

Nutrient Management Plan Essentials

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VASWCD Annual Meeting

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What Is In a Plan?

Key pieces of information to successfully create a plan:

- Maps – aerial (FSA)
- Soil samples
- Crop rotation
- Yield records – past five years
- Previous conditions
- Typical fertilizer schedule (application methods)
- Animal numbers
- Manure samples
- Narrative
- Certain cost-share & grant programs

Receiving soil test results, ordering fertilizer, finalizing next crops

Early growing season

Harvest, prep for cover crop planting



Apr- Jun



Sept - Dec

Jan - Mar

July - September

Sept - Nov



Planting preparation



Crop season

Soil sample, send off for analysis



Our jobs are cyclic!

Services Potentially Offered by Planners

Manure spreader calibration

Manure sampling

Soil sampling

Fertilizer calculations

* These services depend on the availability of the planner. It is important for the producer and planner to coordinate sampling and calibration needs.



Plan Writing Program and Parts of Actual Nutrient Management Plans

Plan Content Requirements: where does it come from?

Information required to be in plans is based on Virginia Nutrient Management Regulations.

This includes plan content and the procedures that go into creating the content.

Regulations can be found on VA Law Website

<https://law.lis.virginia.gov/admincode/title4/agency50/chapter85/>

OR

DCR Website

www.dcr.virginia.gov/soil-and-water/document/nm-training-certification-regulations-2022.pdf

Reading Nutrient Management Plans

You have a plan in your hands, now what?

Tract: Blysdale (T 165) Location: Stafford
 (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)	Notes
6/1(0P)	12/12	2023	Barley (cover)	0-0-0	17/0				(15)-0-0	0	0-0-0(br)	
		2024	Corn (grain)	100-0-30	0/0			100-0-30	38	30-0-30(br)		
										30-0-0(ba)		
										40-0-0(sd)		1
		2025	Barley (cover)	0-0-0	0/0				0-0-0	38	0-0-0(br)	
			Soybeans (FS)	0-0-30	0/0				0-0-30	60	0-0-30(br)	
			Barley (cover)	0-0-0	13/0			(10)-0-0	60	0-0-0(br)		

Nutrient Management Plan: Balance Sheet

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

Land Unit Identifier/ Name	Size Total /Usable	Yr.	Crop	Needs N-P-K (lbs/ac)	Residuals Hist/Leg/ Man/Bio	Season	Man/Bio Rate& Type	IT (d)	Man/BIOS applied N-P-K (lbs/ac)	Net=Needs- applied N-P-K (lbs/ac)	Commercial N-P-K (lbs/ac)	Notes	Lime Rec.	Sum P removal credit		
Test Field 1 / Test Field 1(N)	12.22/12.20	2024	Cotton (bolls)	120-60-100	0/0/0/0	Spring				120-60-100	30-60-100(br)			0		
						Summer			45-0-0(sd)		1					
			Rye (cover)	0-0-0	0/0/0/0	Fall					0-0-0	45-0-0(sd)			0	
						Winter										
		2025	Corn (grain)	150-80-80	0/0/0/0	Spring				150-80-80	30-0-0(b)				47	
						Summer			0-80-80(br)			60-0-0(sd)	2			
			Legume cover crop	0-0-0	0/0/0/0	Fall				0-0-0	60-0-0(sd)				47	
						Winter										
		2026	Corn (grain)	150-80-80	0/100/0/0	Spring				50-80-80	30-0-0(b)				93	
						Summer			0-80-80(br)			20-0-0(sd)				
Wheat (cover)	0-0-0		0/0/0/0	Fall				0-0-0					93			
				Winter												
Test Field 2 / Test Field 2(N)	5.42/5.40	2024	Corn (grain)	120-30-80	0/0/0/0	Spring			120-30-80	30-0-0(b)				45		
						Summer				0-30-80(br)		30-0-0(sd)	2			
			Wheat (grain)	100-30-80	0/0/0/0	Fall				100-30-80	30-30-80(br)				64	
						Winter			30-0-0(td)							
		2025	Wheat (grain)	100-30-80	0/0/0/0	Spring			100-30-80	40-0-0(td)				64		
						Summer				0-30-80(br)						
			Soybeans (DC)	0-30-80	0/0/0/0	Fall				0-30-80	(15)-0-0				83	
						Winter										
		2026	Fescue grass (hay), estab.	120-75-140	0/0/0/0	Spring			120-75-140				60-75-140(br)			97
						Summer						60-0-0(td)				
Fall																
Winter																

*minimum 20 lb. N sidedress

*maximum 40 lb. N 1st split
Max. 50 lb. N 2nd split
30 d apart



Planners may include notes to remind the producer when to apply fertilizer and how much. They may also designate when tests for manure or soils should be performed.

Notes

No.	Title	Body
1.	cotton sidedress	Sidedress cotton no earlier than first square. Sidedress may be done between first square and first bloom.
2.	corn sidedress	Apply sidedress nitrogen when corn is at least 15" tall or at the 6-leaf (V6) stage.
3.	PSNT	Where organic nutrient sources (manure, leguminous cover crops) have been applied in the current or past season(s), nitrogen rates should be determined at the crop-specified time (Fall for small grains, prior to sidedress when crop is at least 12" tall for corn) using a soil nitrate test. Nitrogen adjustments may be made using this information.
4.	additional hay production	Per the Virginia Nutrient Management Standards and Criteria (Revised July 2014): if additional fall hay production is applicable, apply 60-80 lb N/acre in late August/early September. Do not apply more than 160 lb N/acre/year.

DEPT. CONSERVATION & RECREATION NMP 2024-2027 Narrative

The Department C. Recreation owns and operates 17.60 acres off of Holland Road located in the City of Suffolk, Virginia. This is a grain and hay operation with the following crop rotation: cotton, corn and soybean either with a small grain or legume as the winter cover crop. DCR plans to harvest some of the cover crop acres. Field 2 will be converted for fescue hay production in Spring 2026. The crop rotation may vary due to: to weather, economics, farm programs, or additional unforeseen factors.

DCR uses grid/zone sampling for soil analysis; this plan was written using the averages of subfield samples by FSA tract and field numbers. The producer uses in-field variable rate applications for P, K, and lime. In addition to variable rate applications, DCR plans to split the sidedress nitrogen applications on cotton and corn as well as late winter split nitrogen applications on small grains. This is reflected in the balance sheets of the nutrient management plan.

Prior to the Spring 2025 crop planting, DCR plans to apply poultry litter from an outside source to select fields. The application rates will range from 1-1.5T/ac on cotton, 1.5-2T/acre on corn, and 2-4T/acre on hay acres. DCR plans to participate in the Virginia Poultry Litter Incentives Program. Nutrient values from a recent litter analysis were used to more accurately reflect the actual nutrient application on cotton acres.

This plan was developed using actual soil tests, soil survey information, NutMan Software, and the VALUES productivity system to determine nutrient requirements. This plan was written for the enrollment of the operation into the DCR VACS/NRCS EQIP.

NUTRIENT MANAGEMENT PLAN IDENTIFICATION

Operator
 Glenda Sprigs
 25232 Drake Drive
 Newsoms, VA 23874
 (757) 653-8445

Integrator: Murphy-Brown

Farm Coordinates
 Easting: 10000, Northing: 120000, zone: 18

Watershed Summary
 watershed: CU50
 county: Southampton

Nutrient Management Planner
 Stephanie Drzal
 Department of Conservation and Recreation
 Suffolk Regional Office
 1548A Holland Rd
 Suffolk, VA 23434
 stephanie.drzal@dcr.virginia.gov
 757-925-2469
 Certification Code: 723

Acreage Use Summary
 Total Acreage in this plan: 538.
 Cropland: 538.
 Hayland: 0.
 Pasture: 0.
 Specialty: 0.

Livestock Summary
 Beef Cattle 0
 Dairy Cattle 0
 Poultry 0
 Swine 1350
 Other 0

Manure Production Balance					
	Imported	Produced	Exported	Used	Net
kgals	0.	514.1	0.	514.2	0.
tons	0.	0.	0.	0.	0.

Plan written 4/28/2016
 Valid until 4/27/2019

Signature: _____ date
 Planner

NUTRIENT MANAGEMENT PLAN IDENTIFICATION

NMP-15-25-0006

Primary Participant
 Name: GlenDale Farms
 Farm Name: GlenDale Farms
 Farm Address: 1548A Holland Rd, , Suffolk, VA 23434
 Phone Number: 123-456-7890
 Email: testingplans@email.com

Watershed Summary
 Watershed: JL44
 County: City of Suffolk

Nutrient Management Planner
 Name: Stephanie Dawley
 Address: 1548 Holland Rd, Suffolk, VA 23434
 Email: Stephanie.Dawley@dcr.virginia.gov
 Phone: 804-382-3911
 Certification Code: 723
 Plan Amended On:

Acreage Use Summary
 Total Mapped Acreage: 7.50
 Total Plan Acreage: 7.50
 Cropland: 5.00
 Hayland: 0.00
 Pasture: 2.50
 Specialty: 0.00

Livestock Summary

Group Name	Animal Type	Integrator	Qty	Weight

Manure Production Balance

Storage Name	Year	Unit of Measure	Produced	Exported	Used	Net

Imported Manure

Name	Manure Type	Available Amount	Unit of Measure	Year Available	Season Available

Plan Written: 08/01/2024
 Valid Until: 08/01/2027

Signature: _____ Date
 Planner

GlenDale Farms - NMP-15-25-0006



Online Plan Writing Tool

<https://casdsis.dcr.virginia.gov/CAS/Default.aspx?ReturnUrl=%2fCAS%2f>

Calculating Actual Nutrient Applications

Verifying nutrient applications are consistent with spec qualifications

Calculating LIQUID fertilizer application:

Work order from commercial fertilizer company says they applied 24-0-0-3S at 23 gal/ac sidedress to corn crop:

23 gal x 10.84 lb/gal x 0.24 lb N/lb fertilizer = 60 lb N / ac

$$\frac{23 \text{ gal}}{1 \text{ acre}} \times \frac{10.84 \text{ lb}}{1 \text{ gal}} \times \frac{0.24 \text{ lb N}}{1 \text{ lb fertilizer}} = \frac{60 \text{ lb N}}{1 \text{ acre}}$$

Calculating DRY fertilizer application:

Farmer records show they applied 46-0-0 at 80 lb/ac in mid-February topdress to their wheat crop:

$$80 \times 0.46 = 37 \text{ lb N / ac}$$

$$\frac{80 \text{ lb}}{1 \text{ acre}} \times \frac{0.46 \text{ lb N}}{1 \text{ lb fertilizer}} = \frac{37 \text{ lb N}}{1 \text{ acre}}$$

Questions?

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