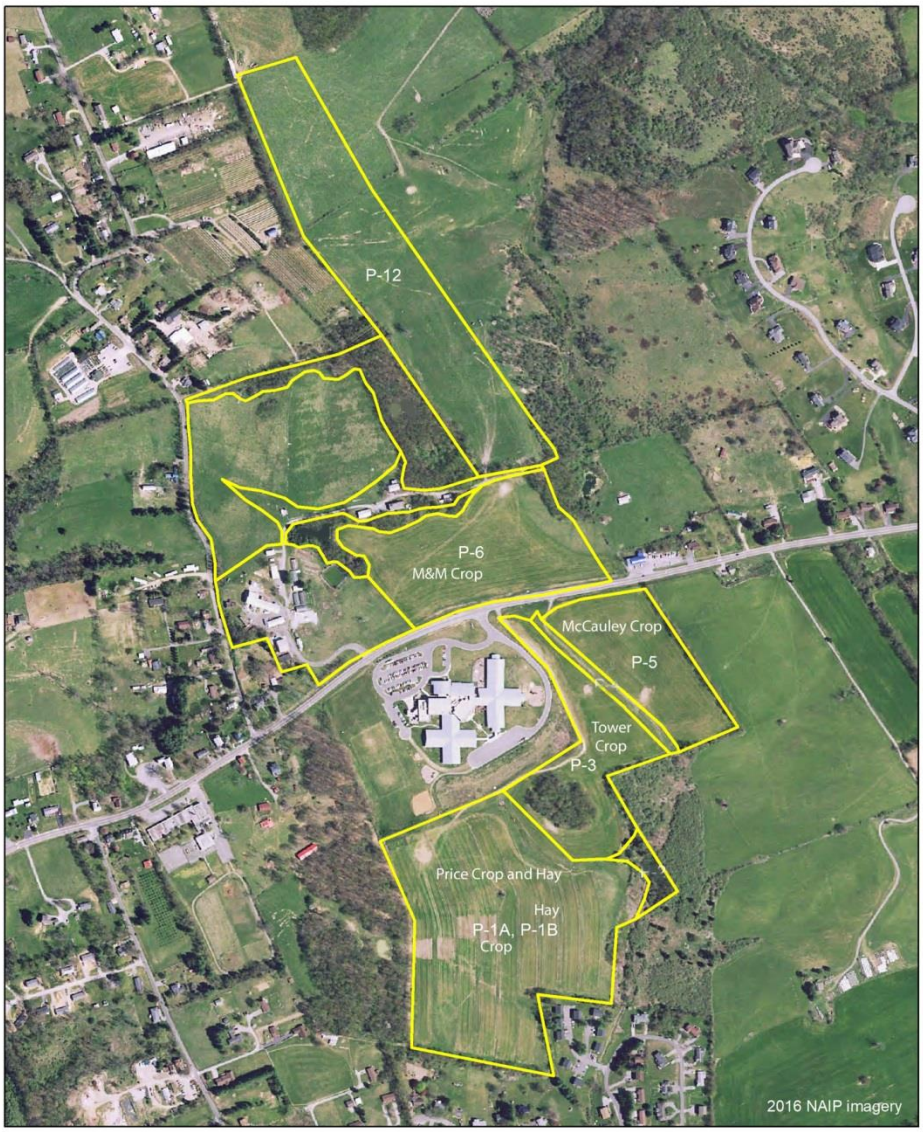
Plantation Fields

Plantation Road fields

N

0 75 150 300 450 600
Meters

Price Fields



Price Farm

N

0 70 140 280 420 560
Meters

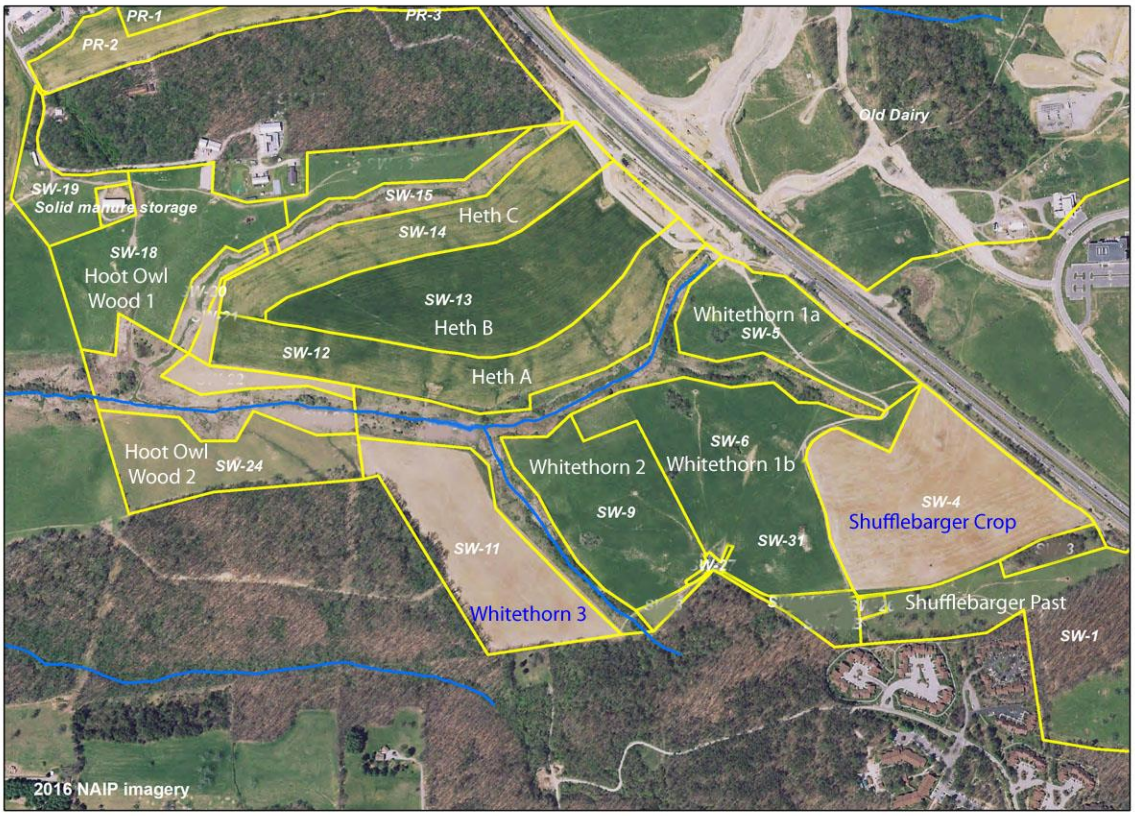
Smithfield Fields

Smithfield fields

N

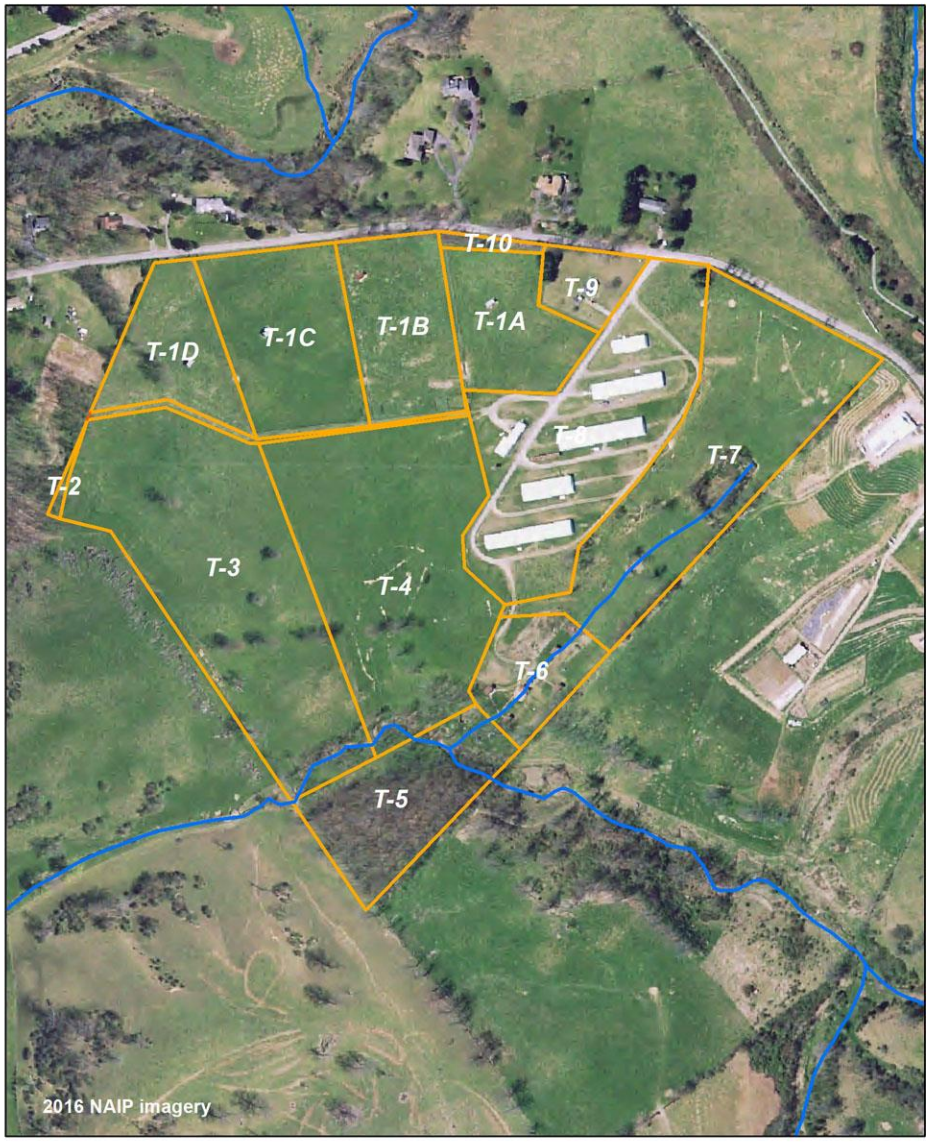
0 75 150 300 450 600 Meters

South West Fields



Southwestern fields

Turkey Fields on Glade Road



Turkey Research Center

N

0 50 100 200 300
Meters

Key to All Maps

Farm Name	Field Name	Field Number	Field Use	Useable Acres	Environmentally Sensitive
Heth Farm	Heth 18	H-4	Crop	18.7	no
Heth Farm	Heth 21	H-8	Crop	16.2	no
Heth Farm	Heth 3	H-3	Hay/Pasture	8.9	no
Heth Farm	Heth 40	H-2	Hay/Pasture	45.8	no
Heth Farm	Heth 54 Lower	H-7a	Crop	27.0	no
Heth Farm	Heth 54 Upper	H-7b	Crop	30.0	no
Heth Farm	Heth 9 Lower	H-9a	Hay/Pasture	13.8	no
Heth Farm	Heth 9 Middle	H-9b	Hay/Pasture	11.8	no
Heth Farm	Heth 9 Upper	H-9c	Hay/Pasture	8.1	Shallow soil, High Slope
Kentand	Adams House	K11	Hay/Pasture	6	no
Kentand	Cemetery Alfalfa	K65a	Crop	12	no
Kentand	Cemetery Corn	K65b	Crop	19	no
Kentand	Cemetery Hay	K65c	Hay Fescue	10	no
Kentand	Dairy 1, East	Dairy 1	Hay Fescue	18.4	no
Kentand	Dary 2, East	Dary 2	Hay Fescue	9.3	Shallow soil, High Slope
Kentand	Dairy 3, East	Dairy 3	Hay Fescue	14.1	no
Kentand	Dairy 4, East	Dairy 4	Hay Fescue	10.2	no
Kentand	Dwights	K1	Crop	12	no
Kentand	Harlens	K51a	Crop	7	no
Kentand	Harlens Buffer	K51b	Hay Fescue	2	no
Kentand	Horse Past 1	K9	Hay/Pasture	13	no
Kentand	Horse Past 2	K13	Hay/Pasture	23	no
Kentand	Horse Past 3	K12	Hay/Pasture	18	Shallow soil, High Slope
Kentand	Manor House	K62	Hay/Pasture	29	Sink holes
Kentand	Manor House Front	K62	Hay/Pasture	4	no
Kentand	Manor Parking	K82	Hay/Pasture	23	no
Kentand	Matt Crop Strips	K67c	Crop	25	High Slope, Sink holes
Kentand	Matt Hay Strips	K67b	Hay Fescue	25	High Slope, Sink holes
Kentand	Matt Hilltop	K67a	Crop	13	Sink holes
Kentand	Orchard Past	K46	Pasture	15	High Slope
Kentand	Pasture #1	K36	Hay/Pasture	33	High Slope, Sink holes
Kentand	Pasture #2	K37	Stockpile Fescue	32	High Slope, Sink holes
Kentand	Pasture #3	K38	Stockpile Fescue	32	High Slope, Sink holes
Kentand	Pasture #4	K39	Stockpile Fescue	34	High Slope, Sink holes
Kentand	Pasture #5	K40	Hay/Pasture	35	Shallow soil, High Slope,
Kentand	Pasture #6	K41	Hay/Pasture	30	Shallow soil, High Slope
Kentand	Repro A	K70	Hay/Pasture	20	High Slope, Sink holes
Kentand	Repro B	K73	Hay/Pasture	20	High Slope, Sink holes
Kentand	Repro C	K76	Hay/Pasture	20	High Slope, Sink holes

Farm Name	Field Name	Field Number	Field Use	Useable Acres	Environmentally Sensitive
Kentand	Repro D	K79	Hay/Pasture	20	High Slope, Sink holes
Kentand	Reservoir Corn	K54	Crop	6	no
Kentand	Showcase & Big Barn	K55a	Hay Fescue	15	no
Kentand	Silo	K16	Hay/Pasture	21	Sink holes
Kentand	Vaughts Past	K14	Hay/Pasture	15	no
Moore Farm	Fire Dept Crop Lower	M-13b	Hay/Pasture	12.0	no
Moore Farm	Fire Dept Crop Upper	M-13a	Hay/Pasture	14.0	no
Moore Farm	Fire Dept Past	M-9c-f	Pasture	29.1	Shallow soil, High Slope
Moore Farm	Observatory Pasture	M-17-20	Pasture	30.0	Shallow soil, High Slope
Moore Farm	Passco hay strips	M-23a	Hay/Pasture	25.0	no
Moore Farm	Passco crop strips	M-23b	Hay/Pasture	15.0	no
Moore Farm	Reynolds Pasture	M-9a-b,12	Pasture	24.7	Shallow soil, High Slope
Plantation Road	Beef Barn	PR-21	Pasture	10	no
Plantation Road	Bypass Crop	PR-3	Crop	10	no
Plantation Road	Horse Ring	PR-19	Pasture	5	no
Plantation Road	New Barn Pasture	PR-60-62	Pasture	8	no
Plantation Road	Piggry	PR-1	Crop	18.4	no
Plantation Road	Sheep Bypass	PR-24	Pasture	9	no
Plantation Road	Sheep Pasture 1	PR-42	Pasture	25	no
Price Farm	M+M crop	P-6	Crop	10.5	no
Price Farm	McCauley Crop	P-5	Crop	7.9	no
Price Farm	Price Strip Crop	P-1a	Crop	14.1	Shallow soil, High Slope
Price Farm	Price Strip Hay	P-1b	Hay Fescue	12.1	Shallow soil, High Slope
Price Farm	Tower Crop	P-3	Crop	9.3	no
Smithfield	Bike Path	SM-7	Pasture	7	no
Smithfield	Exit Crop	SM-1	Crop	14.3	no
Smithfield	Horse Past	SM-13-15	Pasture	16	no
Smithfield	Lower Past	SM-8	Hay/Pasture	6	no
Smithfield	Middle Past	SM-9, 11-12	Hay/Pasture	25	no
Smithfield	Plantation	SM-3	Crop	12	no
Smithfield	Upper Past	SM-10	Pasture	10	no
South West Fields	Heth A	SW-12	Crop	12.9	no
South West Fields	Heth B	SW-13	Crop	22.4	no
South West Fields	Heth C	SW-14	Crop	13.8	no
South West Fields	Hoot Owl Wood 1	SW-18	Pasture	30	no
South West Fields	Hoot Owl Wood 2	SW-24	Pasture	20	Shallow soil, High Slope
South West Fields	Shufflebarger Crop	SW-4	Hay/Pasture	24	no
South West Fields	Shufflebarger Pasture	SW-1	Pasture	11	Shallow soil, High Slope
South West Fields	Whitethorn 1a	SW-5	Pasture	18	no
South West Fields	Whitethorn 1b	SW-6	Pasture	22	no
South West Fields	Whitethorn 2	SW-9	Pasture	20	Shallow soil, High Slope

Farm Name	Field Name	Field Number	Field Use	Useable Acres	Environmentally Sensitive
South West Fields	Whitethorn 3	SW-11	Hay/Pasture	16	no
Turkey Fields	Turkey 3	T-3	Hay/Pasture	11	Shallow soil, Flood plain
Turkey Fields	Turkey 4	T-4	Hay/Pasture	10	Shallow soil, Flood plain
Turkey Fields	Turkey 7	T-7	Hay/Pasture	9	Shallow soil, Flood plain

Off-Farm/End-User - Maps

The location and field maps of Off Farm Fields included in this plan.

Saville Farm Fields

Saville Map Key

Donald Saville, 1920 Brooksfield Road, Blacksburg, VA 24060

Farm Name	Field Name	Field Number	Field Use	Useable Acres	Environmentally Sensitive
Saville	Crop	Crop8	Pasture	5.8	Shallow soil, High Slope
	Crop	Crop9	Pasture	2.8	Shallow soil, High Slope
	R1	R1	Pasture	4.4	Shallow soil, High Slope
	R2	R2	Pasture	2.5	

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

FACT SHEET
Requirements for Animal Waste Use and Storage

You have received this fact sheet because you are the end-user of animal waste (liquid, semi-solid, and solid animal manure and process wastewater, compost or sludges associated with animal feeding operations including the final treated wastes generated by a digester or other manure treatment technologies). As required by the Virginia Pollution Abatement General Permit Regulation (9VAC25-192), animal waste must be used in a manner consistent with this fact sheet or as specified in a nutrient management plan prepared by a Virginia certified Nutrient Management Planner. This fact sheet is intended to specify best management practices for land application of animal waste as a source of crop nutrients. If animal waste is to be used for purposes other than land application to crops (for example: animal feed or fuel), these uses may be subject to other laws or regulations. If animal waste is to be used outside of Virginia, contact that state regarding their requirements.

Storage Requirements

Animal waste that is not immediately land applied must be stored properly.

1. Animal waste shall be stored in a manner that prevents contact with surface water and ground water. Animal waste that is stockpiled outside for more than 14 days shall be kept in a facility or at a site that provides adequate storage and include the following:
   a. Animal waste shall be covered to protect it from precipitation and wind;
   b. Storm water shall not run onto or under the stored animal waste;
   c. A minimum of two feet separation distance to the seasonal high water table or an impermeable barrier shall be used under the stored waste. All waste storage facilities that use an impermeable barrier shall maintain a minimum of one foot separation between the seasonal high water table and the impermeable barrier. Construct impermeable barriers of at least 12 inches of compacted clay, at least four inches of reinforced concrete, or another material of similar structural integrity that has a minimum permeability rating of 0.0014 inches per hour ($1X10^{-6}$ centimeters per second); and
   d. For animal waste that is not stored in a waste storage facility or under roof, the storage site must be at least 100 feet from any surface water, intermittent drainage, wells, sinkholes, rock outcrops, and springs.
2. Any liquid animal waste collection and storage facility shall be designed and operated to (i) prevent point source discharges of pollutants to state waters except in the case of a storm event greater than the 25-year, 24-hour storm and (ii) provide adequate waste storage capacity to accommodate periods when the ground is frozen or saturated, periods when land application of nutrients should not occur due to limited or nonexistent crop nutrient uptake, and periods when physical limitations prohibit the land application of waste.
3. Waste storage facilities constructed after December 1, 1998, shall not be located on a 100-year floodplain.
4. Earthen waste storage facilities constructed after December 1, 1998, shall include a properly designed and installed liner. Such liner shall be either a synthetic liner of at least 20 mils thickness or a compacted soil liner of at least one foot thickness with a maximum permeability rating of 0.0014 inches per hour. A Virginia licensed professional engineer or an employee of the Natural Resources Conservation Service of the United States Department of Agriculture with appropriate engineering approval authority shall certify that the siting, design and construction of the waste storage facility comply with the requirements of subsection B of 9VAC25 -192-90. This certification shall be maintained on site.
5. At earthen waste storage facilities constructed below the seasonal high water table, the top surface of the waste must be maintained at a level of at least two feet above the water table.
6. All liquid waste storage or treatment facilities shall maintain at least one foot of freeboard at all times, up to and including a 25-year, 24-hour storm.

Soil Samples

Where soil samples are necessary to utilize any of the methods described in this document the sample must be less than three (3) years old. A representative soil sample of each field is comprised of at least 20 cores randomly sampled throughout the field. Samples should be taken from the top 4 inches of soil where land is not tilled, or the top 6 inches of soil where land is tilled.

Application Rate

The animal waste application rate can be determined using one of four options:

Option 1: Nutrient Management Plan

Animal waste application rates based on a nutrient management plan can be used when the plan has been developed by a certified nutrient management planner in accordance with §10.1-104.2 of the Code of Virginia. For assistance in locating a nutrient management plan writer: contact DCR at 804-225-4533 or consult the Virginia Nutrient Management Certified Planner Directory, available at: http://www.dcr.virginia.gov/water_quality/documents/nmdir.pdf

Option 2: Standard Rate

Animal waste may be applied to any crop at a rate of no greater than 80 pounds of plant available phosphorus per acre once every three years under the following conditions:

1) The plant available phosphorus supplied by the animal waste is based on a waste nutrient analysis obtained in the last two years;
2) In the absence of current soil sample analyses and recommendations; and
3) Nutrients have not been supplied by manure, biosolids, or other organic sources, other than pastured animals, to the proposed land application sites within the previous three years of the proposed land application date of animal waste.

Option 3: Soil Test Recommendations

Animal waste application rates based on soil test recommendations can be used under the following conditions:

1) The soil sample has been obtained in the last three years from the proposed field where animal waste will be applied.
2) Soil test recommendations have been provided by a laboratory whose procedures and recommendations are approved by the Department of Conservation and Recreation. Recommendations from the following laboratories are approved by DCR:

   ⇒ A&L Agricultural Lab (804) 743-9401 ⇒ Spectrum Analytical Lab 1-800-321-1562 ⇒ Virginia Tech Soil Testing Lab (540) 231-6305

3) Nutrients from the animal waste application do not exceed the nitrogen needs for the crop, and phosphorus recommendations do not exceed the recommendations for the crops in a three year rotation. If the animal waste application rate is made to supply all of the future crop phosphorus needs, no additional phosphorus is to be applied during the rotation.

Example for Calculating Animal Waste Rate Based on Soil Test Recommendation:

$$\text{Animal waste Application Rate (Gallons or Tons per acre)} = \frac{\text{Soil Test P Recommendation}}{\text{Animal Waste P Analysis}}$$

Corn crop needs: **120 lbs/acre Nitrogen** and soil test recommendation for **60 lbs/ac Phosphorus**

Animal waste analysis: Available Nitrogen = **40 lbs/ton of animal waste**, P_2O_5 = **50 lbs/ton of animal waste**

	1st Crop	+	2nd Crop	+	3rd Crop	Options
Three (3) Crop Rotation:	Corn grain **60 lbs/ac P recommended** 1.2 tons animal waste	+	Wheat grain **60 lbs/ac P recommended** 1.2 tons animal waste	+	Soybeans **60 lbs/ac P recommended** 1.2 tons animal waste	**Apply 1.2 tons to each crop OR Apply only 3.0 tons animal waste to Corn (0.6 tons animal waste to Wheat or Soybeans)**

In this example, 1.2 tons of animal waste (60 ÷ 50) will provide the 60 lbs of phosphorus needed for each crop with the nitrogen needs supplemented by commercial fertilizer. Alternatively, applying 3.0 tons of animal waste to the corn crop provides 150 lbs (50x3) of phosphorus for the rotation without exceeding the 120 lbs of nitrogen (40x3) needed by the corn crop. Animal waste used on the wheat or beans cannot exceed the total phosphorus needs of the rotation.

Option 4: Phosphorous Crop Removal

Animal waste application rates based on phosphorus crop removal can be used when the soil test phosphorus levels do not exceed the values listed in Table 1. Table 2. is used to determine the pounds of P2O5 removed per unit of harvested yield.

ANIMAL WASTE RATE CALCULATION

$$\text{Animal Waste Rate (Gallons or Tons per acre)} = \frac{\text{Yield per acre (tons or bushels)} \times P_2O_5 \text{ removal per yield unit (lbs)}}{\text{Animal Waste } P_2O_5 \text{ content (lbs per gallon or ton)}}$$

Table 1. Maximum Soil P	VPI & SU (Mehlich I)		A&L (Mehlich III)	
REGION	**P (lbs/ acre)**	**P (ppm)**	**P (lbs/ acre)**	**P (ppm)**
Eastern Shore and Lower Coastal Plain	270	135	506	253
Middle and Upper Coastal Plain and Piedmont	272	136	508	254
Ridge and Valley	324	162	562	281

Table 2. Phosphorus Removed

Crops	**LBS. P_2O_5 Per Yield Unit (lbs)**	
Row Crops	Grain - Bushels	Silage - Tons
Corn	0.38	4.2
Wheat	0.51	4.2
Barley	0.40	5.1
Rye	0.45	5.6
Soybeans	0.89	10.0
Forages	Hay - Tons	Pasture
Fescue or Orchardgrass	16.0	****
Bermudagrass	10.4	****

Notes for Table 2:

1. **** divide **25** by the animal waste P_2O_5 content to calculate the animal waste application rate.
2. For double crops, add removal for each crop.
3. Additional crops - see Table 4-7 of the DCR Standards and Criteria at: http://www.dcr.virginia.gov/documents/StandardsandCriteria.pdf

Notes:

Land Application Conditions & Buffer Zones

Do not spread animal waste within the following buffer zones:

- 100 feet from wells or springs
- 100 feet from surface water without a permanent vegetated buffer*
- 35 feet from surface water with a permanent vegetated buffer*
- Animal waste may not be applied to ice or snow covered ground or saturated soils
- 25 feet from other rock outcroppings
- 50 feet from limestone outcroppings
- 200 feet from occupied dwellings (unless the occupant signs a waiver of the buffer zone)
- Animal waste shall not be applied in such a manner that it would discharge to sinkholes that may exist in the area

* A vegetated buffer is a permanent strip of dense vegetation established parallel to the contours of and perpendicular to the dominant slope of the field.

Application Timing

CROP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Corn	■	■	■	■	■						■	■
Small Grain	■	■	■					■	■	■	■	■
Hay or Pasture *	■	■	■	■							■	■
Hay or Pasture **	■	■	■	■	■	■			■	■	■	■

* Includes all cool-season grasses: fescue, orchardgrass (growth occurs in the cooler months of the spring & fall)

** Includes all warm-season grasses: bermudagrass (growth occurs in the heat of the summer)

	Animal waste may be spread during these periods
■	Do not spread animal waste during these shaded periods

Do not spread animal waste more than 30 days prior to planting.

Recordkeeping

Land application of animal waste must comply with the criteria outlined in this fact sheet. All records must be maintained for at least three (3) years from the date of the transaction and land application date.

The attached forms are provided to meet the recordkeeping requirements of the end-user.

(See "End-User Animal Waste Transfer Record" & "Animal Waste Land Application Recordkeeping Form")

The following items related to animal waste transactions must be provided to the source of the animal waste by the end-user:

- ⇒ Recipient name & Signature
- ⇒ Recipient address
- ⇒ Locality where animal waste will be utilized (nearest town/city and zip code)
- ⇒ Name of stream or waterbody nearest to utilization or storage site

The following items related to animal waste transactions must be documented by the end-user:

- ⇒ Source name
- ⇒ Source address
- ⇒ Source permit number (if applicable)
- ⇒ Date animal waste was received
- ⇒ Amount of animal waste received
- ⇒ Final use of animal waste
- ⇒ Locality where animal waste will be utilized (nearest town/city and zip code)
- ⇒ Name of stream or waterbody nearest to utilization or storage site

The following items related to land application of animal waste must be documented by the end-user:

- ⇒ Nutrient analysis of animal waste
- ⇒ Maps identifying the application fields and storage sites
- ⇒ Land application rate(s)
- ⇒ Land application date(s)
- ⇒ Crops planted
- ⇒ Soil test results (if obtained)
- ⇒ Method used to determine the animal waste application rate(s): (NMP, standard rate, soil test recommendations or phosphorus crop removal)
- ⇒ Nutrient management plan (if applicable)

Additional Information

This fact sheet provides basic information. For additional information regarding requirements for animal waste management, please visit the DEQ website at http://www.deq.state.va.us/Programs/Water/LandApplicationBeneficialReuse/LivestockPoultry.aspx

You may also contact the Virginia DEQ toll free (in Virginia) at **1-800-592-5482**.

End-User Animal Waste Transfer Record

This record must be maintained by the end-user for at least three (3) years from the date of the waste transfer.

SOURCE INFORMATION: Animal Feeding Operations Owner/Permittee

DEQ Permit #: VPG100013

Name: Mr. Brooks Saville Business Name: Virginia Tech College of Agriculture

Mailing Address: 1020 Old Mill Road, Blacksburg, VA 24060
(Street)

Date(s):	Amount:	☐ Gallons ☐ Tons	Waste Analysis N-P-K (available - lbs/gal or ton):
Locality where litter will be utilized or stored:			Nearest Stream or Waterbody to Land Application or Storage Area:
Town or City Blacksburg	Zip 24060		
Final Use of Waste: ☐ Fertilizer ☐ Feed ☐ Fuel ☐ Other (specify):			

Date(s):	Amount:	☐ Gallons ☐ Tons	Waste Analysis N-P-K (available - lbs/gal or ton):
Locality where litter will be utilized or stored:			Nearest Stream or Waterbody to Land Application or Storage Area:
Town or City	Zip		
Final Use of Waste: ☐ Fertilizer ☐ Feed ☐ Fuel ☐ Other (specify):			

SOURCE INFORMATION: Animal Feeding Operations Owner/Permittee

DEQ Permit #: _____

Name: _____ Business Name: _____

Mailing Address: _____
(Street) (City) (State) (Zip)

Date(s):	Amount:	☐ Gallons ☐ Tons	Waste Analysis N-P-K (available - lbs/gal or ton):
Locality where litter will be utilized or stored:			Nearest Stream or Waterbody to Land Application or Storage Area:
Town or City	Zip		
Final Use of Waste: ☐ Fertilizer ☐ Feed ☐ Fuel ☐ Other (specify):			

Date(s):	Amount:	☐ Gallons ☐ Tons	Waste Analysis N-P-K (available - lbs/gal or ton):
Locality where litter will be utilized or stored:			Nearest Stream or Waterbody to Land Application or Storage Area:
Town or City	Zip		
Final Use of Waste: ☐ Fertilizer ☐ Feed ☐ Fuel ☐ Other (specify):			

Animal Waste Land Application Recordkeeping Form

This record must be maintained by the end-user for at least three (3) years from the land application date. If animal waste is not land applied, this information is not required to be documented.

Date Animal Waste Applied	Field Identification	Number of Acres	Crop Planted	Nutrient Analysis of Waste (available N-P-K lbs/gals or tons)	Gals or Tons of Waste Applied per Acre	Method Used to Determine Rate 1) NMP 2) Std Rate 3) Soil Test 4) P Removal

In addition, the following items must be maintained for at least three (3) years from the land application date:

1. **Field Maps:** a copy of the map with field ID for each field receiving litter
2. **Soil Tests:** If a soil test was obtained, a copy of the test result(s)
3. **NMP:** If an NMP was used to determine the application rate(s), a copy of the plan

Nutrient Management Plan Special Conditions for Virginia Pollution Abatement (VPA) and Virginia Pollutant Discharge Elimination System (VPDES) Permits

September 2011

The following management practices will be utilized for <u>dairy/beef operations</u> requiring a VPA or VPDES permit:

1. Soil samples for manure application fields will be analyzed at least once every three (3) years for pH, phosphorus, potassium, calcium, and magnesium in order to maximize the efficient utilization of nutrients. A representative soil sample of each field will be comprised of at least twenty (20) cores randomly sampled throughout the field. Soil sampling core depth will be from 0-4 inches for land which has not been tilled within the past three (3) years, or 0-6 inches for land that has been tilled within the past three (3) years. Soil pH will be maintained at appropriate agronomic levels to promote optimum crop growth and nutrient utilization.

2. Soil test analysis will be performed by one of the laboratories listed below. Soil phosphorus levels must be determined using the Mehlich I or Mehlich III procedure.
   - A&L Eastern Laboratories
   - Agri-Analysis Testing Laboratory
   - AgroLab
   - Brookside Laboratories
   - Logan Labs
   - Midwest Laboratories (must request Mehlich III)
   - Spectrum Analytical Laboratories
   - Virginia Tech Soil Testing Lab
- Waters Agricultural Laboratories (GA)

3. Representative manure samples will be analyzed at a minimum of once per year for VPA permits and twice per year for VPDES permits for the following: total nitrogen or total Kjeldahl nitrogen (TKN), ammonium nitrogen, total phosphorus, total potassium, calcium, magnesium, and percent (%) moisture. Separate samples shall be taken from all manure sources to be used for application (i.e. liquid, solid, etc.). All manure analyses shall be performed using laboratory methods consistent with *Recommended Methods of Manure Analysis*, publication A3769, University of Wisconsin, 2003 or other methods approved by the Virginia Department of Conservation and Recreation (DCR). Manure analysis results will be used to determine actual manure rates that do not exceed the nitrogen and phosphorus application rates specified in the nutrient management plan using either the most recent manure analysis results (not greater than 1 year old) or the facility's average results based on actual manure analysis. Dairy manure coefficients for organic nitrogen availability in manures (found in Table 8-2 of *Virginia Nutrient Management Standards and Criteria, Revised October 2005*) shall be used for beef manure.

4. All crops will be planted and harvested in a timely manner using commercially acceptable management practices.

5. Make manure applications at or near planting or to existing actively growing crops to ensure that nutrients are properly utilized. Utilize the spreading schedule contained in the nutrient management plan and the spreading schedule in #23 of this document to determine appropriate manure application times and rates. Additional commercial fertilizer applications (especially nitrogen) should be made as a split application separate from the manure applications, either as a sidedress or topdress application.

6. For permanent hay or pasture, an adequate stand of hay and/or pasture crop species will be established prior to land application of manure. Commercially acceptable stands of the listed species will be maintained and other

weeds and grasses controlled. All hay crops will be harvested in a timely and regular manner, removed from fields, and utilized for a suitable purpose.

7. Manure will be applied to application sites in a uniform manner.

8. Do not spread manure within the following setback areas:
   - 100 feet from wells or springs
   - 35 feet from surface waters if the entire setback is a permanent perennial vegetated buffer
   - **OR**
   - 100 feet from surface waters if there is not a permanent perennial vegetated buffer of at least 35 feet in width
   - 50 feet from sinkholes*
   - 50 feet from limestone rock outcrops
   - 25 feet from other rock outcrops
   - 10 feet from agricultural drainage ditches (5 feet if injected)
   - 200 feet from occupied dwellings (unless waived in writing by the occupant)

   *Waste shall not be applied in areas subject to concentrated flow generated by runoff from storm events such that it would discharge into sinkholes in the area.

9. To avoid manure runoff from application fields*:
   - Do not spread manure on soils that are saturated.
   - Do not apply liquid manure (above 85.5% moisture content) or commercial fertilizers to frozen, ice or snow covered ground.

   *If runoff is observed, reduce the application rate immediately to prevent overland flow, which reaches buffer areas or accumulates in low-lying areas.

10. For odor control and to reduce drift, avoid spreading on windy days.

11. Liquid irrigation systems will be operated in a manner to prevent runoff into buffered areas and low-lying areas. Use a liquid application rate at or below the specified maximum hydraulic application rate for each field per application. Traveling guns used for irrigation of effluent should be operated in a full circle pattern whenever possible to allow for maximum infiltration. A small wedge shaped area may be left dry ahead of the gun to reduce soil compaction.

12. Spreader calibration is extremely critical to ensure proper application rates. Calibration of equipment or verification of actual equipment application rates shall occur at a minimum of once per year.

13. New waste storage facilities shall be designed, constructed and operated in accordance with the USDA-NRCS *Field Office Technical Guide* and other appropriate NRCS design criteria.

14. Earthen waste storage structures must be regularly inspected and repaired if leaks, slope failures, excessive embankment settlement, eroded banks, or burrowing animals are detected. A protective cover of appropriate vegetation will be established and maintained on all disturbed areas (lagoon and storage pit embankments, berms, pipe runs, etc.). Vegetation such as trees, shrubs and other woody species are limited to areas considered to be appropriate such as wind breaks or visual screens, and are not to be present on lagoon and storage pit embankments, berms, or pipe runs.

15. Waste handling structures, piping, pumps, etc. should be inspected on a regular basis to prevent breakdowns, leaks and spills.

16. Composting of animal mortalities will be conducted in accordance with the latest guidance developed by Virginia Cooperative Extension.

17. Any facility required in the General Permit to monitor groundwater shall monitor groundwater for the following parameters at a frequency of at least once annually: static water level, ammonia nitrogen, nitrate nitrogen, pH and conductivity.

18. Nutrient management plans that contain fields in which row crops will be grown will be revised at least once every three (3) years. Nutrient management plans that contain only hay or pasture fields will be revised at least once every five (5) years. Any such plan revisions will be submitted to DCR for review and approval.

19. This nutrient management plan must be amended or modified and submitted to DCR for review and approval if animal numbers increase above the level specified in the plan; animal types including intended market weights are changed; additional imported manure, biosolids, or industrial waste that was not identified in the existing plan is applied to fields under the control of the operator; available land area for the utilization of manure decreases below the level necessary to utilize manure in the plan; and/or manure application fields have Mehlich I soil phosphorus levels at or above 55ppm (110 lbs/acre) where either cropping systems, rotations, or fields are changed.

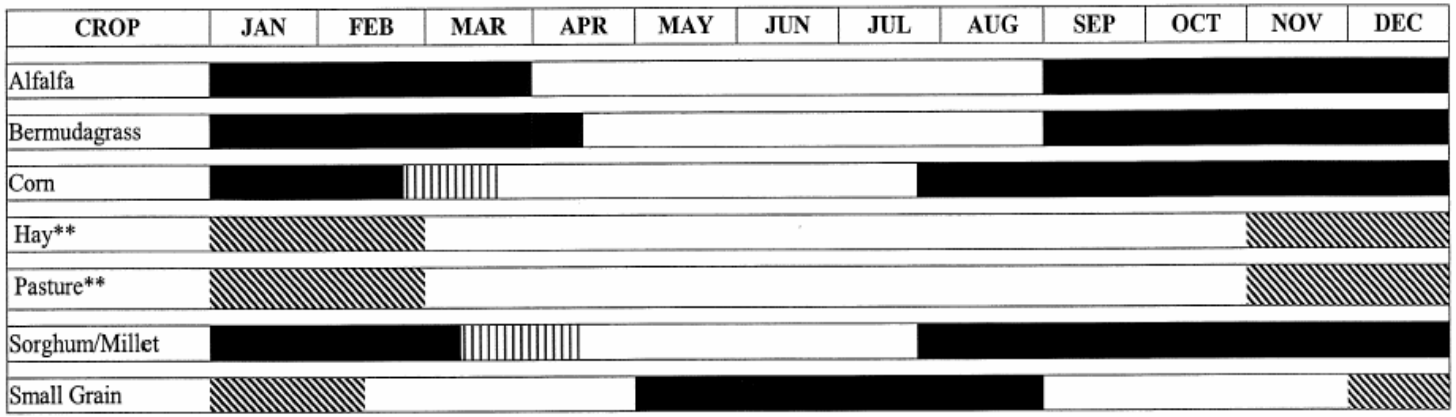
20. Minor plan amendments involving changes to the cropping system, crop rotations, specific application fields, manure analysis results or minor fluctuations in animal market weights or animal numbers (10% or less cumulative increases since this original plan was developed) may be made to this nutrient management plan without he prior approval of DCR by the specific certified nutrient management planner that developed this plan. Any such plan amendments must be made prior to subsequent nutrient application to fields impacted by the change. Certified nutrient management planners shall provide a copy of any such plan amendments to DCR within two (2) weeks of the plan modification.

21. All major plan modifications shall be submitted to DCR for review and approval prior to implementing any changes. Major modifications include, but are not limited to, proposed changes to the plan expiration date; increases in animal numbers of greater than 10%; changes in animal type including intended market weight; additional imported manure, biosolids, or industrial wastes not included in the original plan are to be applied; or available land area for the utilization of manure decreases below the level necessary to utilize manure in the plan due to sale of land, expired lease, etc.

22. These conditions do not override any more restrictive plan requirements if required by other specific legislative, regulatory or incentive programs which apply to a specific operator.23. Manure spreading schedule:

6. Manure spreading schedule.

DAIRY/BEEF MANURE SPREADING SCHEDULE*



*Do not spread liquid manure, dry or semi solid manure, or parlor effluent on soils that are saturated.

*Do not spread liquid manure/effluent (above 85.5% moisture content) to frozen, ice or snow covered ground.

*Application of dry or semi solid manure (85.5% moisture content or less) should be avoided on frozen, ice or snow covered ground. If necessary applications may be made to fields that have: (i) slopes not greater than 6.0%, (ii) 60% uniform ground cover from crop residue or an existing actively growing crop such as a small grain or tall fescue with an exposed plant height of ≥ 3", (iii) a minimum 200-foot vegetated or adequate crop residue buffer between the application area and all surface water courses, and (iv) soils characterized by USDA as "well drained".

** Cool season grasses only, Fescue and or Orchardgrass

Spread liquid manure, dry or semi solid manure, and parlor effluent at the rates and times specified in the nutrient management plan

Do not spread liquid manure, dry or semi solid manure, and parlor effluent during these shaded months.

Manure applications will not be made earlier than 30 days prior to planting on environmentally sensitive sites.
On fields not listed as environmentally sensitive:

- Liquid manure applications will not occur more than 60 days prior to spring planting.
- Applications of semi-solid beef manure (85.5% moisture content or less) or semi-solid dairy manure (85.5% moisture content or less) for operations using straw or sawdust (not sand) bedding will not occur more than 90 days prior to spring planting on fields having (i) slopes less than 7% throughout the application area or (ii) having at least 60% uniform ground cover from crop residue.

Manure applications are not recommended during this period (late fall-winter). If necessary uniformly apply a maximum of 3,000 gallons per acre per application. If using an irrigation system apply up to a maximum of a ¼ inch per acre per hour. Do not exceed 40 pounds of plant available nitrogen per acre during this entire period. Allow sufficient drying time between applications. Fields must have greater than 60% uniform live cover with plant height greater than three (3) inches.

Nutrient Management Plan Special Conditions for Virginia Pollution Abatement (VPA) and Virginia Pollutant Discharge Elimination System (VPDES) Permits

September 2011

The following management practices will be utilized for <u>swine operations</u> requiring a VPA or VPDES permit:

1. Soil samples for manure application fields will be analyzed at least once every three (3) years for pH, phosphorus, potassium, calcium, and magnesium in order to maximize the efficient utilization of nutrients. A representative soil sample of each field will be comprised of at least twenty (20) cores randomly sampled throughout the field. Soil sampling core depth will be from 0-4 inches for land which has not been tilled within the past three (3) years, or 0-6 inches for land that has been tilled within the past three (3) years. Soil pH will be maintained at appropriate agronomic levels to promote optimum crop growth and nutrient utilization.

2. Soil test analysis will be performed by one of the laboratories listed below. Soil phosphorus levels must be determined using the Mehlich I or Mehlich III procedure.
   - A&L Eastern Laboratories
   - Agri-Analysis Testing Laboratory
   - AgroLab
   - Brookside Laboratories
   - Logan Labs
   - Midwest Laboratories (must request Mehlich III)
   - Spectrum Analytical Laboratories
   - Virginia Tech Soil Testing Lab
   - Waters Agricultural Laboratories (GA)

3. Representative manure samples will be analyzed at a minimum of once per year for VPA permits and twice per year for VPDES permits for the following: total nitrogen or total Kjeldahl nitrogen (TKN), ammonium nitrogen, total phosphorus, total potassium, calcium, magnesium, and percent (%) moisture. Separate samples shall be taken from all manure sources to be used for application (i.e. under-house, lagoon, compost, etc.). All manure analyses shall be performed using laboratory methods consistent with *Recommended Methods of Manure Analysis*, publication A3769, University of Wisconsin, 2003 or other methods approved by the Virginia Department of Conservation and Recreation (DCR). Manure analysis results will be used to determine actual manure rates that do not exceed the nitrogen and phosphorus application rates specified in the nutrient management plan using either the most recent manure analysis results (not greater than 1 year old) or the facility's average results based on actual manure analysis.

4. All crops will be planted and harvested in a timely manner using commercially acceptable management practices.

5. Make manure applications at or near planting or to existing actively growing crops to ensure that nutrients are properly utilized. Utilize the spreading schedule contained in the nutrient management plan and the spreading schedule in #26 of this document to determine appropriate manure application times and rates. Additional commercial fertilizer applications (especially nitrogen) should be made as a split application separate from the manure applications, either as a sidedress or topdress application.

6. For permanent hay or pasture, an adequate stand of hay and/or pasture crop species will be established prior to land application of manure. Commercially acceptable stands of the listed species will be maintained and other

weeds and grasses controlled. All hay crops will be harvested in a timely and regular manner, removed from fields, and utilized for a suitable purpose.

7. Manure will be applied to application sites in a uniform manner.

8. Do not spread manure within the following setback areas:
   - 100 feet from wells or springs
   - 35 feet from surface waters if the entire setback is a permanent perennial vegetated buffer
   - **OR**
   - 100 feet from surface waters if there is not a permanent perennial vegetated buffer of at least 35 feet in width
   - 50 feet from sinkholes*
   - 50 feet from limestone rock outcrops
   - 25 feet from other rock outcrops
   - 10 feet from agricultural drainage ditches (5 feet if injected)
   - 200 feet from occupied dwellings (unless waived in writing by the occupant)

   *Waste shall not be applied in areas subject to concentrated flow generated by runoff from storm events such that it would discharge into sinkholes in the area.

9. To avoid manure runoff from application fields*:
   - Do not spread manure on soils that are saturated.
   - Do not apply liquid manure (above 85% moisture content) or commercial fertilizers to frozen, ice or snow-covered ground.

   *If runoff is observed, reduce the application rate immediately to prevent overland flow, which reaches buffer areas or accumulates in low-lying areas.

10. For odor control and to reduce drift, avoid spreading on windy days.

11. Liquid irrigation systems will be operated in a manner to prevent runoff into buffered areas and low-lying areas. Use a liquid application rate at or below the specified maximum hydraulic application rate for each field per application. Traveling guns used for irrigation of effluent should be operated in a full circle pattern whenever possible to allow for maximum infiltration. A small wedge shaped area may be left dry ahead of the gun to reduce soil compaction.

12. Spreader calibration is extremely critical to ensure proper application rates. Calibration of equipment or verification of actual equipment application rates shall occur at a minimum of once per year.

13. New waste storage facilities shall be designed, constructed and operated in accordance with the USDA-NRCS *Field Office Technical Guide* and other appropriate NRCS design criteria.

14. Earthen waste storage structures must be regularly inspected and repaired if leaks, slope failures, excessive embankment settlement, eroded banks, or burrowing animals are detected. A protective cover of appropriate vegetation will be established and maintained on all disturbed areas (lagoon and storage pit embankments, berms, pipe runs, etc.). Vegetation such as trees, shrubs and other woody species are limited to areas considered to be appropriate such as wind breaks or visual screens, and are not to be present on lagoon and storage pit embankments, berms, or pipe runs.

15. New lagoons will be charged to at least ½ of treatment volume capacity with water prior to placement of hogs into production facilities in order to promote biological treatment activity and to reduce odor. When charging lagoons, carefully manage the rate of the water input to avoid damage to lagoon liners.

16. For operations with anaerobic lagoons, pumping shall be managed to maintain the lagoon level between the maximum and minimum operating level. The lagoon level shall be pumped to near the minimum operating level in preparation for the late fall-winter period. The effluent removed shall be uniformly applied, to the designated

fields in the nutrient management plan, at or below the maximum rate specified in the plan. Visible markers or another practical method shall be used in new lagoons to indicate the minimum and maximum operating levels based on the lagoon design specifications.

17. Waste discharge from inlet pipe(s) must not have direct contact with clay liner, in order to avoid erosion of the liner. The discharge line(s) must extend past the minimum operating level such that lagoon influent will discharge over the water surface.

18. Waste handling structures, piping, pumps, etc. should be inspected on a regular basis to prevent breakdowns, leaks and spills.

19. Composting of animal mortalities will be conducted in accordance with the latest guidance developed by Virginia Cooperative Extension.

20. Any facility required in the General Permit to monitor groundwater shall monitor groundwater for the following parameters at a frequency of at least once annually: static water level, ammonia nitrogen, nitrate nitrogen, pH and conductivity.

21. Nutrient management plans that contain fields in which row crops will be grown will be revised at least once every three (3) years. Nutrient management plans that contain only hay or pasture fields will be revised at least once every five (5) years. Any such plan revisions will be submitted to DCR for review and approval.

22. This nutrient management plan must be amended or modified and submitted to DCR for review and approval if animal numbers increase above the level specified in the plan; animal types including intended market weights are changed; additional imported manure, biosolids, or industrial waste that was not identified in the existing plan is applied to fields under the control of the operator; available land area for the utilization of manure decreases below the level necessary to utilize manure in the plan; and/or manure application fields have Mehlich I soil phosphorus levels at or above 55ppm (110 lbs/acre) where either cropping systems, rotations, or fields are changed.

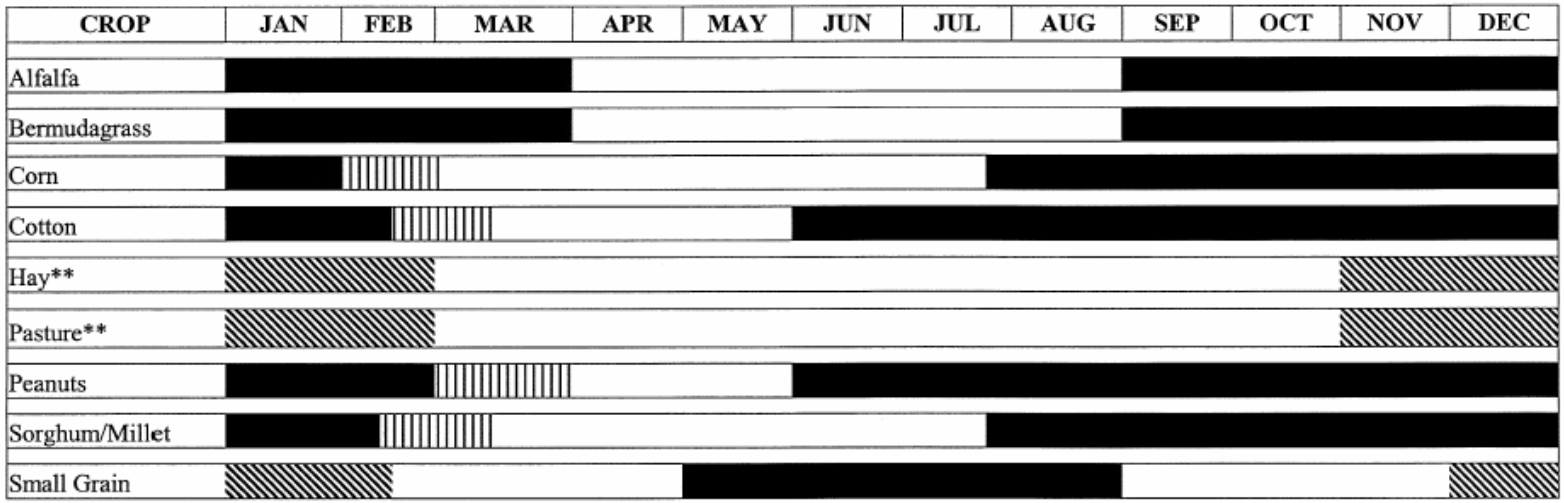
23. Minor plan amendments involving changes to the cropping system, crop rotations, specific application fields, manure analysis results or minor fluctuations in animal market weights or animal numbers (10% or less cumulative increases since this original plan was developed) may be made to this nutrient management plan without he prior approval of DCR by the specific certified nutrient management planner that developed this plan. Any such plan amendments must be made prior to subsequent nutrient application to fields impacted by the change. Certified nutrient management planners shall provide a copy of any such plan amendments to DCR within two (2) weeks of the plan modification.

24. All major plan modifications shall be submitted to DCR for review and approval prior to implementing any changes. Major modifications include, but are not limited to, proposed changes to the plan expiration date; increases in animal numbers of greater than 10%; changes in animal type including intended market weight; additional imported manure, biosolids, or industrial wastes not included in the original plan are to be applied; or available land area for the utilization of manure decreases below the level necessary to utilize manure in the plan due to sale of land, expired lease, etc.

25. These conditions do not override any more restrictive plan requirements if required by other specific legislative, regulatory or incentive programs which apply to a specific operator.26. Manure spreading schedule:

6. Manure spreading schedule.

SWINE MANURE SPREADING SCHEDULE*



***Do not spread liquid manure, dry or semi solid manure on soils that are saturated.**

***Do not spread liquid manure/effluent (above 85.5% moisture content) to frozen, ice or snow covered ground.**

***Application of dry or semi solid manure (85.5% moisture content or less) should be avoided on frozen, ice or snow covered ground. If necessary applications may be made to fields that have: (i) slopes not greater than 6.0%, (ii) 60% uniform ground cover from crop residue or an existing actively growing crop such as a small grain or tall fescue with an exposed plant height of ≥ 3", (iii) a minimum 200-foot vegetated or adequate crop residue buffer between the application area and all surface water courses, and (iv) soils characterized by USDA as "well drained".**

**** Cool season grasses only, Fescue and or Orchardgrass**

Spread liquid manure and dry or semi solid manure at the rates and times specified in the nutrient management plan

Do not spread liquid manure and dry or semi solid manure during these shaded months.

Manure applications will not be made earlier than 30 days prior to planting on environmentally sensitive sites.
On fields not listed as environmentally sensitive:

- **Liquid manure applications will not occur more than 60 days prior to spring planting.**

Manure applications are not recommended during this period (late fall-winter). If necessary uniformly apply a maximum of 3,000 gallons per acre per application. If using an irrigation system apply up to a maximum of a ¼ inch per acre per hour. Do not exceed 40 pounds of plant available nitrogen per acre during this entire period. Allow sufficient drying time between applications. Fields must have greater than 60% uniform live cover with plant height greater than three (3) inches.