

# How to Complete Multiple Manure Applications

## Purpose:

This procedure describes how to complete a multiple manure application in Appendix 4 Input. If you have not yet completed a field in Appendix 4 Input and need help then please refer to the guidance document: How to Complete App 4 Input.

Multiple manure applications can be applied any number of times on a field that is nitrogen based planning. Multiple applications on phosphorous based, (a P Index Part B field), planning are limited to six instances of a field (multiples or double crops).

In the 1st example, a field that will be planted in corn silage has liquid manure applied in the fall and solid manure applied in the spring before planting. Multiple Manure application in the Nutrient Management Plan should follow the crop year. The crop year begins in the fall so the fall applied manure would be entered before the spring or summer applied manure.

The procedure will step through adding each field and changing the appropriate selections for each multiple manure application.

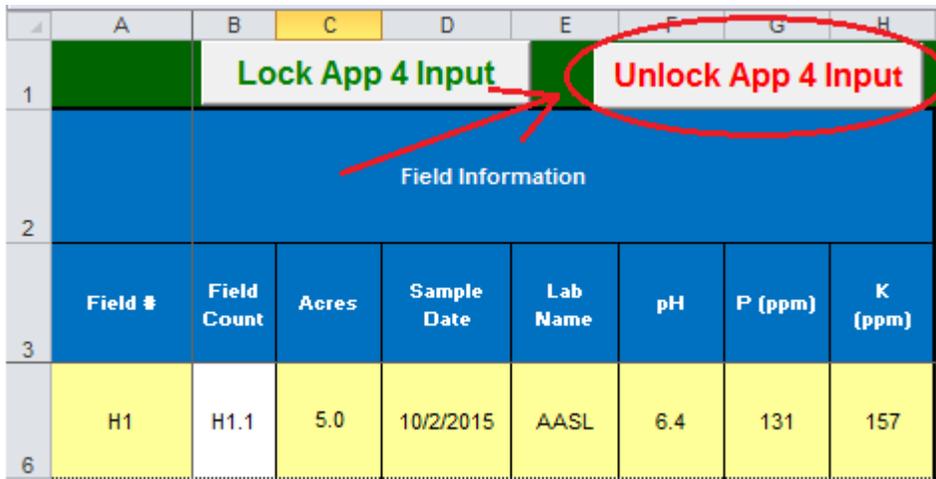
## 1. Procedure

Enter the information for the first application on a field like any other field in Appendix 4 Input.

At this point you may or may not know whether there will be more than one application of manure on the field. Nothing different needs to be done at this point. After entering the information for the initial application or at any time later when you decide to add another application to the field do the following.

### 1.1 Copy and paste the field that will receive the multiple manure application:

1.1.1. Unlock the App 4 Input spreadsheet by clicking on the "Unlock App 4" Input: button. When the spreadsheet is unlocked the top row of the spreadsheet will change to red. This will allow you to copy paste the existing field information with re-entering everything.



	A	B	C	D	E	F	G	H
1		Lock App 4 Input			Unlock App 4 Input			
2	Field Information							
3	Field #	Field Count	Acres	Sample Date	Lab Name	pH	P (ppm)	K (ppm)
6	H1	H1.1	5.0	10/2/2015	AASL	6.4	131	157

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**1.1.2.** Select the field you want to copy and paste for the multiple manure application by using a “right mouse click” *on the row number next to the Field Id* and select copy in the pop-up box. The entire row will be shaded

	A	B	C	D
1		Lock App 4 Input		
2	Field Inform			
3	Field #	Field Count	Acres	Sample Date
6	H1	H1.1	5.0	10/2/2015

The field is ready to copy when you see the dancing ants around the row you selected.

	A	B	C	D	E	F	G	H
1		Lock App 4 Input				Unlock App 4 Input		
2	Field Information							
3	Field #	Field Count	Acres	Sample Date	Lab Name	pH	P (ppm)	K (ppm)
6	H1	H1.1	5.0	10/2/2015	AASL	6.4	131	157

dancing ants

**1.1.3.** Right mouse click then select “Insert Copied Cells” on the row number where you want to insert the field. In the example the copied field will be inserted in row 5 and slide all fields below it down one row.

2	Field Information							
3	Field #	Field Count	Acres	Sample Date	Lab Name	pH	P (ppm)	K (ppm)
6	H1	H1.1	5.0	10/2/2015	AASL	6.4	131	157
7								

The “Field Count” column must indicate the field name with a .2. This means they are recognized as the same field. It indicates it is the 2<sup>nd</sup> instance of the field, and will appropriately carryover nutrient balance after manure.

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	A	B	C	D	E	F	G	H
1		Lock App 4 Input				Unlock App 4 Input		
2	Field Information							
3	Field #	Field Count	Acres	Sample Date	Lab Name	pH	P (ppm)	K (ppm)
6	H1	H1.1	5.0	10/2/2015	AASL	6.4	131	157
7	H1	H1.2	5.0	10/2/2015	AASL	6.4	131	157

1.2. Click on the lock button to lock the spreadsheet. It will be locked when the top row changes from red to green.

	A	B	C	D	E	F	G	H
1			Lock App 4 Input				Unlock	
2	Field Information							
3	Field #	Field Count	Acres	Sample Date	Lab Name	pH	P (ppm)	K (ppm)
4	H1	H1.1	5.0	10/2/2015	AASL	6.4	131	157
5	H1	H1.2	5.0	10/2/2015	AASL	6.4	131	157

This will prevent inadvertently deleting formulas from the white cells in Appendix 4 Input.

1.3. Update the starter or other fertilizer information.

When completing multiple manure applications, any starter or other fertilizer needs to be entered ONLY into the first instance of a field.

If the field is copied to create an additional multiple then enter zeros for the starter or other fertilizer for any multiple other than the initial application (There should be no starter or other fertilizer listed for any field with the M or Mf designation described below). Having the values from the initial field in the following applications won't affect the calculations but it will appear as if starter is being applied twice in the printed Appendix 4 Crop & Manure Management and the NMP Summary.

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	A	B	O	Q	R	Z	AA	AB
1			Lock App 4 Input					
2	Field Information		Crop Information			Starter Fertilizer		
3	Field #	Field Count	Crop	Yield	Units	Starter N lbs/A	Starter P <sub>2</sub> O <sub>5</sub> lbs/A	Starter K <sub>2</sub> O lbs/A
4	H1	H1.1	Corn for Silage	25	ton/A	4	12	4
5	H1	H1.2	Corn for Silage	25	ton/A	0	0	0

### 1.4. Change the Manure and Application Information for the fields

Since all the field information was copied from the initial field, only the Manure Application Information and Manure Rate needs to be changed for both instances of the field.

- 1.4.1.** Change the Manure group, Application Season, and Application Management for the multiple application. Note that this could be the same or it can be a different manure group, season, and application method. Make sure that each multiple has the intended management information correctly entered in these three cells.

	A	B	AF	AG	AH	AJ
1			Manure Group	Lock App 4 Input		Unlock App 4 Input
2	Field Information		Manure and Application			
3	Field #	Field Count	Manure Group	Planned Application Season	Planned Application Management	Multiple/ Split Application
4	H1	H1.1	Cow Fall Liquid	Early Fall	Early Fall: Summer Utilization. Incorporated after 7 days or none, no cover crop	Mi
5	H1	H1.2	Heifer Barn Bedded Pack	Spring	Spring: Incorporated within 5-7 days	Mf

## How to Complete Multiple Manure Applications

**1.4.2.** Select the appropriate multiple designation from the drop down list. There are three choices:

- Mi = Initial Manure Application in a Multiple
- M = Middle Manure Applications in a Multiple
- Mf = Final Manure Application in a Multiple

There are pop-up notes in the blue column headers to help you make the appropriate selection.

The first manure application gets the “Mi” designation and the last or final manure application gets the “Mf” designation. When you entered the first application, if you know that there will be multiple applications on the field, you can enter the initial application designation (Mi) at that time or if you made a decision later to make a multiple application, you will need to go back to the row for the initial application and designate it as the initial application by selecting “Mi” in this cell. If there are only 2 applications planned, they must be designated “Mi” and “Mf” respectively. There must always be a “Mi” and “Mf” if there are multiple applications on a field. If there are more than 2 multiple applications, the middle applications will all be designated “M”.

	A	B	O	Q	R	AF	AG	AH	AJ	
1			Lock App 4 Input							Unlock Ap
2	Field Information		Crop Information			Manure and Application				
3	Field #	Field Count	Crop	Yield	Units	Manure Group	Planned Application Season	Planned Application Management	Multiple/ Split Application	
4	H1	H1.1	Corn for Silage	25	ton/A	Cow Fall Liquid	Early Fall	Early Fall: Early Spring Utilization. Incorporated after 7 days or none	Mi	
5	H1	H1.2	Corn for Silage	25	ton/A	Heifer Barn Bedded Pack	Spring	Spring: Incorporated within 5-7 days	Mf	

**1.5.** Change the Planned Manure Rate for the added multiple application.

The Nitrogen Balanced Rate and Crop Phosphorous Removal Rate are shown. Remember to enter only the amount of manure. The units don’t need to be entered. You don’t need to enter tons or gallons.

	A	AF	AG	AH	AJ	AK	AL	AM	
1		Lock App 4 Input				Unlock App 4 Input			Manure Group Manure Balan
2	Field Information	Manure and Application				Manure Rate			
3	Field #	Manure Group	Planned Application Season	Planned Application Management	Multiple/ Split Application	Nitrogen Balanced Manure Rate	Crop Phosphorous Removal Manure Rate	Planned Manure Rate	
6	H1	Cow Fall Liquid	Early Fall	Early Fall: Early Spring Utilization. Incorporated after 7 days or none	Mi	23529	6769	6000	
	H1	Heifer Bedded Pack	Spring	Spring: Incorporated within 5-7 days	Mf	23.9	1.1	12	

## How to Complete Multiple Manure Applications

Once the fields receive the multiple initial and final designations, the Nutrient Balance after Manure will be blank for the initial manure application and any middle applications. The balance after manure should only appear in the field with the “Mf” designation.

	A	AF	AG	AH	AJ	AM	AN	AO	AP
1			Lock App 4 Input		Unlock App 4	Manure Group & Manure			
2	Field Infor	Manure and Application				Manure Rate	Balance after Manure		
3	Field #	Manure Group	Planned Application Season	Planned Application Management	Multiple/ Split Application	Planned Manure Rate	N Balance	P205 Balance	K2O Balance
6	H1	Cow Fall Liquid	Early Fall	Early Fall: Early Spring Utilization. Incorporated after 7 days or none	Mi	6000			
7	H1	Heifer Bedded Pack	Spring	Spring: Incorporated within 5-7 days	Mf	12	43	-202	-122

The Balance after Manure will reflect the nutrient deficit, (positive number) or excess, (negative number).

### 1.6. Enter any Supplemental Fertilizer values in the final Multiple manure application.

If there is no supplemental fertilizer applied enter a zero “0”. The spreadsheet won’t calculate properly when working on a plan that’s been transferred from a Version 4.x plan without a zero entered here.

	A	AF	AG	AH	AJ	AM	AN	AO	AP	AQ	AR	AS	AV	AW	AX
1			Lock App 4 Input		Unlock App 4	Manure Group & Manure									
2	Field Infor	Manure and Application				Manure Rate	Balance after Manure			Supplemental Fertilizer			Final Nutrient Balance		
3	Field #	Manure Group	Planned Application Season	Planned Application Management	Multiple/ Split Application	Planned Manure Rate	N Balance	P205 Balance	K2O Balance	Suppl. N	Suppl. P205	Suppl. K2O	Final N Balance	Final P205 Balance	Final K2O Balance
6	H1	Cow Fall Liquid	Early Fall	Early Fall: Early Spring Utilization. Incorporated after 7 days or none	Mi	6000				0	0	0			
7	H1	Heifer Bedded Pack	Spring	Spring: Incorporated within 5-7 days	Mf	12	43	-202	-122	43	0	0	0	-202	-122

## How to Complete Multiple Manure Applications

### 1.7. Add any field notes as applicable.

While it is not required, it is recommended that notes be added to each multiple application explaining what is planned to the operator. Suggested application notes are included in the Field Notes screenshot below. You can increase the row width if needed.

	A	B	O	AF	AJ	AM	BM
2	Field Information		Crop Information	Manure and Application		Manure Rate	User Note - Enter notes directly for each Field/CMU here. Note that are repeated can be copied from one CMU and pasted in another.
3	Field #	Field Count	Crop	Manure Group	Multiple/ Split Application	Planned Manure Rate	Field Notes
4	H1	H1.1	Corn for Silage	Cow Fall Liquid	Mi	6000	This field will receive multiple applications of manure. This is the first application which will be Cow Fall Liquid manure Heifer Barn Bedded Pack manure applied in the in the spring and incorporated within 5-7 days. Details on the second application on this field in the spring are given below.
5	H1	H1.2	Corn for Silage	Heifer Barn Bedded Pack	Mf	12	This field will receive multiple applications of manure. This is the second application which will be Heifer Barn Bedded Pack manure applied in the early fall. Details on the first application on this field in the fall were given above.

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- 1.8. This is how a multiple application is displayed in the printed Appendix 4 Crop & Manure Management section that's submitted for review and approval.

App. 4: Crop Yrs. 2018						
H1			H1			
CMU/Field ID						
Acres	5.0			5.0		
Soil Test Report Date	October 2, 2015			October 2, 2015		
Laboratory Name	AASL			AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH
	131	157	6.4	131	157	6.4
P Index Part A Evaluation	No to All Part A			No to All Part A		
Part A Result	N Based			N Based		
Crop	Corn for Silage			Corn for Silage		
Planned Yield	25 ton/A			25 ton/A		
PSU Soil Test Recommendation (lb/A)	<b>N</b>	<b>P2O5</b>	<b>K2O</b>	<b>N</b>	<b>P2O5</b>	<b>K2O</b>
	200	0	90	200	0	90
User Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	4	12	4	0	0	0
P Index Application Method	Starter or Injected					
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	45	Soybeans, 45 bu/A		0	Soybeans, 45 bu/A	
Net Nutrients Required (lb/A)	116	-12	86	86	-90	-50
Manure Group	Cow Fall Liquid			Heifer Bedded Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall: Summer utilization with cover crop used as green manure; Incorporated after 7 days or none			Spring: Spring or summer utilization- Incorporation within 5-7 days		
Availability Factors (Total N or NH4-N & Organic N)	<b>Total N</b>	<b>NH4-N</b>	<b>Org. N</b>	<b>Total N</b>	<b>NH4-N</b>	<b>Org. N</b>
	0.20			0.30		
P Index Application Method						
N Balanced Manure Rate (ton; gal/A)	23,529 gal/A			24 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	6,763 gal/A			1 tons/A		
	Crop P Removal (lb/A) 88.0			Crop P Removal (lb/A) 10.0		
P Index Value						
Planned Manure Rate (ton or gal/A)	<b>6,000.0 gal/A</b>			<b>12.00 tons/A</b>		
Nutrients Applied at Planned Manure Rate (lb/A)	30	75	136	43	112	72
Nutrient Balance after Manure	86	-90	-50	43	-202	-122
Supplemental Fertilizer (lb/A)	0	0	0	43	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)				<b>0</b>	<b>-202</b>	<b>-122</b>
Multiple Application	Multiple Initial			Multiple Final		
Manure Utilized on CMU	30,000 gallons			60 tons		

Appendix 4 Crop & Manure Mgmt.

The Crop Nutrient Balance after Manure in the initial multiple becomes the Crop Net Nutrients required in the final multiple. The multiple application designation appears at the bottom of the CMU / Field ID.

## How to Complete Multiple Manure Applications

**2.1. Multiple Applications on P Index Fields** - The transport factors for a P Index Part B field must be in the initial multiple manure application. It doesn't matter if they are repeated or not in the middle or final multiple applications.

Lock App 4 Input																Unlock App 4 Input					
Field Information		Crop Information		Manure and Application					P Index Transport Factors												
Field or CMU ID	Field Count	Crop	Manure Group	Planned Application Season	Planned Application Management	P Index Application Method	Multiple/ Split Application	P Index Part A Result	Soil Loss (ton/Ac)	Runoff Potential	Subsurface Drainage	Contributing Distance	Modified Connectivity	P Index Value							
14A	14A.1	Established Alfalfa with Manure	Cow Fall Liquid	Early Fall	Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none	April - Oct: No incorp or incorp > 1 wk.	Mi	Part B	2	2	0	2	1	64							
14A	14A.2	Established Alfalfa with Manure	Heifer Bedded Pack	Winter	Winter: Early Spring Utilization. Small grains and established grass or legume hay	Nov - Mar: No incorp or incorp > 1 wk.	Mf	Part B						64							

**Remember that a P Index Part B field can have a maximum of six instances of a field in order to properly calculate a P Index score.**

**2.2. Multiple Applications on a field evaluated in the Winter Matrix** – The Winter Matrix Evaluation factors must be entered in the multiple containing the Planned Application Season of “Winter” or “Winter 1.2-15”. In the example below, the second application is in the winter, so that is where the winter matrix must be completed.

Lock App 4 Input																Unlock App 4 Input					
Field Information		Crop Information		Manure and Application					P Index Transport Factors							Winter Matrix					
Field or CMU ID	Field Count	Crop	Manure Group	Planned Application Season	Planned Application Management	P Index Application Method	Multiple/ Split Application	P Index Part A Result	Soil Loss (ton/Ac)	Runoff Potential	Subsurface Drainage	Contributing Distance	Modified Connectivity	P Index Value	Is there 25% cover?	Field Slope	Runoff Control	Final Winter Matrix Value	Winter Matrix Interpretation		
14A	14A.1	Established Alfalfa with Manure	Cow Fall Liquid	Early Fall	Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none	April - Oct: No incorp or incorp > 1 wk.	Mi	Part B	2	2	0	2	1	64							
14A	14A.2	Established Alfalfa with Manure	Heifer Bedded Pack	Winter	Winter: Early Spring Utilization. Small grains and established grass or legume hay	Nov - Mar: No incorp or incorp > 1 wk.	Mf	Part B						64	Yes	3	3	14	Good		

**2.3. Multiple Applications on Legumes** – When completing multiple manure applications on a Legume “with manure”, the crop balance after manure will display differently in Appendix 4 Input and the Printed Appendix 4 Crop & Manure Management Section.

**Multiple Applications on Legumes in Appendix 4 Input:**

Balance after Manure will show the amount of Nitrogen that can be utilized by the legume. It will also show the Phosphorous and P2O5 and K2O balance, (positive value = deficit of crop need and negative value = excess of crop need).

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The Supplemental N cell is formatted to turn grey if the crop is a legume. This is because the legume can utilize the Nitrogen but doesn't need it.

Field Information		Crop Information		Manure and Application				Manure Rate			Balance after Manure			
Field or CMU ID	Field Count	Crop	Manure Group	Planned Application Season	Planned Application Management	P Index Application Method	Multiple/Split Application	Nitrogen Balanced Manure Rate	Crop Phosphorous Removal Manure Rate	Planned Manure Rate	N Balance	P2O5 Balance	K2O Balance	Suppl. N
14A	14A.1	Established Alfalfa with Manure	Cow Fall Liquid	Early Fall	Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none	April - Oct: No incorp or incorp > 1 wk.	Mi	53753	6923	6000				0
14A	14A.2	Established Alfalfa with Manure	Heifer Bedded Pack	Winter	Winter: Early Spring Utilization. Small grains and established grass or legume hay	Nov - Mar: No incorp or incorp > 1 wk.	Mf	49	1.3	12	177	-190	-88	0

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## Multiple Applications on Legumes

### In the Printed Appendix 4 Crop & Manure Management Section:

The nitrogen balance after manure for the initial manure application is zero for a legume “with manure” since it doesn’t need it. The legume can still utilize it so the Net Nutrients Required for the next manure application is calculated by subtracting the nitrogen applied in the initial application from the net nitrogen required in the initial application (see below).

The P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O balance after manure are transferred from the net nutrients required in the initial application to the net nutrients required in the next multiple application.

App. 4: Crop Yrs. 2018	14A			14A		
CMU/Field ID						
Acres	5.0			5.0		
Soil Test Report Date	October 2, 2015			October 2, 2015		
Laboratory Name	AASL			AASL		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH
	131	157	6.4	131	157	6.4
P Index Part A Evaluation	No to All Part A			Winter		
Part A Result	Part B			Part B		
Crop	Established Alfalfa with Manure			Established Alfalfa with Manure		
Planned Yield	6 ton/A			6 ton/A		
PSU Soil Test Recommendation (lb/A)	N	P2O5	K2O	N	P2O5	K2O
	300	0	120	300	0	120
User Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method	Starter or Injected					
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description	35	Continuously - Summer		n	Continuously - Summer	
Residual Manure N (lb/A)						
Legume History Description						
Residual Legume N (lb/A)	0	beans, to burn		0	beans, to burn	
Net Nutrients Required (lb/A)	265		120	235	-78	-16
Manure Group	Cow Fall Liquid			Heifer Bedded Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none			Winter: Early Spring Utilization. Small grains and established grass or legume hay		
Availability Factors (Total N or NH <sub>4</sub> -N & Organic N)	Total N	NH <sub>4</sub> -N	Org. N	Total N	NH <sub>4</sub> -N	Org. N
	0.20			0.40		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			Nov - Apr: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton, gal/A)	53,753 gal/A			49 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	6,923 gal/A			1 tons/A		
P Index Value	64			64		
Planned Manure Rate (ton or gal/A)	6,000 gal/A			12 tons/A		
Nutrients Applied at Planned Manure Rate (lb/A)	30	78	136	58	112	72
Nutrient Balance after Manure	0	-78	-16	0	-190	-88
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)				0	-190	-88
Multiple Application	Multiple Initial			Multiple Final		
Manure Utilized on CMU	30,000 gallons			60 tons		

265 – 30lbs N applied = 235lbs N can be removed

P2O5 & K2O balances carry forward

## 2.4. How Multiple Applications appear in the NMP Summary

Each Multiple Application is listed as a separate row in the NMP Summary. Fields receiving multiple applications of manure are counted just once in the Total acres reported in the NMP Summary if the field names are exactly the same for each multiple.

## How to Complete Multiple Manure Applications

Field names that look the same can be different. If you type a field name and press the space bar after typing a name for one of the multiple applications then Excel will treat it as a separate field. The field acres would be counted twice in the Total acres reported in the NMP Summary.

Nutrient Management Plan Summary															
Total acres reported in NMP Summary: <span style="border: 1px solid red; padding: 2px;">5.0</span>										Crop Year(s) 2018					
Whole Farm Note:															
If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.										<span style="border: 1px solid gray; padding: 5px; color: green; font-weight: bold;">Create/Update Summary</span>					
You must click Create/Update Summary button after updating field in App 4 Input															
Operation Acres:															
Total Acres: <span style="border: 1px solid gray; padding: 2px;"> </span> Total Acres Available For Nutrient Application Under Operator's Control: Owned: <span style="border: 1px solid gray; padding: 2px;"> </span> Rented: <span style="border: 1px solid gray; padding: 2px;"> </span>															
Animal Equivalent Units: <span style="border: 1px solid gray; padding: 2px;">161.56</span>							Animal Equivalent Units Per Acre: <span style="border: 1px solid gray; padding: 2px;">161.56</span>								
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate <sup>1</sup>	Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A) <sup>2</sup>		
							N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
H1	5	Corn for Silage	Cow Fall Liquid	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	6000 gal/A	4	12	4	0	0	0			
H1	5	Corn for Silage	Heifer Bedded Pack	Spring	Spring: Spring or summer utilization-Incorporation within 5-7 days	12 tons/A	0	0	0	43	0	0	0	-202	-122

Field acres are only counted once for multiple manure applications

### 2.5. How Multiple Applications appear in the NMP Summary Notes

NMP Summary Notes	
Crop Years 2018	
CMU/Field ID	Notes
H1	This field will receive multiple applications of manure. This is the first application which will be Cow Fall Liquid manure Heifer Barn Bedded Pack manure applied in the in the spring and incorporated within 5-7 days. Details on the second application on this field in the spring are given below.
H1	This field will receive multiple applications of manure. This is the first application which will be Cow Fall Liquid manure Heifer Barn Bedded Pack manure applied in the in the spring and not incorporated. Details on the second application on this field in the spring are given below.

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## 2.6. How Multiple Applications appear in the P Index

Appendix 5 - P Index		Pennsylvania P Index Version 2				Go to NMP Index	Go to App 4 Input
Crop Yrs. 2018		PART A: SCREENING TOOL				CMU/Field ID	
PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL				CMU/Field ID	
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?				A1	14A
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?				No	No
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm)				No	No
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?				250	131
Is winter manure application planned for this field?		Is winter manure application planned for this field?				No	No
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)				No	Yes
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)		Mehlich 3 Soil Test P (ppm P)				250	131
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)						50	26
FERTILIZER P APPLIED REGARDLESS OF MANURE (SURFACE APPLIED)		Fertilizer P (lb P2O5/acre)				12	0, 0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE <sup>2</sup>		Initial application values				0.6	0.2, -
SUPPLEMENTAL P FERTILIZER		If a value is blank a dash or hyphen will be used as a placeholder				Fertilizer P (lb P2O5/acre)	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER <sup>2</sup>						0	0, 0
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method						7	0
MANURE P RATE		Fields with Multiple applications appear separated by a comma				65	78, 112
MANURE APPLICATION METHOD <sup>2</sup>						0.6	0.6, 0.8
P SOURCE COEFFICIENT <sup>1</sup>		Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1				0.64	0.64, 0.8
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						25	102
Source Factor Sum						82	128
PART B: TRANSPORT FACTORS EROSION		Soil Loss (ton/acre/yr)				Final application values	
RUNOFF POTENTIAL		0, 2, 4, 6, 8				4	2
SUBSURFACE DRAINAGE		0, 1, 2, 3				0	0
CONTRIBUTING DISTANCE		0, 2, 4, 6, 8				2	2
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						10	6
MODIFIED CONNECTIVITY		0.85, 10, 11				10	10
Transport Sum x Modified Connectivity / 24						0.42	0.25
P Index Value = 2 x Source x Transport						69	64
Low: 59 or less		Medium: 60 to 79				High: 80 to 99	

## 3. Revision History

Revision History	
Previous Revision Number	Description of Change
None	First Issue of this document