

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

**Annual Report Form For CAFO Operations Permitted Under
NPDES General Permit ARG590000**

Reporting Period: 1-1-16 through 12-31-16

Permittee: C+H Hog Farms, Inc. Permit Tracking Number: ARG590001

Number & type of animals: annual average 2,498 swine ≥ 55 lbs, annual average 635 swine < 55 lbs
(beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other.)

Estimated amount of total manure, process water & litter in previous 12 months:
2,532,275 gallons (estimate based on annual average animal population and animal weights)
(Express in tons or gallons)

Estimated amount of total manure, litter and process wastewater transferred to other person by the CAFO in the previous 12 months: 0
(express in tons or gallons, units consistent with previous answer)

Total number of acres available for land application in accordance with NMP: 606.9 (see note below)

Total number of acres used for land application of manure, litter and process wastewater in previous 12 months: 498.1

Summary of all manure, litter or process wastewater discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume. Please list in chronological order. Add additional pages if necessary.

	Date	Time	Approximate Volume (gallons)
Discharge 1			
Discharge 2			
Discharge 3			
Discharge 4			

Has the current version of the CAFO's nutrient management plan was developed or approved by a certified nutrient management planner?

Yes
No

Signature Jason Henson Date 1/26/17

NOTE: Total number of acres available for land application (usable acres) per NMP is 630.7 acres. Due to a map discrepancy, Field 5 is not currently available for land application. The total number of acres available for land application (usable acres) for Field 5 is 23.8 acres. Therefore, the total number of acres available for land application in 2016 was 606.9 acres (630.7 acres minus Field 5's 23.8 acres).

Annual Summary, page 1

The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

Field ID or Name (same as in NMP)	Crop Planted	Crop Yield (lbs., bu., or ton/acre)	Nitrogen Content of waste (lbs/1000 gal or lbs/ton)	Phosphorus Content of waste (lbs/1000 gal or lbs/ton)	Amount of waste applied in previous 12 months (gal or tons/acre)	Results of soil testing for Nitrogen, if required. Include data for calculations (mg/kg)	Results of soil testing for Phosphorus, if required. Include data used for calculations (mg/kg)	Amount of supplemental fertilizer, if any, used in previous 12 months. Express lbs/acre in 0-0-0 format
1					78,000 gal			
2					48,000 gal			
3					108,000 gal			
4					57,000 gal			
8					84,000 gal			
9					420,000 gal			
10					303,000 gal			
11					132,000 gal			

WASTEWATER SAMPLE LOCATION: Holding Pond 1 and Holding Pond 2

You must submit a copy of the wastewater analysis for each sample provided to cooperative extension service or a private lab. The wastewater analysis must include pH (s.u.), total nitrogen, ammonia nitrogen, total potassium, total phosphorus, and percent solid.

In addition you must submit a copy of the soil analysis for each field with this form. The soil analysis must include pH (su), potassium (lbs/ac), phosphorus (lbs/ac), and nitrates (lbs/ac). At least one soil analysis should be done for each 10 acre track.

Please complete the table on the back for land application report. You must sign and date this report and submit it to the department prior to may 30th of each year. Please keep a copy of this report, the soil analysis, and the wastewater analysis for your record at the facility.

Annual Summary, page 2

The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

Field ID or Name (same as in NMP)	Crop Planted	Crop Yield (lbs., bu., or ton/acre)	Nitrogen Content of waste (lbs/1000 gal or lbs/ton)	Phosphorus Content of waste (lbs/1000 gal or lbs/ton)	Amount of waste applied in previous 12 months (gal or tons/acre)	Results of soil testing for Nitrogen, if required. Include data for calculations (mg/kg)	Results of soil testing for Phosphorus, if required. Include data used for calculations (mg/kg)	Amount of supplemental fertilizer, if any, used in previous 12 months. Express lbs/acre in 0-0-0 format
12					156,000 gal			
13					354,000 gal			
14					75,000 gal			
15					339,000 gal			
16					93,000 gal			
17					462,000 gal			

WASTEWATER SAMPLE LOCATION: Holding Pond 1 and Holding Pond 2

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In addition you must submit a copy of the soil analysis for each field with this form. The soil analysis must include pH (su), potassium (lbs/ac), phosphorus (lbs/ac), and nitrates (lbs/ac). At least one soil analysis should be done for each 10 acre track.

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Winter Application
using Manure Sample for Holding Pond 1, Apr 2015

The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

Field ID or Name (same as in NMP)	Crop Planted	Crop Yield (lbs., bu., or ton/acre)	Nitrogen Content of waste (lbs/1000 gal or lbs/ton)	Phosphorus Content of waste (lbs/1000 gal or lbs/ton)	Amount of waste applied in previous 12 months (gal or tons/acre) Jan 1 - Feb 29	Results of soil testing for Nitrogen, if required. Include data for calculations (mg/kg)	Results of soil testing for Phosphorus, if required. Include data used for calculations (mg/kg)	Amount of supplemental fertilizer, if any, used in previous 12 months. Express lbs/acre in 0-0-0 format
13	Mixed	4 tons/acre	20.1 lbs/1000gal	4.8 lbs/1000gal	90,000 gal	0	86 ppm	0
15	Mixed	4 tons/acre	20.1 lbs/1000gal	4.8 lbs/1000gal	78,000 gal	0	72 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 1, Apr 2015

You must submit a copy of the wastewater analysis for each sample provided to cooperative extension service or a private lab. The wastewater analysis must include pH (s.u.), total nitrogen, ammonia nitrogen, total potassium, total phosphorus, and percent solid.

In addition you must submit a copy of the soil analysis for each field with this form. The soil analysis must include pH (su), potassium (lbs/ac), phosphorus (lbs/ac), and nitrates (lbs/ac). At least one soil analysis should be done for each 10 acre track.

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Spring Application, page 1
using Manure Sample for Holding Pond 2, Jan 2016

The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

Field ID or Name (same as in NMP)	Crop Planted	Crop Yield (lbs., bu., or ton/acre)	Nitrogen Content of waste (lbs/1000 gal or lbs/ton)	Phosphorus Content of waste (lbs/1000 gal or lbs/ton)	Amount of waste applied in previous 12 months (gal or tons/acre) Mar 1 - Jun 30	Results of soil testing for Nitrogen, if required. Include data for calculations (mg/kg)	Results of soil testing for Phosphorus, if required. Include data used for calculations (mg/kg)	Amount of supplemental fertilizer, if any, used in previous 12 months. Express lbs/acre in 0-0-0 format
1	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	42,000 gal	0	95 ppm	0
2	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	24,000 gal	0	108 ppm	0
3	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	54,000 gal	0	89 ppm	0
4	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	30,000 gal	0	75 ppm	0
8	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	42,000 gal	0	82 ppm	0
9	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	252,000 gal	0	82 ppm	0
10	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	150,000 gal	0	82 ppm	0
11	Mixed	6 tons/acre	8.7 lbs/1000 gal	1.8 lbs/1000 gal	72,000 gal	0	62 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 2, Jan 2016

You must submit a copy of the wastewater analysis for each sample provided to cooperative extension service or a private lab. The wastewater analysis must include pH (s.u.), total nitrogen, ammonia nitrogen, total potassium, total phosphorus, and percent solid.

In addition you must submit a copy of the soil analysis for each field with this form. The soil analysis must include pH (su), potassium (lbs/ac), phosphorus (lbs/ac), and nitrates (lbs/ac). At least one soil analysis should be done for each 10 acre track.

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Spring Application, page 2
using Manure Sample for Holding Pond 2, Jan 2016

The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

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12	Mixed	6 tons/acre	8.7 lbs/1000gal	1.8 lbs/1000 gal	99,000 gal	0	88 ppm	0
13	Mixed	6 tons/acre	8.7 lbs/1000gal	1.8 lbs/1000 gal	60,000 gal	0	86 ppm	0
14	Mixed	6 tons/acre	8.7 lbs/1000gal	1.8 lbs/1000 gal	75,000 gal	0	75 ppm	0
15	Mixed	6 tons/acre	8.7 lbs/1000gal	1.8 lbs/1000 gal	111,000 gal	0	72 ppm	0
17	Mixed	6 tons/acre	8.7 lbs/1000gal	1.8 lbs/1000gal	336,000 gal	0	86 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 2, Jan 2016

You must submit a copy of the wastewater analysis for each sample provided to cooperative extension service or a private lab. The wastewater analysis must include pH (s.u.), total nitrogen, ammonia nitrogen, total potassium, total phosphorus, and percent solid.

In addition you must submit a copy of the soil analysis for each field with this form. The soil analysis must include pH (su), potassium (lbs/ac), phosphorus (lbs/ac), and nitrates (lbs/ac). At least one soil analysis should be done for each 10 acre track.

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Summer Application, page 1
using Manure Sample for Holding Pond 1, Jul 2016

The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

Field ID or Name (same as in NMP)	Crop Planted	Crop Yield (lbs., bu., or ton/acre)	Nitrogen Content of waste (lbs/1000 gal or lbs/ton)	Phosphorus Content of waste (lbs/1000 gal or lbs/ton)	Amount of waste applied in previous 12 months (gal or tons/acre) Jul 1-Oct 31	Results of soil testing for Nitrogen, if required. Include data for calculations (mg/kg)	Results of soil testing for Phosphorus, if required. Include data used for calculations (mg/kg)	Amount of supplemental fertilizer, if any, used in previous 12 months. Express lbs/acre in 0-0-0 format
1	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000 gal	36,000 gal	0	95 ppm	0
2	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000 gal	24,000 gal	0	108 ppm	0
3	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000 gal	54,000 gal	0	89 ppm	0
4	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000gal	27,000 gal	0	75 ppm	0
8	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000 gal	42,000 gal	0	82 ppm	0
9	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000 gal	168,000 gal	0	82 ppm	0
10	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000gal	153,000 gal	0	82 ppm	0
11	Mixed	6 tons/acre	21.6 lbs/1000gal	15.7 lbs/1000gal	60,000 gal	0	62 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 1, Jul 2016

You must submit a copy of the wastewater analysis for each sample provided to cooperative extension service or a private lab. The wastewater analysis must include pH (s.u.), total nitrogen, ammonia nitrogen, total potassium, total phosphorus, and percent solid.

In addition you must submit a copy of the soil analysis for each field with this form. The soil analysis must include pH (su), potassium (lbs/ac), phosphorus (lbs/ac), and nitrates (lbs/ac). At least one soil analysis should be done for each 10 acre track.

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Summer Application, page 2
using Manure Sample for Holding Pond 1, Jul 2016

The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

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12	Mixed	6 tons/acre	21.6 lbs/1000 gal	15.7 lbs/1000 gal	57,000 gal	0	88 ppm	0
13	Mixed	6 tons/acre	21.6 lbs/1000 gal	15.7 lbs/1000 gal	204,000 gal	0	86 ppm	0
15	Mixed	6 tons/acre	21.6 lbs/1000 gal	15.7 lbs/1000 gal	150,000 gal	0	72 ppm	0
16	Mixed	6 tons/acre	21.6 lbs/1000 gal	15.7 lbs/1000 gal	93,000 gal	0	68 ppm	0
17	Mixed	6 tons/acre	21.6 lbs/1000 gal	15.7 lbs/1000 gal	126,000 gal	0	86 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 1, Jul 2016

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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jason Henson
OPERATOR (Please Print)

Jason Henson
SIGNATURE

1/26/17
DATE

Mail complete annual report form and annual application report to:
Arkansas Department of Environmental Quality
Permits Branch, 5301 Northshore Drive, North Little Rock, AR 72118
Or email to:

Water-permit@adeq.state.ar.us

Cooperative Extension Service
Soil Testing And Research Laboratory
Marianna, AR 72360
<http://soiltest.uark.edu>

The University of Arkansas is an equal opportunity/affirmative action institution.

JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 JH 1 18 No No Unknown
County: Lab Number: Sample Number:	Pope 154610 3466528

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	95	190	Above Optimum
K	443	886	Above Optimum
Ca	4722	9444	--
Mg	169	338	--
SO4-S	19	38	--
Zn	7.9	15.8	--
Fe	106	212	--
Mn	261	522	--
Cu	1	2	--
B	0.6	1.2	--
NO3-N	85	170	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	7.1	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	28.25	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Clay			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
92.92	83.58	4.99	4.02	0.34

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	0
Crop 3	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 JH 2 9 No No Unknown
County: Lab Number: Sample Number:	Pope 154611 3466529

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	108	216	Above Optimum
K	283	566	Above Optimum
Ca	1621	3242	--
Mg	124	248	--
SO4-S	19	38	--
Zn	5.3	10.6	--
Fe	137	274	--
Mn	326	652	--
Cu	0.8	1.6	--
B	0.4	0.8	--
NO3-N	52	104	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	6.2	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	13.42	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam - Silty Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
73.91	60.41	7.70	5.41	0.39

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	0
Crop 3	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 CC 3 17 No No Unknown
County: Lab Number: Sample Number:	Pope 154612 3466530

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	89	178	Above Optimum
K	89	178	Low
Ca	1994	3988	--
Mg	71	142	--
SO4-S	11	22	--
Zn	3.8	7.6	--
Fe	186	372	--
Mn	253	506	--
Cu	1.6	3.2	--
B	0.4	0.8	--
NO3-N	26	52	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	6.7	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	13.86	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam - Silty Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
78.35	71.96	4.27	1.65	0.47

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	0	0	0	0

4. Crop 1 Notes:

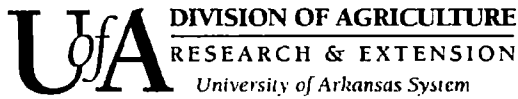
To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.



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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 JH 4 11 No No Unknown
County: Lab Number: Sample Number:	Pope 154613 3466531

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	75	150	Above Optimum
K	220	440	Above Optimum
Ca	1718	3436	--
Mg	166	332	--
SO4-S	19	38	--
Zn	7.5	15	--
Fe	255	510	--
Mn	96	192	--
Cu	0.9	1.8	--
B	0.4	0.8	--
NO3-N	32	64	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.6	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	15.64	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silty Clay Loam - Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
68.03	54.92	8.84	3.61	0.67

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop	N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop Pasture (212)	----- lb/acre -----						
Crop 1 Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	5000
Crop 2 Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	5000
Crop 3 Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	5000

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 EGC 7 73 No No Unknown
County: Lab Number: Sample Number:	Pope 154614 3466532

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	89	178	Above Optimum
K	88	176	Low
Ca	889	1778	--
Mg	116	232	--
SO4-S	15	30	--
Zn	6.4	12.8	--
Fe	182	364	--
Mn	205	410	--
Cu	1.6	3.2	--
B	0.2	0.4	--
NO3-N	20	40	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.4	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	10.24	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
56.04	43.42	9.44	2.20	0.98

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop	N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop Hay (144)	----- lb/acre -----						
Crop 1 Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	5000
Crop 2 Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	5000
Crop 3							

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:



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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 CC 8 11 No No Unknown
County: Lab Number: Sample Number:	Pope 154615 3466533

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	82	164	Above Optimum
K	111	222	Medium
Ca	2083	4166	--
Mg	95	190	--
SO4-S	12	24	--
Zn	4.4	8.8	--
Fe	155	310	--
Mn	224	448	--
Cu	0.9	1.8	--
B	0.4	0.8	--
NO3-N	30	60	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	6.5	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	14.57	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silty Clay Loam - Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
79.41	71.48	5.43	1.95	0.54

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 CC 9 30 No No Unknown
County: Lab Number: Sample Number:	Pope 154617 3466535

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	82	164	Above Optimum
K	87	174	Low
Ca	3027	6054	--
Mg	96	192	--
SO4-S	11	22	--
Zn	5.2	10.4	--
Fe	198	396	--
Mn	140	280	--
Cu	2	4	--
B	0.5	1	--
NO3-N	32	64	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	6.9	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	18.75	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Clay			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
86.66	80.74	4.27	1.19	0.46

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 YE 10 29 No No Unknown
County: Lab Number: Sample Number:	Pope 154667 3466554

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	82	164	Above Optimum
K	118	236	Medium
Ca	1324	2648	--
Mg	125	250	--
SO4-S	15	30	--
Zn	5.4	10.8	--
Fe	222	444	--
Mn	182	364	--
Cu	1.6	3.2	--
B	0.3	0.6	--
NO3-N	38	76	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.6	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	12.59	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam - Silty Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
64.25	52.60	8.28	2.40	0.97

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
		----- lb/acre -----						
Last Crop	Pasture (212)							
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	4000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 FD 11 19 No No Unknown
County: Lab Number: Sample Number:	Pope 154622 3466539

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	62	124	Above Optimum
K	150	300	Optimum
Ca	875	1750	--
Mg	157	314	--
SO4-S	20	40	--
Zn	4.7	9.4	--
Fe	157	314	--
Mn	281	562	--
Cu	0.9	1.8	--
B	0.3	0.6	--
NO3-N	23	46	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.4	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	10.64	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
57.70	41.13	12.30	3.62	0.65

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	-----lb/acre-----						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	5000
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	5000
Crop 3	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	5000

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 RF 12 13 No No Unknown
County: Lab Number: Sample Number:	Pope 154623 3466540

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	88	176	Above Optimum
K	128	256	Medium
Ca	1247	2494	--
Mg	101	202	--
SO4-S	14	28	--
Zn	3.9	7.8	--
Fe	185	370	--
Mn	206	412	--
Cu	1.5	3	--
B	0.4	0.8	--
NO3-N	21	42	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.8	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	12.00	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam - Silty Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
62.50	51.96	7.01	2.73	0.80

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
		----- lb/acre -----						
Last Crop	Pasture (212)							
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 CC 13 13 No No Unknown
County: Lab Number: Sample Number:	Pope 154624 3466541

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	86	172	Above Optimum
K	176	352	Above Optimum
Ca	1670	3340	--
Mg	131	262	--
SO4-S	18	36	--
Zn	7.6	15.2	--
Fe	122	244	--
Mn	510	1020	--
Cu	1.2	2.4	--
B	0.5	1	--
NO3-N	45	90	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	6.4	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	13.49	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam - Silty Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
74.06	61.88	8.09	3.34	0.74

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	-----lb/acre-----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 CC 14 15 No No Unknown
County: Lab Number: Sample Number:	Pope 154627 3466544

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	75	150	Above Optimum
K	149	298	Optimum
Ca	894	1788	--
Mg	145	290	--
SO4-S	19	38	--
Zn	8.3	16.6	--
Fe	141	282	--
Mn	446	892	--
Cu	1.1	2.2	--
B	0.3	0.6	--
NO3-N	48	96	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.8	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	10.14	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
60.55	44.09	11.92	3.77	0.77

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	-----lb/acre-----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	150	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 C1C 15 28 No No Unknown
County: Lab Number: Sample Number:	Pope 154628 3466545

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	72	144	Above Optimum
K	144	288	Optimum
Ca	908	1816	--
Mg	155	310	--
SO4-S	18	36	--
Zn	6.9	13.8	--
Fe	131	262	--
Mn	498	996	--
Cu	1.5	3	--
B	0.4	0.8	--
NO3-N	45	90	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.7	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	10.28	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
61.10	44.15	12.56	3.59	0.80

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	150	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	4000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

Cooperative Extension Service
Soil Testing And Research Laboratory
Marianna, AR 72360
<http://soiltest.uark.edu>

The University of Arkansas is an equal opportunity/affirmative action institution.

JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 BH 16 21 No No Unknown
County: Lab Number: Sample Number:	Pope 154631 3465548

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	68	136	Above Optimum
K	183	366	Above Optimum
Ca	1145	2290	--
Mg	138	276	--
SO4-S	17	34	--
Zn	4.9	9.8	--
Fe	190	380	--
Mn	236	472	--
Cu	1.4	2.8	--
B	0.3	0.6	--
NO3-N	47	94	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	5.5	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	12.91	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silt Loam - Silty Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
57.41	44.33	8.91	3.63	0.54

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	0	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	4000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

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JASON HENSON HC 72 BOX 10 MT JUDEA	Client ID: 8706881318 AR 72655
Date Processed: Field ID: Acres: Lime Applied in the last 4 years: Leveled in past 4 years: Irrigation:	12/4/2015 JC 17 36 No No Unknown
County: Lab Number: Sample Number:	Pope 154632 3466549

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	86	172	Above Optimum
K	93	186	Medium
Ca	2539	5078	--
Mg	106	212	--
SO4-S	17	34	--
Zn	7.1	14.2	--
Fe	158	316	--
Mn	207	414	--
Cu	1.9	3.8	--
B	0.4	0.8	--
NO3-N	38	76	--

2. Soil Properties

Property	Value	Units		
Soil pH (1:2 soil-water)	6.5	--		
Soil EC (1:2 soil-water)		umhos/cm		
Soil Estimated CEC	17.00	cmolc/kg		
Organic Matter (Loss on Ignition)		%		
Estimated Soil Texture	Silty Clay Loam - Clay Loam			
Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
82.35	74.68	5.20	1.40	1.07

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	----- lb/acre -----						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

AGRICULTURAL DIAGNOSTIC SERVICE LABORATORY

1366 W. Altheimer Dr., Fayetteville, AR 72704

(479)575-3908

agrilab@uark.edu

University of Arkansas, Dept. of Crops, Soils, and Environmental Science

LIQUID MANURE FOR FERTILIZER ANALYSIS (report for AGRI-429)



Name:	KARL VanDEVENDER / ANDREW SHARPLE	Received in lab:	4/17/2015
Address:		Mailed:	4/24/2015
City:		State.Zip:	AR
County:		Phone #:	
E-Mail:	kvan@uaex.edu, sharples@uark.edu	Check #:	Big Creek Research Project

Lab. No.	M50518	M50519				
Sample I.D.	C&HP1P	C&HP2P				
Animal type	swine	swine				
age / lbs	no info	no info				
Bedding type	none	none				
Manure type	pond liquid	pond liquid				
Sample date	4/16/2015	4/16/2015				
Age of manure	no info	no info				
pH	7.6	8.0				
EC(µmhos/cm)	13580	8710				
% Solids	3.37	2.42				

-mg/l on as-is basis-

Total N	2410	1820				
Total P	253	417				
Total K	1358	1044				
Total Ca	102	378				
NH4-N	1291	636				
Water Extractable P	169	89				

-lbs/1000 gal on as-is basis-

Total N	20.1	15.2				
TOTAL P AS						
"P2O5"	4.8	7.9				
TOTAL K AS						
"K2O"	13.6	10.4				
Total Ca	0.9	3.1				
NH4-N	10.8	5.3				
Water Extractable P	1.4	0.7				

*lbs/1000gal P2O5 = mg/l Total P on "as-is" basis multiplied by 2.29*0.00833

*lbs/1000gal K2O = mg/l Total K on "as-is" basis multiplied by 1.2*0.00833

*Water Extractable P: 1:100 solids to H2O ratio, 1 hr shake, centrifuged, filtered, acidified, analysis by ICP

AGRICULTURAL DIAGNOSTIC SERVICE LABORATORY

1366 W. Altheimer Dr., Fayetteville, AR 72704

(479)575-3908 agrilab@uark.edu

University of Arkansas, Dept. of Crops, Soils, and Environmental Science

LIQUID MANURE FOR FERTILIZER ANALYSIS (report for AGRI-429)



Name:	KARL VanDEVENDER / ANDREW SHARPLE	Received in lab:	1/19/2016
Address:	2301 SOUTH UNIVERSITY AVE	E- Mailed:	1/29/2016
City:	LITTLE ROCK	State, Zip:	AR 72204
County:		Phone #:	501-671-2244
E-Mail:	kvan@uaex.edu	Check #:	bill to Dr. Sharpley

Lab. No.	M60083	M60084			
Sample I.D.	HP #1	HP #2			
Animal type	swine	swine			
age / lbs	no info	no info			
Bedding type	none	none			
Manure type	pond liquid	pond liquid			
Sample date	1/15/2016	1/15/2016			
Age of manure	n/a	n/a			
pH	7.4	8.0			
EC(µmhos/cm)	11840	6710			
% Solids	4.44	0.95			

		-mg/l on as-is basis-			
Total N	3187	1043			
Total P	1683	93			
Total K	1321	794			
Total Ca	1600	39			
NH4-N	1146	536			
NO3-N	<0.07	<0.07			
Water Extractable P	200	64			

		-lbs/1000 gal on as-is basis-			
Total N	26.5	8.7			
TOTAL P AS					
"P2O5"	32.1	1.8			
TOTAL K AS					
"K2O"	13.2	7.9			
Total Ca	13.3	0.3			
NH4-N	9.5	4.5			
NO3-N	<0.001	<0.001			
Water Extractable P	1.7	0.5			

*lbs/1000gal P2O5 = mg/l Total P on "as-is" basis multiplied by 2.29*0.00833

*lbs/1000gal K2O = mg/l Total K on "as-is" basis multiplied by 1.2*0.00833

*Water Extractable P: 1:100 solids to H2O ratio, 1 hr shake, centrifuged, filtered, acidified, analysis by ICP

AGRICULTURAL DIAGNOSTIC SERVICE LABORATORY

1366 W. Altheimer Dr., Fayetteville, AR 72704

(479)575-3908

agrilab@uark.edu

University of Arkansas, Dept. of Crops, Soils, and Environmental Science

LIQUID MANURE FOR FERTILIZER ANALYSIS (report for AGRI-429)



Name:	DR. KARL VANDEVENDER	Received in lab:	5/31/2016
Address:	2301 S. UNIVERSITY AVE.	E-Mailed:	6/14/2016
City:	LITTLE ROCK	State, Zip:	AR 72204
County:		Phone #:	501-671-2244
E-Mail:	kvandevender@uaex.edu, sharpley@uark.edu	Check #:	BCRET Fund #

Lab. No.	M60735					
Sample I.D.	BCRET 1-C					
Animal type	swine					
-age/lbs	no info					
Bedding type	no info					
Manure type	pond liquid/sludge					
Sample date	5/27/2016					
Age of manure	no info					
pH	7.9					
EC(umhos/cm)	12780					
% Solids	2.51					

-mg/l on as-is basis-

Total N	2590	Total Mg	365	Total Na	339
Total P	821	Total S	169		
Total K	1408	Total Fe	248		
Total Ca	613	Total Mn	11.5		
NH4-N	1153	Total Zn	33.2	Chloride	391
NO3-N	<0.07	Total Cu	4.4	Water Extractable P	139

-lbs/1000 gal on as-is basis-

Total N	21.6	Total Mg	3.0	Total Na	2.8
TOTAL P AS "P2O5"	15.7	Total S	1.4		
TOTAL K AS "K2O"	14.1	Total Fe	2.1		
Total Ca	5.1	Total Mn	0.10		
NH4-N	9.6	Total Zn	0.28	Chloride	3.3
NO3-N	<0.0006	Total Cu	0.04	Water Extractable P	1.2

*lbs/1000gal P2O5 = mg/l Total P on "as-is" basis multiplied by 2.29*0.00833

*lbs/1000gal K2O = mg/l Total K on "as-is" basis multiplied by 1.2*0.00833

*Water Extractable P: 1:100 solids to H2O ratio, 1 hr shake, centrifuged, filtered, acidified, analysis by ICP



LIQUID MANURE FOR FERTILIZER ANALYSIS (report for AGRI-429)

Name:	<u>DR. KARL VANDEVENDER</u>	Received in lab:	<u>5/31/2016</u>
Address:	<u>2301 S. UNIVERSITY AVE.</u>	E-Mailed:	<u>6/14/2016</u>
City:	<u>LITTLE ROCK</u>	State, Zip:	<u>AR 72204</u>
County:		Phone #:	<u>501-671-2244</u>
E-Mail:	<u>kvandevender@uaex.edu, sharpley@uark.edu</u>	Check #:	<u>BCRET Fund #</u>

Lab. No.	<u>M60736</u>				
Sample I.D.	<u>BCRET 2-C</u>				
Animal type	<u>swine</u>				
-age/lbs	<u>no info</u>				
Bedding type	<u>no info</u>				
Manure type	<u>pond liquid/sludge</u>				
Sample date	<u>5/27/2016</u>				
Age of manure	<u>no info</u>				
pH	<u>8.2</u>				
EC(umhos/cm)	<u>8100</u>				
% Solids	<u>2.29</u>				

-mg/l on as-is basis-					
Total N	<u>1420</u>	Total Mg	<u>29.3</u>	Total Na	<u>253</u>
Total P	<u>164</u>	Total S	<u>41.0</u>		
Total K	<u>1073</u>	Total Fe	<u>471</u>		
Total Ca	<u>64.5</u>	Total Mn	<u>2.0</u>		
NH4-N	<u>565</u>	Total Zn	<u>3.7</u>	Chloride	<u>372</u>
NO3-N	<u><0.07</u>	Total Cu	<u>0.6</u>	Water Extractable P	<u>91.3</u>

-lbs/1000 gal on as-is basis-					
Total N	<u>11.8</u>	Total Mg	<u>0.24</u>	Total Na	<u>2.1</u>
TOTAL P AS "P2O5"	<u>3.1</u>	Total S	<u>0.34</u>		
TOTAL K AS "K2O"	<u>10.7</u>	Total Fe	<u>3.9</u>		
Total Ca	<u>0.5</u>	Total Mn	<u>0.017</u>		
NH4-N	<u>4.7</u>	Total Zn	<u>0.031</u>	Chloride	<u>3.1</u>
NO3-N	<u><0.0006</u>	Total Cu	<u>0.005</u>	Water Extractable P	<u>0.76</u>

*lbs/1000gal P2O5 = mg/l Total P on "as-is" basis multiplied by 2.29*0.00833

*lbs/1000gal K2O = mg/l Total K on "as-is" basis multiplied by 1.2*0.00833

*Water Extractable P: 1:100 solids to H2O ratio, 1 hr shake, centrifuged, filtered, acidified, analysis by ICP

Arkansas Nutrient Management Planner with 2009 PI (Beta draft ver 09162015)

Planner:	Monica Hancock
Plan Description:	C & H 2016 End of Year Report

Date:	10/6/2016
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Beta Test Version for Use by Select Planners working with Author. This worksheet is intended to assist in the writing of Nutrient Management Plans for the application of manure to pasture and hay land. To do this, the worksheet estimates the litter production for the farm, estimates the P Index risk value for the defined conditions of each field, assists with the allocation of nutrients to the various receiving fields, and estimates the amount of litter available for off farm use. This worksheet is the result of an effort to develop a reliable training/planning tool faithful to the 2009 Arkansas P Index developed by a multi-agency effort. However, no guarantees are made, and any observed problems or suggestions for improvement should be directed to Karl VanDevender at kvan@uaex.edu.

Nutrient Source and Description Information

Manure Source	Source Type	Amount Available		N Concentration		P2O5 Concentration		K2O Concentration		Water Extractable P		Alum
HP 1 April 2015	Liquid Manure	1	1000 gal	20.1	lb/1000 gal	4.8	lb/1000 gal	13.6	lb/1000 gal	1.40	lb/1000 gal	No
HP 2 Jan 2016	Liquid Manure	1	1000 gal	8.7	lb/1000 gal	1.8	lb/1000 gal	7.9	lb/1000 gal	0.50	lb/1000 gal	No
HP 1 July 2016	Liquid Manure	1	1000 gal	21.6	lb/1000 gal	15.7	lb/1000 gal	14.1	lb/1000 gal	1.20	lb/1000 gal	No
HP 2 July 2016	Liquid Manure	1	1000 gal	11.8	lb/1000 gal	3.1	lb/1000 gal	10.7	lb/1000 gal	0.76	lb/1000 gal	No

Nutrient Loss and Mineralization Factors

Manure Source	N		P2O5		K2O	
	Storage Losses (%)	Appl. Losses (%)	Storage Losses (%)	Appl. Losses (%)	Storage Losses (%)	Appl. Losses (%)
HP 1 April 2015		25%				
HP 2 Jan 2016		25%				
HP 1 July 2016		25%				
HP 2 July 2016		25%				
0						

Estimated Plant Available Nutrients

Manure Source	N		P2O5		K2O		Water Extractable P					
	Concentration	Total (lb)	Concentration	Total (lb)	Concentration	Total (lb)	Concentration	Total (lb)				
HP 1 April 2015	15.08	lb/1000 gal	15	4.80	lb/1000 gal	5	13.60	lb/1000 gal	14	1.40	lb/1000 gal	1.4
HP 2 Jan 2016	6.53	lb/1000 gal	7	1.80	lb/1000 gal	2	7.90	lb/1000 gal	8	0.50	lb/1000 gal	0.5
HP 1 July 2016	16.20	lb/1000 gal	16	15.70	lb/1000 gal	16	14.10	lb/1000 gal	14	1.20	lb/1000 gal	1.2
HP 2 July 2016	8.85	lb/1000 gal	9	3.10	lb/1000 gal	3	10.70	lb/1000 gal	11	0.76	lb/1000 gal	0.76
0												
			47			25			46			4

Fields Shown		--- General Field Information --- General Field Information --- General Field Information --- General Field Information --- General Field Information ---																		
Total Annual		15	County	Field Area (ac)	Appl Area (ac)	Soil Map Unit	Slope Gradient (%)				Slope Length (ft)				Flooding Frequency		Predominate Vegetation	Percent Ground Cover	Conservation Support Practices (P)	
PI Value	N Balance (+/-)	Field					Min	Max	Rep	Used	Min	Max	Rep	Used	Data Base Default	Used				
		(Column Shown Value)	Hide																	
		(Column Default Value)	Newton																	
17	-43	H1	Newton	7.30	7.30	42	3	8	5	5	15	75	45	45	None	None	Grass	95-100	None	
16	-69	H2	Newton	6.00	6.00	43	8	20	14	14	15	30	20	20	None	None	Grass	95-100	None	
27	-210	H3	Newton	13.60	13.60	48	0	3	2	2	15	75	45	45	Occasional	Occasional	Grass	95-100	None	
14	-67	H4	Newton	6.80	6.80	43	8	20	14	14	15	30	20	20	None	None	Grass	95-100	None	
10	-300	H7	Newton	64.30	64.30	48	0	3	2	2	15	75	45	45	Occasional	Occasional	Grass	95-100	None	
16	-189	H8	Newton	8.60	8.60	51	2	5	2.5	2.5	15	75	45	45	None	None	Grass	95-100	None	
30	-177	H9	Newton	35.50	35.50	50	0	3	2	2	15	75	45	45	Occasional	Occasional	Grass	95-100	None	
16	-182	H10	Newton	29.30	29.30	51	2	5	2.5	2.5	15	75	45	45	None	None	Grass	95-100	None	
13	-58	H11	Newton	14.20	14.20	43	8	20	14	14	15	30	20	20	None	None	Grass	95-100	None	
33	-162	H12	Newton	11.40	11.40	50	0	3	2	2	15	75	45	45	Occasional	Occasional	Grass	95-100	None	
21	-61	H13	Newton	50.90	50.90	43	8	20	14	14	15	30	20	20	None	None	Grass	95-100	None	
11	-240	H14	Newton	8.10	8.10	43	8	20	14	14	15	30	20	20	None	None	Grass	95-100	None	
22	-45	H15	Newton	37.50	37.50	43	8	20	14	14	15	30	20	20	None	None	Grass	95-100	None	
24	-201	H16	Newton	15.20	15.20	50	0	3	2	2	15	75	45	45	Occasional	Occasional	Grass	95-100	None	
18	-167	H17	Newton	31.90	31.90	1	3	8	5	5	15	75	45	45	None	None	Grass	95-100	None	

Farm Totals Available Surpluses/Deficits (+/-) 340.60 340.60

Fields Shown		15	--- General Field Information ---											Additional Best Management Practices					--- Nutrient Application Information --- Nutrient Application Infor				
Total Annual		Field	Pasture Use	RUSLE 1 (ton/ac)	RUSLE 2 (ton/ac)	Diversion	Terrace	Pond	Filter Strip	Grassed Waterway	Fencing	Riparian Forest Buffer	Riparian Herbaceous Cover	Field Borders	--- Application Group 1 ---		--- Application Group 1 --- Application Group 1 --- Applic						
PI Value	N Balance (+/-)	(Column Shown Value) (Column Default Value)													Timing	Appl Method	Nutrient Source	Bulk Rate	Units				
17	-43	H1	Rotational Grazing	0.12	0.12																		
16	-69	H2	Rotational Grazing	0.28	0.28																		
27	-210	H3	Rotational Grazing	0.05	0.05																		
14	-67	H4	Rotational Grazing	0.28	0.28																		
10	-300	H7	Rotational Grazing	0.05	0.05																		
16	-189	H8	Rotational Grazing	0.05	0.05																		
30	-177	H9	Rotational Grazing	0.05	0.05																		
16	-182	H10	Rotational Grazing	0.05	0.05																		
13	-58	H11	Rotational Grazing	0.28	0.28																		
33	-162	H12	Rotational Grazing	0.05	0.05																		
21	-61	H13	Rotational Grazing	0.28	0.28										Nov-Feb	Surface	HP 1 April 2015	1.77	1000 gal/ac				
11	-240	H14	Rotational Grazing	0.28	0.28																		
22	-45	H15	Rotational Grazing	0.28	0.28										Nov-Feb	Surface	HP 1 April 2015	2.08	1000 gal/ac				
24	-201	H16	Rotational Grazing	0.05	0.05																		
18	-167	H17	Rotational Grazing	0.12	0.12																		

Farm Totals Available Surpluses/Deficits (+/-)

Fields Shown		Nutrient Application Information																						
Total Annual		Application Group 1					Application Group 2					Application Group 2					Application Group 3							
PI Value	N Balance (+/-)	Field	N	P2O5	K2O	Group Sub PI	Group Sub PI Range	Timing	Appl Method	Nutrient Source	Bulk Rate	Units	N	P2O5	K2O	Group Sub PI	Group Sub PI Range	Timing	Appl Method	Nutrient Source	Bulk Rate	Units	N	
			(lb/ac)	(lb/ac)	(lb/ac)								(lb/ac)	(lb/ac)	(lb/ac)									(lb/ac)
		(Column Shown Value)	Show	Show	Show							Hide	Show	Show	Show									Show
17	-43	H1						March-June	Surface	HP 2 Jan 2016	5.75	1000 gal/ac	38	10	45	3	Low	July-Oct	Surface	HP 1 July 2016	4.93	1000 gal/ac	80	
16	-69	H2						March-June	Surface	HP 2 Jan 2016	4.00	1000 gal/ac	26	7	32	2	Low	July-Oct	Surface	HP 1 July 2016	4.00	1000 gal/ac	65	
27	-210	H3						March-June	Surface	HP 2 Jan 2016	3.97	1000 gal/ac	26	7	31	4	Low	July-Oct	Surface	HP 1 July 2016	3.97	1000 gal/ac	64	
14	-67	H4						March-June	Surface	HP 2 Jan 2016	4.41	1000 gal/ac	29	8	35	3	Low	July-Oct	Surface	HP 1 July 2016	3.97	1000 gal/ac	64	
10	-300	H7																						
16	-189	H8						March-June	Surface	HP 2 Jan 2016	4.88	1000 gal/ac	32	9	39	3	Low	July-Oct	Surface	HP 1 July 2016	4.88	1000 gal/ac	79	
30	-177	H9						March-June	Surface	HP 2 Jan 2016	7.10	1000 gal/ac	46	13	56	7	Low	July-Oct	Surface	HP 1 July 2016	4.73	1000 gal/ac	77	
16	-182	H10						March-June	Surface	HP 2 Jan 2016	5.12	1000 gal/ac	33	9	40	3	Low	July-Oct	Surface	HP 1 July 2016	5.22	1000 gal/ac	85	
13	-58	H11						March-June	Surface	HP 2 Jan 2016	5.07	1000 gal/ac	33	9	40	3	Low	July-Oct	Surface	HP 1 July 2016	4.23	1000 gal/ac	68	
33	-162	H12						March-June	Surface	HP 2 Jan 2016	8.68	1000 gal/ac	57	16	69	8	Low	July-Oct	Surface	HP 1 July 2016	5.00	1000 gal/ac	81	
21	-61	H13	27	8	24	4	Low	March-June	Surface	HP 2 Jan 2016	1.18	1000 gal/ac	8	2	9	1	Low	July-Oct	Surface	HP 1 July 2016	4.01	1000 gal/ac	65	
11	-240	H14						March-June	Surface	HP 2 Jan 2016	9.26	1000 gal/ac	60	17	73	5	Low							
22	-45	H15	31	10	28	5	Low	March-June	Surface	HP 2 Jan 2016	2.96	1000 gal/ac	19	5	23	2	Low	July-Oct	Surface	HP 1 July 2016	4.00	1000 gal/ac	65	
24	-201	H16																July-Oct	Surface	HP 1 July 2016	6.12	1000 gal/ac	99	
18	-167	H17						March-June	Surface	HP 2 Jan 2016	10.53	1000 gal/ac	69	19	83	6	Low	July-Oct	Surface	HP 1 July 2016	3.95	1000 gal/ac	64	

Farm Totals
 Available
 Surpluses/Deficits (+/-)

Fields Shown		15	Information ---				Soil Test P and Soil Sub PI				Application Totals		Total = Soil + Applications		Per Acre Nutrient Budget				Surr		
Total Annual		Field	P2O5	K2O	Group Sub PI	Group Sub PI Range	ppm	lb/ac	Soil Sub PI	Soil Sub Range	App Sub Pls Sum	App Sub Pls Range	Total PI Value	PI Range	Application Rate Totals			Nutrient Recommendation			N (lb/ac)
PI Value	N Balance (+/-)		(lb/ac)	(lb/ac)											N (lb/ac)	P2O5 (lb/ac)	K2O (lb/ac)	N (lb/ac)	P2O5 (lb/ac)	K2O (lb/ac)	
		(Column Shown Value)	Show	Show																	
		(Column Default Value)																			
17	-43	H1	77	70	6	Low	95	126	8	Low	9	Low	17	Low	117	88	115	160	0	0	-43
16	-69	H2	63	56	5	Low	108	144	9	Low	7	Low	16	Low	91	70	88	160	0	0	-69
27	-210	H3	62	56	10	Low	89	118	13	Low	14	Low	27	Low	90	69	87	300	0	300	-210
14	-67	H4	62	56	5	Low	75	100	6	Low	8	Low	14	Low	93	70	91	160	0	0	-67
10	-300	H7					89	118	10	Low	0	Low	10	Low	0	0	0	300	0	300	-300
16	-189	H8	77	69	6	Low	82	109	7	Low	9	Low	16	Low	111	85	107	300	0	250	-189
30	-177	H9	74	67	11	Low	82	109	12	Low	18	Low	30	Low	123	87	123	300	0	300	-177
16	-182	H10	82	74	6	Low	82	109	7	Low	9	Low	16	Low	118	91	114	300	0	250	-182
13	-58	H11	66	60	5	Low	62	82	5	Low	8	Low	13	Low	102	75	100	160	0	40	-58
33	-162	H12	79	71	12	Low	88	117	13	Low	20	Low	33	Medium	138	94	139	300	0	250	-162
21	-61	H13	63	57	5	Low	86	114	11	Low	10	Low	21	Low	99	74	90	160	0	0	-61
11	-240	H14					75	100	6	Low	5	Low	11	Low	60	17	73	300	0	200	-240
22	-45	H15	63	56	5	Low	72	96	10	Low	12	Low	22	Low	115	78	108	160	0	150	-45
24	-201	H16	96	86	15	Low	68	90	9	Low	15	Low	24	Low	99	96	86	300	0	0	-201
18	-167	H17	62	56	5	Low	86	114	7	Low	11	Low	18	Low	133	81	139	300	0	250	-167

Farm Totals
Available
Surpluses/Deficits (+/-)

Fields Shown		15	--- Per Field Nutrient Budget ----- Per Field Nutrient Budget ----- Per Field Nutrient Budget ----- Per Field Nutrient Budget ---											March-June		July	
Total Annual			Surpluses / Deficits (+/-)		Application Rate Totals			Nutrient Recommendation (lb/field)			Surpluses / Deficits (+/-)			Per Acre	Per Field	Per Acre	
PI Value	N Balance (+/-)	Field	P2O5 (lb/ac)	K2O (lb/ac)	N (lb/field)	P2O5 (lb/field)	K2O (lb/field)	N (lb/field)	P2O5 (lb/field)	K2O (lb/field)	N (lb/field)	P2O5 (lb/field)	K2O (lb/field)	Per Acre	Per Field	Per Acre	
		(Column Shown Value)															
		(Column Default Value)															
17	-43	H1	88	115	857	641	839	1,168	0	0	-311	641	839				
16	-69	H2	70	88	545	420	528	960	0	0	-415	420	528				
27	-210	H3	69	-213	1,227	945	1,188	4,080	0	4,080	-2,853	945	-2,892				
14	-67	H4	70	91	633	478	618	1,088	0	0	-455	478	618				
10	-300	H7	0	-300	0	0	0	19,290	0	19,290	-19,290	0	-19,290				
16	-189	H8	85	-143	954	735	924	2,580	0	2,150	-1,626	735	-1,226				
30	-177	H9	87	-177	4,366	3,091	4,360	10,650	0	10,650	-6,284	3,091	-6,290				
16	-182	H10	91	-136	3,457	2,672	3,342	8,790	0	7,325	-5,333	2,672	-3,983				
13	-58	H11	75	60	1,442	1,072	1,415	2,272	0	568	-830	1,072	847				
33	-162	H12	94	-111	1,569	1,073	1,586	3,420	0	2,850	-1,851	1,073	-1,264				
21	-61	H13	74	90	5,053	3,743	4,574	8,144	0	0	-3,091	3,743	4,574				
11	-240	H14	17	-127	489	135	593	2,430	0	1,620	-1,941	135	-1,028				
22	-45	H15	78	-42	4,330	2,929	4,053	6,000	0	5,625	-1,670	2,929	-1,572				
24	-201	H16	96	86	1,507	1,460	1,311	4,560	0	0	-3,053	1,460	1,311				
18	-167	H17	81	-111	4,234	2,583	4,431	9,570	0	7,975	-5,336	2,583	-3,544				
Farm Totals Available					30,665	21,977	29,762	85,002	0	62,133	-54,337	21,977	-32,372				
Surpluses/Deficits (+/-)					47	25	46										
					-30,618	-21,951	-29,715										

Fields Shown		15	1000 gal					1000 gal					March			
			Oct	Nov-Feb		Annual		March-June		July-Oct		Nov-Feb		Annual		
Total Annual		Field	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre
PI Value	N Balance (+/-)		(Column Shown Value)													
17	-43	H1							5.75	42.00					5.75	42.00
16	-69	H2							4.00	24.00					4.00	24.00
27	-210	H3							3.97	54.00					3.97	54.00
14	-67	H4							4.41	30.00					4.41	30.00
10	-300	H7														
16	-189	H8							4.88	42.00					4.88	42.00
30	-177	H9							7.10	252.00					7.10	252.00
16	-182	H10							5.12	150.00					5.12	150.00
13	-58	H11							5.07	72.00					5.07	72.00
33	-162	H12							8.68	99.00					8.68	99.00
21	-61	H13		1.77	90.00	1.77	90.00	1.18	60.00					1.18	60.00	
11	-240	H14							9.26	75.00					9.26	75.00
22	-45	H15		2.08	78.00	2.08	78.00	2.96	111.00					2.96	111.00	
24	-201	H16														
18	-167	H17							10.53	336.00					10.53	336.00

Farm Totals
 Available
 Surpluses/Deficits (+/-)

168.00

168.00

1

-167

1347.00

1347.00

1

-1,346

Fields Shown		15	1000 gal						1000 gal							
Total Annual			~June	July-Oct		Nov-Feb		Annual		March-June		July-Oct		Nov-Feb		Anr
PI Value	N Balance (+/-)	Field	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre	Per Field	Per Acre
		(Column Shown Value)														
		(Column Default Value)														
17	-43	H1		4.93	36.00			4.93	36.00							
16	-69	H2		4.00	24.00			4.00	24.00							
27	-210	H3		3.97	54.00			3.97	54.00							
14	-67	H4		3.97	27.00			3.97	27.00							
10	-300	H7														
16	-189	H8		4.88	42.00			4.88	42.00							
30	-177	H9		4.73	168.00			4.73	168.00							
16	-182	H10		5.22	153.00			5.22	153.00							
13	-58	H11		4.23	60.00			4.23	60.00							
33	-162	H12		5.00	57.00			5.00	57.00							
21	-61	H13		4.01	204.00			4.01	204.00							
11	-240	H14														
22	-45	H15		4.00	150.00			4.00	150.00							
24	-201	H16		6.12	93.00			6.12	93.00							
18	-167	H17		3.95	126.00			3.95	126.00							

Farm Totals
 Available 1194.00
 Surpluses/Deficits (+/-) 1
 -1,193

Planning

Fields Shown		15	ual	1000 gal	
Total Annual		Field	Per Field	Per Acre	Per Field
PI Value	N Balance (+/-)	(Column Shown Value) (Column Default Value)	Hide		
17	-43	H1		10.68	78
16	-69	H2		8.00	48
27	-210	H3		7.94	108
14	-67	H4		8.38	57
10	-300	H7			
16	-189	H8		9.77	84
30	-177	H9		11.83	420
16	-182	H10		10.34	303
13	-58	H11		9.30	132
33	-162	H12		13.68	156
21	-61	H13		6.95	354
11	-240	H14		9.26	75
22	-45	H15		9.04	339
24	-201	H16		6.12	93
18	-167	H17		14.48	462

Farm Totals
 Available
 Surpluses/Deficits (+/-)

1

Fields Shown		15		Nov-Feb			March-June			July-October			Yearly Total	
Total Annual		Field		HP 1 April 2015	HP 2 Jan 2016	HP 1 July 2016	HP 1 April 2015	HP 2 Jan 2016	HP 1 July 2016	HP 1 April 2015	HP 2 Jan 2016	HP 1 July 2016		
PI Value	N Balance (+/-)	(Column Shown Value) (Column Default Value)	Field	Soil only P Index Timing value	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	Gal/ac Gal/Field P Index	
17	-43	H1	H1	March-June 8					5.75 42,000 3				4.93 36,000 6	10.68 78,000 17
16	-69	H2	H2	March-June 9					4. 24,000 2				4. 24,000 5	8. 48,000 16
27	-210	H3	H3	March-June 13					3.97 54,000 4				3.97 54,000 10	7.94 108,000 27
14	-67	H4	H4	March-June 6					4.41 30,000 3				3.97 27,000 5	8.38 57,000 14
10	-300	H7	H7	July-Oct 10										0 0 10
16	-189	H8	H8	March-June 7					4.88 42,000 3				4.88 42,000 6	9.77 84,000 16
30	-177	H9	H9	March-June 12					7.1 252,000 7				4.73 168,000 11	11.83 420,000 30
16	-182	H10	H10	March-June 7					5.12 150,000 3				5.22 153,000 6	10.34 303,000 16
13	-58	H11	H11	March-June 5					5.07 72,000 3				4.23 60,000 5	9.3 132,000 13
33	-162	H12	H12	March-June 13					8.68 99,000 8				5. 57,000 12	13.68 156,000 33
21	-61	H13	H13	Nov-Feb 11	1.77 90,000 4				1.18 60,000 1				4.01 204,000 5	6.95 354,000 21
11	-240	H14	H14	March-June 6					9.26 75,000 5					9.26 75,000 11
22	-45	H15	H15	Nov-Feb 10	2.08 78,000 5				2.96 111,000 2				4. 150,000 5	9.04 339,000 22
24	-201	H16	H16	July-Oct 9									6.12 93,000 15	6.12 93,000 24
18	-167	H17	H17	March-June 7					10.53 336,000 6				3.95 126,000 5	14.48 462,000 18

Farm Totals Available Surpluses/Deficits (+/-)

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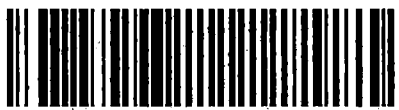
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