Nutrient Balance Sheet

Prepared For

Gary L. Brown 934 Pine Hill Road, Lititz, PA 17543 717-626-6032 Lancaster County

Prepared By

Jesse A. Landis 462-NMC 273 Centerville Road, Lancaster, PA 17603 717-299-5691

Jesse A. Landis

Nutrient Management Specialist or Broker 2 Signature

July 30, 2024

Date of Development

This nutrient balanced sheet has been developed for manure exported for agricultural land application under the following Act 38 export option:

X Exported to a known operation (included in Exporter NMP)

Exported through a broker (include Broker information below if not prepared by broker)

Broker Information

Broker Name
Broker Certification Number
Broker Address
Broker Phone Number(s)

Exporter Information

Dennis Siegrist 23 Orchard Road Lititz, PA 17543 Lancaster County

Nutrient Balance Sheet Summary

	Crop Group	CMU/Field ID	Manure Group	Application Season	Application Management	Planned Manure Rate		arter/Otl tilizer (II			rient Bal Planned (lb/A) ¹		Notes (check)
							N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O	
1	Pasture	1	Siegrist Fall	Early Fall	No Incorporation	6250	0	0	0	75	(160)	(117)	✓
2	Corn After Corn	2-8	Siegrist Spring	Spring	No Incorporation	6250	15	30	30	59	(97)	(94)	√
3	Corn After Soybeans	2-8	Siegrist Spring	Spring	No Incorporation	6250	15	30	30	19	(157)	(139)	✓
4	Barley (Winter)	2-8	Siegrist Fall	Early Fall	No Incorporation	3200	0	0	0	19	(71)	(52)	√
5	Soybeans (Summer)	2-8	Siegrist Spring	Summer	No Incorporation	6250	0	0	0	59	(198)	(161)	√
6	Grass Hay (1 st)	9	Siegrist Spring	Spring	No Incorporation	6250	0	0	0				√
7	Grass Hay (2 nd)	9	Siegrist Spring	Summer	No Incorporation	3200	0	0	0	12	(192)	(165)	✓
8	Corn After Alfalfa	10	Siegrist Spring	Spring	No Incorporation	3200	0	0	0	90	(65)	(56)	✓
9	Corn After Alfalfa	11	Siegrist Spring	Spring	No Incorporation	3200	0	0	0	0	5	(4)	✓
10													
11													
12													
13													
14													
15													

¹ Positive numbers = nutrient deficit; negative numbers = nutrient excess

Nutrient Balance Sheet Summary Notes

Fall manure applications require at least 25% cover unless the crop management unit is planted to a cover crop in time to allow for appropriate growth to control runoff until the next growing season, or the manure is injected or mechanically incorporated within 5 days using minimal soil disturbance techniques consistent with no-till farming practices.

	Crop Group	CMU/Field ID	Manure Group	Notes ¹
1	Corn After Corn	2-8	Siegrist Spring	Fields 4 – 8 have a 150' manure application setback from the stream.
2	Corn After Soybeans	2-8	Siegrist Spring	Fields 4 – 8 have a 150' manure application setback from the stream.
3	Barley (Winter)	2-8	Siegrist Fall	Fields 4 – 8 have a 150' manure application setback from the stream.
4	Soybeans (Summer)	2-8	Siegrist Spring	Fields 4 – 8 have a 150' manure application setback from the stream.
5	Grass Hay (1 st)	9	Siegrist Spring	This application is applied in the spring at green-up. Field 9 has a 100' manure application setback from a well and 150' manure application setback along the stream.
6	Grass Hay (2 nd)	9	Siegrist Spring	This application is applied after first cutting. Field 9 has a 100' manure application setback from a well and 150' manure application setback along the stream.
7	Corn After Alfalfa	11	Siegrist Spring	Nutrient balances for P_2O_5 and K_2O are based on crop removal and should not be used to determine additional fertilizer needs. Field 11 has a 100' manure application setback from a sinkhole.
8	Pasture	1	Sheep Uncollected	25 ewes and 2 rams on pasture from March through November for 18 hours per day.
9				
10				
11				
12				
13				

¹ If crop removal values were used in Row A for P_2O_5 and K_2O , planners should use the following standard note: Nutrient balances for P_2O_5 and K_2O are based on crop removal and should not be used to determine additional fertilizer needs.

	Crop Grou	ıb		Yield		_		eld Ide		ation ified on a map	p) Acre	es
	Pastur	e		3 ton/a	С			1			9	
	OPTIO P Rem			_	PTIO equir	N 2 ement		X		_	TION 3 ndex	
Manure Plan Basis (check planning option)		n setback from or ponds cation olumn to determi	ed for onal	N requirement rates 150' application setback from streams, lakes or ponds Soil test < 200 ppm Mehlich 3 P No winter application Use the N column to determine acceptable rate Soil Test Mehlich 3 P (ppm) 1						Winter Matrix requation atte column base	d on the	
Man	ure Group	Man (Poultry, Swin	nure Typ ne, Othei			Application	n Se	eason		Appli	ication Manager	ment
Sieg	rist Fall	S	wine			Early	y fa	ıll		No i	incorporat	ion
Units (Circ	cle)	I NH₄-N		Analysis rganic N		P ₂ O ₅			K ₂ O		Manure % S	olids
lb/ton or	(b/1000 gal	18.3		12.1		22.1			16.	1	4.1	
Notes	•									•		

	N P ₂ O			K ₂ O	Recommendation Basis			
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)		50	0	40	Х	Soil Tests Crop Removal		
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)		0	0	0		pplication Record & Notes ord when the planned manure and		
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)	1	3	22			lizer rates were applied or note nges.		
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	35 O		Oth	Other Organic Source -				
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report		0			Und	collected Sheep Manure		
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	102 (22) (16)							
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 18.3	Org N 12.1	22.1	NH₄-N 18.3				
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.1	Org N 0.2						
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 1.83	Org N 2.42						
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N 25						
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	24,	000						
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		6,250						
M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P & K: (K x G)	27 138 101		K ₂ O	e: Nutrient balances for P ₂ O ₅ and based on crop removal (Row A) uld not be used to determine				
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)			(117)	additional fertilizer needs. Only				

	Crop Grou	ıp qı		Yield				eld Ide e clearl		ation fied on a ma	p)	Acres	
	Corn after	Corn	•	150 bu/a	C			2-8	3		90		
	OPTIC P Rem				PTIO quir	N 2 ement		X			TION 3 ndex		
Manure Plan Basis (check planning option)		n setback from or ponds cation olumn to determin	ne • d for nal	N requirement 150' applica lakes or pon Soil test < 2 No winter ap Use the N coacceptable in test Mehror test meh	ation : nds 200 pp pplica colum rate	setback from om Mehlich 3 ation n to determir	3 P		P I wii Us	index evalu ndex and V nter applica e appropria ndex to de	Winter Mat ation ate columr	rix requir	n the
Man	ure Group	Man (Poultry, Swin	ure Type e, Other, (Compost)		Applicatio	n Se	eason		Appli	ication Ma	anageme	nt
Siegri	st Spring	S	wine			Spr	ing	J		No	Incorp	oratio	n
Units (Circ	Units (Circle) NH ₄ -N					P ₂ O ₅				K₂O .		e % Soli	ds
lb/ton or	1b/1000 gai	19.6	13	3.1		20.3			17.4	4		4.2	
Notes	Notes												

		N	P ₂ O ₅	K ₂ O		Recommendation Basis				
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)	15	50	60	45	Х	Soil Tests Crop Removal				
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)	1	5	30	30		pplication Record & Notes ord when the planned manure and				
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)		0 0 0			lizer rates were applied or note nges.					
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	3	5								
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report		0								
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	100		30	15						
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 19.6	Org N 13.1	20.3	NH₄-N 19.6						
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.1	Org N 0.35								
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 1.96	Org N 4.59								
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N 55								
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	15,	267								
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		6,	250							
M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P & K: (K x G)	41		41		41		127	109	K ₂ C	e: Nutrient balances for P ₂ O ₅ and based on crop removal (Row A) uld not be used to determine
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)			(97)	(94)	add reco	itional fertilizer needs. Only ommendations based on soil tests uld be used for this purpose.				

	Crop Gro	ир	Yie	ld			eld Identif	ication entified on a ma	p) Acres	
(Corn after So	oybeans	150 k	u/ac			2-8		90	
	OPTIO P Ren		1	OPTIC I Requir			Х	~	TION 3 ndex	
Manure Plan Basis (check planning option)	 acceptable rate Completion of all options; P₂C 	on setback from s or ponds lication column to determin	lakes of Soil terment No wir Use the accept	oplication or ponds st < 200 p ter applic e N colun able rate	setback from	3 P	•	P Index and Winter application	uation of fields Winter Matrix requi ation ate column based of termine acceptable	on the
Man	ure Group		ure Type e, Other, Compo	st)	Application	on Sea	ason	Appli	ication Manageme	ent
Siegri	st Spring	S	wine		Spr	ring		No	Incorporation	n
Units (Circ	cle)	NH₄-N	Manure Analysis Organic N		P ₂ O ₅		K ₂	0 .	Manure % Sol	ids
lb/ton or	lb/1000 ga	19.6	13.1		20.3		17	'.4	4.2	
Notes										

		N	P ₂ O ₅	K ₂ O		Recommendation Basis
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)		60	0	0	х	Soil Tests Crop Removal
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)	1	5	30	30		pplication Record & Notes ord when the planned manure and
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)	o o fe		ferti	lizer rates were applied or note nges.		
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	35					
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report	5	0				
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	6	0	(30)	(30)		
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 19.6	Org N 13.1	20.3	NH₄-N 19.6		
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.1	Org N 0.35				
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 1.96	Org N 4.59				
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N 55				
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	9,1	160				
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		6,250				
M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P & K: (K x G)	41 127 109		K ₂ O	e: Nutrient balances for P ₂ O ₅ and based on crop removal (Row A) uld not be used to determine		
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)	19 (157)		(157)	(139)	add reco	itional fertilizer needs. Only ommendations based on soil tests uld be used for this purpose.

	Crop Gro	ир		Yield		CN (Each field n		i eld Ide be clear			ap)	Acres	
	Barley (W	inter)		60 bu/a	С			2-8	3			90	
	OPTIO P Ren			_	PTIO equir	N 2 ement		X		_	TION 3		
Manure Plan Basis (check planning option)	 acceptable rate Completion of all options; P₂C 	or setback from or ponds ication column to determin	d for nal	N requirem 150' applicilakes or po Soil test < 2 No winter a Use the No acceptable Soil Test Me	ation nds 200 p applica colum rate	setback from pm Mehlich (ation in to determin	3 P		• P I wir	nter applica e appropri	Winter ation ate co	of fields r Matrix requir llumn based c ne acceptable	on the
Man	ure Group	Man (Poultry, Swin	ure Type, Othe			Application	n Se	eason		Appl	icatio	n Manageme	ent
Sieg	rist Fall	S	wine			Early	y fa	all		No	inco	orporatio	n
Units (Circ	Units (Circle) NH ₄ -N					P ₂ O ₅			K₂O			anure % Soli	ds
lb/ton or	lb/1000 gal	18.3		12.1		22.1			16.1	1		4.1	
Notes	Notes									•			

	l	V	P ₂ O ₅	K ₂ O		Recommendation Basis			
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)	5	5	0	0	Х	Soil Tests Crop Removal			
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)	()	0	0		pplication Record & Notes ord when the planned manure and			
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)	0 0 0		0	fertilizer rates were applied or note changes.					
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	7					sidual manure is for winter crop louble crop.			
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report	0				Per Table 6 footnote, when				
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	48		0	0	manure solids <5% the NH ₄ -N availability factor is increased by				
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 18.3	Org N 12.1	22.1	16.1	0.2	•			
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.3	Org N 0.3			ava	culate Carryover Organic N iilable to next year's soybeans			
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 5.49	Org N 3.63			sce	mmer crop in this double crop nario): 1 lb N X 3,200 gal = 38.72 lb N			
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N 12				00 gal. acre acre			
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	5,2	263				72 lb N X 0.25 Org N avail. Factor			
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		3,	200			= 9.68 = 10 carried to soybean workshee			
M) Nutrients Applied at Planned Rate (Ib/A) For N: (K x I) For P & K: (K x G)	29		71	52	Note: Nutrient balances for P ₂ O ₅ and K ₂ O based on crop removal (Row A) should not be used to determine				
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)		(71)	(52)	add reco	itional fertilizer needs. Only ommendations based on soil tests uld be used for this purpose.				

	Crop Gro	oup		Yield					entifica y identif	ation fied on a map) Acr	es
	Soybean (S	ummer)		50 bu/a	С			2-8	3		90)
	OPTI P Rer	ION 1 noval		_	PTIO quir	N 2 ement		X		OPTI P In	ON 3 dex	
Manure Plan Basis (check planning option)	 acceptable rate Completion of all options; P₂ 	on setback from s or ponds lication column to determin	d for onal	lakes or poSoil test < 2No winter a	ation nds 200 p applica colum rate	setback from pm Mehlich 3 ation in to determin	3 P		• PI wir • Us	ndex and W nter applicate e appropria	ation of fields /inter Matrix red tion te column base ermine accepta	d on the
Manı	ure Group	Man (Poultry, Swin	nure Typ ie, Othe			Applicatio	n Se	ason		Applio	cation Manage	ment
Siegri	st Spring	S	wine			Spr	ing			No I	ncorporat	ion
Manu Units (Circle) NH₄-N				Analysis rganic N		P ₂ O ₅	K₂O		K ₂ O .		Manure % S	olids
lb/ton or	1b/1000 gai	19.6		13.1		20.3			17.4	4	4.2	
Notes												·

	N P ₂ O ₅ K ₂ O							
		V	P ₂ O ₅	K ₂ O		Recommendation Basis		
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)	10	60	0	0	Х	Soil Tests Crop Removal		
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)	()	0	0		pplication Record & Notes ord when the planned manure and		
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)	40 (74) (50) fe		ferti	fertilizer rates were applied or note changes.				
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	13			Oth	ner organic sources are			
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report)			Other organic sources are transferred from winter crop. For Note the value is derived through			
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	137 (71) (52)		(52)	calculating carryover organic N from manure applied to barley the				
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 19.6	Org N 13.1	20.3	NH₄-N 19.6	previous fall (calculation provide on barley worksheet). For P & k nutrient balances are transferre			
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.3	Org N 0.5				n the barley Nutrient Balance rksheet.		
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 5.88	Org N 6.55				sidual manure is for summer p in double crop.		
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N . 43				Table 6 footnote, when		
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	11,	022			1	nure solids <5% the NH ₄ -N ilability factor is increased by		
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		6	6,250		0.2	•		
M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P & K: (K x G)	79 127 109		K ₂ O	e: Nutrient balances for P ₂ O ₅ and based on crop removal (Row A) uld not be used to determine				
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)	1 54	(198)	(161)	additional fertilizer needs. Only recommendations based on soi should be used for this purpose				

	Crop Gro	up		Yield		_		ield Ide oe clear		ation fied on a map	o) A	cres	
Gra	ıss Hay (1 st i	n Multiple)		3 ton/a	С	9					16		
	OPTION P Rem			_	PTIO equire	N 2 ement		X		OPTION 3 P Index			
Manure Plan Basis (check planning option)		n setback from or ponds cation column to determin	ne d for onal	lakes or poSoil test < 2No winter a	ation : nds 200 p _l applica colum rate	eetback from streams, om Mehlich 3 P tition n to determine P Index evaluation of fields P Index and Winter Matrix re winter application Use appropriate column bas P Index to determine accept				P Index ex evaluation of fields ex and Winter Matrix required r application			
Man	ure Group	Man (Poultry, Swin	ure Type e, Other	e , Compost)		Application	n Se	eason	Application Managemen			gemer	nt
Siegr	ist Spring	S	wine			Spr	ing)		No I	ncorpor	atio	n
Units (Circ	cle)	I NH₄-N		Analysis rganic N		P ₂ O ₅			K ₂ O		Manure %	% Solid	ls
lb/ton or	lb/1000 gal	19.6	1	13.1		20.3			17.4	4	4.2		
Notes													

		N	P ₂ O ₅	K ₂ O		Recommendation Basis		
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)		50	0	0	х	Soil Tests Crop Removal		
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)	0		0	0		pplication Record & Notes ord when the planned manure and		
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)	0		0	0		lizer rates were applied or note nges.		
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	2	0			Per Table 6 footnote, when manure solids <5% the NH ₄ -N availability factor is increased by			
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report		0						
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	130		0	0	0.2.	•		
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 19.6	Org N 13.1	20.3	17.4				
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.3	Org N 0.5						
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 5.88	Org N 6.55						
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N .43						
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	10,	459						
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		6,	250					
M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P & K: (K x G)	78		127	109	Note: Nutrient balances for P ₂ O ₅ and K ₂ O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.			
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)	52		(127)	(109)				

	Crop Grou	ıb		Yield	_	IU/Field Id		ation fied on a map)	Acres	
Gras	ss Hay (2 nd i	n Multiple)	3 1	ton/ac		9			16	
	P Removal N Requirement N requirement rates							PTION 3 P Index		
Manure Plan Basis (check planning option)	 150' application streams, lakes No winter appli Use the P₂O₅ c acceptable rate Completion of I all options; P₂C 	n setback from or ponds cation olumn to determin	150 lake Soil No Use acc nal	or application or application es or ponds if test < 200 p winter applica e the N colum ceptable rate Test Mehlich	setback from pm Mehlich 3 ation in to determin	3 P	 P Index evaluation of fields P Index and Winter Matrix required winter application Use appropriate column based on the P Index to determine acceptable rate 			
Manı	ure Group	Man (Poultry, Swin	ure Type e, Other, Com	npost)	Application	on Season		Applica	ation Manageme	ent
Siegri	st Spring	S	wine		Spr	ing		No In	corporation	on
Units (Circ	sle)	NH₄-N	Manure Analys Organic		P ₂ O ₅	P_2O_5 K_2O . Manure %		Manure % Sol	ids	
lb/ton or	lb/1000 gal	19.6	13.1		20.3	0.3 17.4 4.2				
Notes										

		V	P ₂ O ₅	K ₂ O		Recommendation Basis	
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)		•	. 203	1.20	Х	Soil Tests Crop Removal	
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)						pplication Record & Notes ord when the planned manure and	
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)					ferti	lizer rates were applied or note nges.	
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)							
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report					Net	nutrient requirements	
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	52		(127)	(109)	trar	nsferred from initial manure dication nutrient balance.	
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 19.6	Org N 13.1	20.3	17.4	Dor	Table C factuate when	
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.3	Org N 0.5			ma	Table 6 footnote, when nure solids <5% the NH ₄ -N ilability factor is increased by	
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 5.88	Org N 6.55			0.2.	•	
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N . 43					
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	4,1	83					
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		3,	200				
M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P & K: (K x G)	40 12		65	56	Note: Nutrient balances for P ₂ O ₅ and K ₂ O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.		
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)			(192)	(165)			

	Crop Grou	nb		Yield		_			fication entified on a map	Acres	3	
	Corn after A	Alfalfa		175 bu/a	ac		10			12		
Manure	OPTION 1 P Removal P removal rates			N Re N requirem	ent ra	ement ates		ON 3 dex	Х			
Plan Basis (check planning option)		or ponds cation column to determi	ed for onal	lakes or poSoil test < 2No winter a	nds 200 p _l applica colum rate	n to determir	3 P	•	P Index evaluation of fields P Index and Winter Matrix required f winter application Use appropriate column based on th P Index to determine acceptable rate			
Manı	ure Group	Mar (Poultry, Swin	nure Typ ne, Othe			Application	n Seas	son	Applic	ation Managem	ent	
Siegri	st Spring	S	wine			Spr	ing		No I	ncorporati	on	
Units (Circ	sle)	NH ₄ -N		Analysis Organic N		P ₂ O ₅	P ₂ O ₅ K ₂ O .		K₂O . Manure % Solid		lids	
lb/ton or	1b/1000 gal	19.6		13.1		20.3		1	7.4	4.2		
Notes												

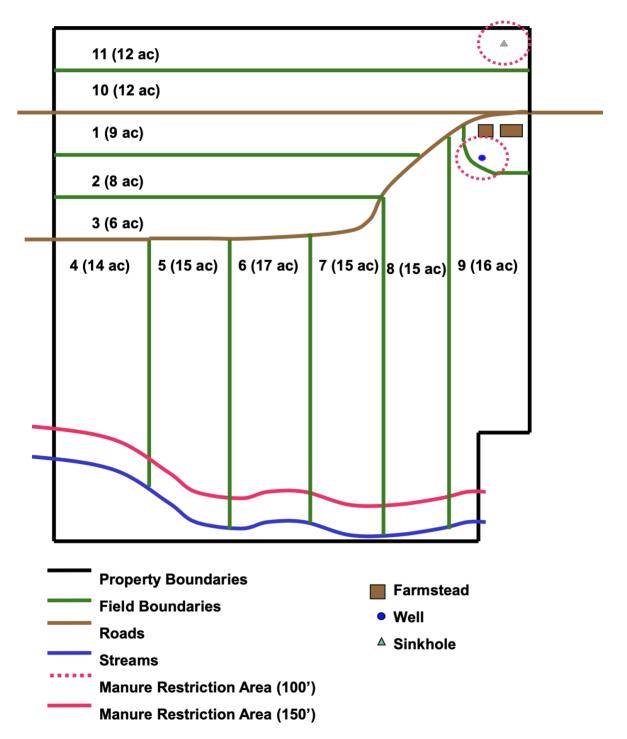
		\1	D 0	V 0		December deller Deel		
A) D		N	P ₂ O ₅	K ₂ O	+	Recommendation Basis		
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)	19	90	0	0	X	Soil Tests Crop Removal		
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)	(0	0	0		pplication Record & Notes ord when the planned manure and		
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)	0		0	0	ferti	ilizer rates were applied or note nges.		
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	2	0						
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report	4	.0			Previous legume was alfalfa <25% stand.			
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	1;	30	0	0				
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 19.6	Org N 13.1	20.3	17.4				
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH₄-N 0.3	Org N 0.5						
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH₄-N 5.88	Org N 6.55						
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N . 43						
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)	10,	459						
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used		3,	200					
M) Nutrients Applied at Planned Rate (Ib/A) For N: (K x I) For P & K: (K x G)	40		40		65	56	K ₂ C	te: Nutrient balances for P ₂ O ₅ and based on crop removal (Row A) and not be used to determine
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)	90		(65)	(56)	reco	litional fertilizer needs. Only ommendations based on soil tests all be used for this purpose.		

	Crop Gro	oup		Yield		CMI (Each field m		eld Idei e clearly			ıp)	Acres	
	Corn after	· Alfalfa		175 bu/a	ac			11				12 13 on of fields eer Matrix required column based on nine acceptable r	
		TION 1 moval	X		PTIO quir	N 2 ement			OPTION 3 P Index				
Manure Plan Basis (check planning option)	streams, lake No winter app Use the P ₂ O ₅ acceptable ra Completion o all options; P ₂	ion setback from es or ponds plication column to determir	d for nal	N requirem 150' applica lakes or por Soil test < 2 No winter a Use the N c acceptable Soil Test Mel	ation nds 200 p applica colum rate	setback from pm Mehlich 3 ation in to determin	Р		PI wirUs	P Index evaluation of fields P Index and Winter Matrix required winter application Use appropriate column based on t P Index to determine acceptable ra			n the
Man	ure Group	Man (Poultry, Swind	ure Ty e, Othe			Application	n Sea	ason		Appl	ication Man	ageme	nt
Siegr	ist Spring	S	wine	•		Spri	ing			No	Incorpo	ratio	n
Units (Circ	cle)	NH₄-N		e Analysis Organic N		P ₂ O ₅			K₂O		Manure	% Solid	ds
lb/ton or	1b/1000 gai	19.6		13.1		20.3			17.4	1	4.2		
Notes										•			

	N P ₂ O ₅ K ₂ O			Recommendation Basis				
A) Recommendation or Removal (lb/A) N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5) P ₂ O ₅ & K ₂ O – Soil Test or Table 3 (AG Table 1.2-6)		75	70	53	x	Soil Tests Crop Removal		
B) Fertilizer Applied (Ib/A) (Regardless of Manure e.g. Starter)	0		0	0	Application Record & Note Record when the planned manure an			
C) Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)	0		0	0	ferti	fertilizer rates were applied or note changes.		
D) Residual Manure N (lb/A) Table 4 (AG Table 1.2-11B)	2	:0						
E) Previous Legume N (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report	4	.0						
F) Net Nutrient Requirement (lb/A) (A - B - C - D - E)	115		70	53				
G) Manure Analysis (lb/ton or lb/1000gal)	NH₄-N 19.6	Org N 13.1	20.3	17.4				
H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A)	NH ₄ -N 0.3	Org N 0.5						
I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)	NH ₄ -N 5.88	Org N 6.55						
J) Total Available Nitrogen (sum of Available N Fractions from row I)		+ Org N . 43						
K) Balanced Manure Rate (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G)			3,448					
L) Planned Manure Rate (tons/A or gallons/A) Must be less than or equal to Row K Balanced Rate and based on the plan basis being used	3,200							
M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P & K: (K x G)	40		65	56	K ₂ O	e: Nutrient balances for P ₂ O ₅ and based on crop removal (Row A) uld not be used to determine		
N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)			5	(3)	add reco	itional fertilizer needs. Only ommendations based on soil tests uld be used for this purpose.		

Appendix 1 Operation Maps

Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation. A soils map for Option 3 P Index fields is encouraged but not required.



Appendix 2 **Option 3 Evaluations**

Include the current Pennsylvania Phosphorus Index Spreadsheet or paper worksheet for each field that required Part B of the P Index when using Manure Plan Basis Option 3. Include the Winter Matrix evaluation of fields that will receive winter manure applications.

Phosphorus Index Populated from NBS Input P Index sheet

Pennsylvania P Index Version 2

	Pennsylvania P Inde	x Version 2				
PART A: SCREENING TOOL CMU/Field ID			PART A: SCREENING T	TOOL	CMU/Field ID	10 - Corn After Alfalfa P Index
Is the CMU in a Special Protection watershed?		Is the CMU in a Specia	al Protection watershed?			No
A significant farm management change as defined by Act 38?		Is there a significant fa	rm management change as d	efined by Act 38?	If the answer is Yes to	No
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlicl	n 3 P greater than 200 ppm P	? (enter soil test value in ppm P)	any of these questions,	315
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Dist	tance from this CMU to receive	ing water less than 150 ft.?	Part B must be used.	No
Is winter manure application planned for this field?		Is winter manure applic	cation planned for this field?			No
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B vo	luntarily? (Answers are No to	o all Part A questions.)		No
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)			Mehlich 3 Soil Test P (pp	om P)		315
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)						63
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)					Fertilizer P (lb P2O5/acre)	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE ³	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov March	1.0 Surface applied to frozen or snow covered soil	
SUPPLEMENTAL P FERTILIZER					Fertilizer P (lb P2O5/acre)	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov March	1.0 Surface applied to frozen or snow covered soil	
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	ethod					0
MANURE P RATE					Manure P (lb P2O5/acre)	65
MANURE APPLICATION METHOD ³	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov March	1.0 Surface applied to frozen or snow covered soil	0.6
P SOURCE COEFFICIENT ³	Ref	er to: Test results for P	Source Coefficient OR Book	values from P Index Fact Sheet	Table 1	1
Manure Rating = Manure Rate x Manure Application Metho	d x P Source Coeffic	cient				39
Source Factor Sum						102
PART B: TRANSPORT FACTORS EROSION			Soil Loss (ton/acre/y	r)		2
RUNOFF POTENTIAL	0 Drainage Class is Excessively	2 Drainage Class is Somewhat Excessively	4 Drainage Class is Well/Moderately Well	6 Drainage Class is Somewhat Poorly	8 Drainage Class is Poorly/Very Poorly	4
SUBSURFACE DRAINAGE	0 None		1 Random		2 ¹ Patterned	0
CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	9 ² < 100 ft.	0
Transport Sum = Erosion + Runoff Potential + Subsurface	Drainage + Contribu	iting Distance				6
MODIFIED CONNECTIVITY	0.85					
Transport Sum x Modified Connectivity / 24						0.25
P Index Value = 2 x Source x Transport						51

Low: 59 or less Nitrogen based management Medium: 60 to 79

High: 80 to 99 Phosphorus limited to crop removal

Very High: 100 or greater No Phosphorus applied