ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

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

Reporting Period: 1-1-19 through 12-31-19

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

Number & type of animals: annual average 1,939 swine ≥ 55lbs, annual average 615 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: 2,265,374 gallons
(Express in tons or gallons)

Estimated amount of total manure, littler and process wastewater transferred to other person by the CAFO in the previous 12 months: 774,000 gallons
(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: 551.7

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			0
Discharge 2			0
Discharge 3			0
Discharge 4			0

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 1-24-2020

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 2019 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					24,000 gal			
2					45,000 gal			
3					132,000 gal			
4					51,000 gal			
7					894,000 gal			
8					28,000 gal			
9					281,000 gal			
10					183,000 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.

Spring Application
using manure sample for Holding Pond 1, Feb 2019

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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1	Mixed	6 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	24,000 gal	0	90 ppm	0
4	Mixed	6 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	21,000 gal	0	101 ppm	0
8	Mixed	6 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	28,000 gal	0	126 ppm	0
9	Mixed	6 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	80,000 gal	0	102 ppm	0
13	Mixed	6 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	147,000 gal	0	49 ppm	0
14	Mixed	6 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	82,500 gal	0	74 ppm	0
15	Mixed	6 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	105,000 gal	0	122 ppm	0

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Spring Application
using manure sample for Holding Pond 2, Feb 2019

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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3	Mixed	6 tons/acre	1.2 lbs/1000gal	1.6 lbs/1000gal	69,000 gal	0	146 ppm	0
7	Mixed	6 tons/acre	1.2 lbs/1000gal	1.6 lbs/1000gal	363,000 gal	0	150 ppm	0
10	Mixed	6 tons/acre	1.2 lbs/1000gal	1.6 lbs/1000 gal	105,000 gal	0	83 ppm	0
12	Mixed	6 tons/acre	1.2 lbs/1000gal	1.6 lbs/1000gal	51,000 gal	0	152 ppm	0
15	Mixed	6 tons/acre	1.2 lbs/1000gal	1.6 lbs/1000 gal	168,000 gal	0	122 ppm	0
16	Mixed	6 tons/acre	1.2 lbs/1000gal	1.6 lbs/1000gal	93,000 gal	0	84 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 2, Feb 2019

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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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Summer Application
using manure sample for Holding Pond 1, Feb 2019

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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17	Mixed	4 tons/acre	16.3 lbs/1000 gal	51.1 lbs/1000 gal	30,000 gal	0	99 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 1, Feb 2019

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Summer Application
using manure sample for Holding Pond 2, Feb 2019

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3	Mixed	6 tons/acre	1.2 lbs/1000gal	1.6 lbs/1000 gal	63,000 gal	0	146ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 2, Feb 2019

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Summer Application
using manure sample for Holding Pond 1, Jun 2019

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2	Mixed	6 tons/acre	12.7 lbs/1000gal	28.5 lbs/1000gal	15,000 gal	0	120 ppm	0
17	Mixed	6 tons/acre	12.7 lbs/1000 gal	28.5 lbs/1000 gal	114,000 gal	0	99 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 1, Jun 2019

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Summer Application
using manure sample for Holding Pond 2, Jun 2019

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2	Mixed	6 tons/acre	1.9 lbs/1000gal	1.9 lbs/1000gal	30,000 gal	0	120 ppm	0
4	Mixed	6 tons/acre	1.9 lbs/1000gal	1.9 lbs/1000 gal	30,000 gal	0	101 ppm	0
7	Mixed	6 tons/acre	1.9 lbs/1000gal	1.9 lbs/1000 gal	531,000 gal	0	150 ppm	0
9	Mixed	6 tons/acre	1.9 lbs/1000gal	1.9 lbs/1000 gal	201,000 gal	0	102 ppm	0
10	Mixed	6 tons/acre	1.9 lbs/1000gal	1.9 lbs/1000 gal	78,000 gal	0	83 ppm	0
13	Mixed	6 tons/acre	1.9 lbs/1000gal	1.9 lbs/1000 gal	216,000 gal	0	49 ppm	0
17	Mixed	6 tons/acre	1.9 lbs/1000gal	1.9 lbs/1000 gal	183,000 gal	0	99 ppm	0

WASTEWATER SAMPLE LOCATION: Holding Pond 2, Jun 2019

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.

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Annual Summary, page 2

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12					51,000 gal			
13					363,000 gal			
14					22,500 gal			
15					273,000 gal			
16					93,000 gal			
17					327,000 gal			

WASTEWATER SAMPLE LOCATION: Holding Pond 1 and Holding Pond 2

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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	Jason Henson	1-24-2020
OPERATOR (Please Print)	SIGNATURE	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

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

Planner:	
Plan Description:	2019 C&H Yearend Report

Date:	11/1/2019

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
P1 M90178	Liquid Manure	1	1000 gal	16.3	lb/1000 gal	51.1	lb/1000 gal	12.5	lb/1000 gal	1.60	lb/1000 gal	No
P2 M90179	Liquid Manure	1	1000 gal	1.2	lb/1000 gal	1.6	lb/1000 gal	7.7	lb/1000 gal	0.40	lb/1000 gal	No
P1 M90564	Liquid Manure	1	1000 gal	12.7	lb/1000 gal	28.5	lb/1000 gal	13.9	lb/1000 gal	0.70	lb/1000 gal	No
P2 M90565	Liquid Manure	1	1000 gal	1.9	lb/1000 gal	1.9	lb/1000 gal	9	lb/1000 gal	0.40	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 (%)
P1 M90178		25%				
P2 M90179		25%				
P1 M90564		25%				
P2 M90565		25%				

Estimated Plant Available Nutrients

Manure Source	N			P2O5			K2O			Water Extractable P		
	Concentration		Total (lb)	Concentration		Total (lb)	Concentration		Total (lb)	Concentration		Total (lb)
P1 M90178	12.23	lb/1000 gal	12	51.10	lb/1000 gal	51	12.50	lb/1000 gal	13	1.60	lb/1000 gal	1.6
P2 M90179	0.90	lb/1000 gal	1	1.60	lb/1000 gal	2	7.70	lb/1000 gal	8	0.40	lb/1000 gal	0.4
P1 M90564	9.53	lb/1000 gal	10	28.50	lb/1000 gal	29	13.90	lb/1000 gal	14	0.70	lb/1000 gal	0.7
P2 M90565	1.43	lb/1000 gal	1	1.90	lb/1000 gal	2	9.00	lb/1000 gal	9	0.40	lb/1000 gal	0.4
			24			83			43			3

Planner:	
Plan Description:	2019 C&H Yearend Report Final

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Fields Shown	Total Annual Summary					- - - General Field Information - - -- - -													
15	PI		Nutrient Balance (+/-)			County	Field Area (ac)	Appl Area (ac)	Soil Map Unit	Slope Gradient (%)				Slope Length (ft)				Flooding F
Field	Target	Value	N	P2O5	K2O					Min	Max	Rep	Used	Min	Max	Rep	Used	**D**ata **B**ase **D**efault
(Column Shown Value)																		
(**C**olumn **D**efault **V**alue)	66					Newton												
H1	66	16	-120	+168	+41	Newton	7.30	7.30	42	3	8	5	5	15	75	45	45	None
H2	66	13	-129	+81	+80	Newton	6.00	6.00	43	8	20	14	14	15	30	20	20	None
H3	66	28	-151	+16	+15	Newton	13.60	13.60	48	0	3	2	2	15	75	45	45	Occasional
H4	66	20	-116	+166	+38	Newton	6.80	6.80	43	8	20	14	14	15	30	20	20	None
H7	66	32	-283	+25	-182	Newton	64.30	64.30	48	0	3	2	2	15	75	45	45	Occasional
H8	66	19	-260	+166	-209	Newton	8.60	8.60	51	2	5	2.5	2.5	15	75	45	45	None
H9	66	30	-264	+126	-171	Newton	35.50	35.50	50	0	3	2	2	15	75	45	45	Occasional
H10	66	10	-293	+11	-198	Newton	29.30	29.30	51	2	5	2.5	2.5	15	75	45	45	None
H11	66	2	-160	-30	+0	Newton	14.20	14.20	43	8	20	14	14	15	30	20	20	None
H12	66	26	-296	+7	-166	Newton	11.40	11.40	50	0	3	2	2	15	75	45	45	Occasional
H13	66	15	-259	+111	+74	Newton	50.90	50.90	43	8	20	14	14	15	30	20	20	None
H14	66	14	-266	+142	-215	Newton	8.10	8.10	43	8	20	14	14	15	30	20	20	None
H15	66	21	-122	+150	+29	Newton	37.50	37.50	43	8	20	14	14	15	30	20	20	None
H16	66	17	-154	+10	+7	Newton	15.20	15.20	50	0	3	2	2	15	75	45	45	Occasional
H17	66	23	-246	+161	-187	Newton	31.90	31.90	1	3	8	5	5	15	75	45	45	None
Farm Totals							340.60	340.60										
Available																		
Surpluses/Deficits (+/-)																		

Planner:
Plan Description:
Beta Test Version for Us
the writing of Nutrient Mar
worksheet estimates the l
of each field, assists with
litter available for off farm

Fields Shown
15

	al Field Information - - -- - - - General Field Information - - -- - - - General Field Information - - -							- - - Nutrient Application Information - - -- - - Nutrient Application Informatior					
	Frequency							- - - Application Group 1 - - - - - - Application Group 1 - - - - - - Application					
Field	Used	Predominate Vegetation	Percent Ground Cover	Conservation Support Practices (P)	Pasture Use	RUSLE 1 (ton/ac)	RUSLE 2 (ton/ac)	Timing	Appl Method	Nutrient Source	Bulk Rate	Units	(lb/ac)
(Column Shown Value)									Show				
(**C**olumn **D**efault **V**alue)		Grass	95-100	None	Rotational Grazing								
H1	None	Grass	95-100	None	Rotational Grazing	0.12	0.1188	March-June	Surface	P1 M90178	3.29	1000 gal/ac	40
H2	None	Grass	95-100	None	Rotational Grazing	0.26	0.2646						
H3	Occasional	Grass	95-100	None	Rotational Grazing	0.05	0.04914						
H4	None	Grass	95-100	None	Rotational Grazing	0.26	0.2646	March-June	Surface	P1 M90178	3.09	1000 gal/ac	38
H7	Occasional	Grass	95-100	None	Rotational Grazing	0.05	0.04914						
H8	None	Grass	95-100	None	Rotational Grazing	0.05	0.04914	March-June	Surface	P1 M90178	3.26	1000 gal/ac	40
H9	Occasional	Grass	95-100	None	Rotational Grazing	0.05	0.04914	March-June	Surface	P1 M90178	2.25	1000 gal/ac	28
H10	None	Grass	95-100	None	Rotational Grazing	0.05	0.04914						
H11	None	Grass	95-100	None	Rotational Grazing	0.26	0.2646						
H12	Occasional	Grass	95-100	None	Rotational Grazing	0.05	0.04914						
H13	None	Grass	95-100	None	Rotational Grazing	0.26	0.2646	March-June	Surface	P1 M90178	2.89	1000 gal/ac	35
H14	None	Grass	95-100	None	Rotational Grazing	0.26	0.2646	March-June	Surface	P1 M90178	2.78	1000 gal/ac	34
H15	None	Grass	95-100	None	Rotational Grazing	0.26	0.2646	March-June	Surface	P1 M90178	2.80	1000 gal/ac	34
H16	Occasional	Grass	95-100	None	Rotational Grazing	0.05	0.04914						
H17	None	Grass	95-100	None	Rotational Grazing	0.12	0.1188						

Farm Totals
Available
Surpluses/Deficits (+/-)

Planner:	
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Fields Shown																			
15	) - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Info																		
	Group 1 - - - - - - Application Group 1 - - - - - - Application Group 1 - - -								- - - Application Group 2 - - - - - - Application Group 2 - - - - - - Application Group 2 - - - - - - Application Group 2 - - - -									
Field	N		P2O5		K2O		Group Sub PI	Group Sub PI Range	Timing	Appl Method	Nutrient Source	Bulk Rate	Units	N		P2O5		K	
	(lb/field)	(lb/ac)	(lb/field)	(lb/ac)	(lb/field)									(lb/ac)	(lb/field)	(lb/ac)	(lb/field)	(lb/ac)	
(Column Shown Value)																			
(**C**olumn **D**efault **V**alue)																			
H1	293	168	1,226	41	300	9	Low												
H2																			
H3									March-June	Surface	P2 M90179	5.07	1000 gal/ac	5	62	8	110	39	
H4	257	158	1,073	39	263	9	Low												
H7									March-June	Surface	P2 M90179	5.65	1000 gal/ac	5	327	9	581	43	
H8	342	166	1,431	41	350	9	Low												
H9	978	115	4,088	28	1,000	11	Low												
H10									March-June	Surface	P2 M90179	3.58	1000 gal/ac	3	95	6	168	28	
H11																			
H12									March-June	Surface	P2 M90179	4.47	1000 gal/ac	4	46	7	82	34	
H13	1,797	148	7,512	36	1,838	9	Low												
H14	275	142	1,150	35	281	8	Low												
H15	1,284	143	5,366	35	1,313	8	Low		March-June	Surface	P2 M90179	4.48	1000 gal/ac	4	151	7	269	34	
H16									March-June	Surface	P2 M90179	6.12	1000 gal/ac	6	84	10	149	47	
H17																			
Farm Totals	5,226		21,845		5,344										764		1,358		
Available																			
Surpluses/Deficits (+/-)																			

Planner:
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Fields Shown
15

rmation - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Applicati																		
- - Application Group 2 - - -				- - - Application Group 3 - - -														- - - Applicat
Field	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
	(lb/field)								(lb/ac)	(lb/field)	(lb/ac)	(lb/field)	(lb/ac)	(lb/field)			
(Column Shown Value)																	
(**C**olumn **D**efault **V**alue)																	
H1																	
H2																	July-Oct
H3	531	4	Low	July-Oct	Surface	P2 M90179	4.63	1000 gal/ac	4	57	7	101	36	485	3	Low	
H4																	
H7	2,795	4	Low														
H8																	
H9																	
H10	809	2	Low														
H11																	
H12	393	4	Low														
H13																	
H14																	
H15	1,294	2	Low														
H16	716	5	Low														
H17				July-Oct	Surface	P1 M90178	0.94	1000 gal/ac	11	367	48	1,533	12	375	3	Low	July-Oct
Farm Totals	6,537									423		1,634		860			
Available																	
Surpluses/Deficits (+/-)																	

Planner:
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Fields Shown
15

	on Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient Application Information - - -- - - Nutrient App																
	on Group 4 - - - - - - Application Group 4 - - - - - - Application Group 4 - - - - - - Application Group 4 - - -										- - - Application Group 5 - - - - - - Application Group 5 - - - - - - Applicatio					
Field	Appl Method	Nutrient Source	Bulk Rate	N		P2O5		K2O		Group Sub PI	Group Sub PI Range	Timing	Appl Method	Nutrient Source	Bulk Rate	Units	
				(lb/ac)	(lb/field)	(lb/ac)	(lb/field)	(lb/ac)	(lb/field)								(lb/ac)
(Column Shown Value)																	
(**C**olumn **D**efault **V**alue)																	
H1																	
H2	Surface	P1 M90564	2.50	24	143	71	428	35	209	3	Low	July-Oct	Surface	P2 M90565	5.00	1000 gal/ac	7
H3																	
H4												July-Oct	Surface	P2 M90565	4.41	1000 gal/ac	6
H7												July-Oct	Surface	P2 M90565	8.26	1000 gal/ac	12
H8																	
H9												July-Oct	Surface	P2 M90565	5.66	1000 gal/ac	8
H10												July-Oct	Surface	P2 M90565	2.66	1000 gal/ac	4
H11																	
H12																	
H13												July-Oct	Surface	P2 M90565	4.24	1000 gal/ac	6
H14																	
H15																	
H16																	
H17	Surface	P1 M90564	3.57	34	1,086	102	3,249	50	1,585	6	Low	July-Oct	Surface	P2 M90565	5.74	1000 gal/ac	8
Farm Totals					1,229		3,677		1,793								
Available																	
Surpluses/Deficits (+/-)																	

Planner:	
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Fields Shown																			
15	lication Information - - - - - - Nutrient Application Information - - -							est P and Soil S		Total = Soil + Applications		Per Acre Nutrient Budget							
	n Group 5 - - - - - - Application Group 5 - - - - - - Application Group 5 - - -							ppm	lb/ac			Application Rate Totals			Nutrient Recommendation			Surpluses / Defic	
Field	N	P2O5		K2O		Group Sub PI	Group Sub PI Range			Total PI Value	PI Range	N (lb/ac)	P2O5 (lb/ac)	K2O (lb/ac)	N (lb/ac)	P2O5 (lb/ac)	K2O (lb/ac)	N (lb/ac)	P2O5 (lb/ac)
	(lb/field)	(lb/ac)	(lb/field)	(lb/ac)	(lb/field)														
(Column Shown Value)																			
(**C**olumn **D**efault **V**alue)																			
H1								90	120	16	Low	40	168	41	160	0	0	-120	168
H2	43	10	57	45	270	2	Low	120	160	13	Low	31	81	80	160	0	0	-129	81
H3								146	194	28	Low	9	16	75	160	0	60	-151	16
H4	43	8	57	40	270	2	Low	101	134	20	Low	44	166	78	160	0	40	-116	166
H7	757	16	1,009	74	4,779	6	Low	150	200	32	Low	17	25	118	300	0	300	-283	25
H8								126	168	19	Low	40	166	41	300	0	250	-260	166
H9	286	11	382	51	1,809	4	Low	102	136	30	Low	36	126	79	300	0	250	-264	126
H10	111	5	148	24	702	1	Low	83	110	10	Low	7	11	52	300	0	250	-293	11
H11								40	53	2	Low	0	0	0	160	30	0	-160	-30
H12								152	202	26	Low	4	7	34	300	0	200	-296	7
H13	308	8	410	38	1,944	2	Low	49	65	15	Low	41	156	74	300	45	0	-259	111
H14								74	98	14	Low	34	142	35	300	0	250	-266	142
H15								122	162	21	Low	38	150	69	160	0	40	-122	150
H16								84	112	17	Low	6	10	47	160	0	40	-154	10
H17	261	11	348	52	1,647	3	Low	99	132	23	Low	54	161	113	300	0	300	-246	161
Farm Totals	1,808		2,411		11,421														
Available																			
Surpluses/Deficits (+/-)																			

Planner:
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litter available for off farm

Fields Shown															
		- - - Per Field Nutrient Budget - - - - - - Per Field Nutrient Budget - - -									- - - Manure Distribution Summary, Grouped by Source, Appl Time, Field - - - -				
											- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source				
15	its (+/-)	Application Rate Totals			Nutrient Recommendation (lb/field)			Surpluses / Deficits (+/-)			March-June			July-Oct	
Field	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	Appl Pl	Per Acre	Per Field
(Column Shown Value)															
(**C**olumn **D**efault **V**alue)															
H1	41	293	1,226	300	1,168	0	0	-875	1,226	300	3.29	24.00	9		
H2	80	186	485	479	960	0	0	-774	485	479					
H3	15	119	211	1,016	2,176	0	816	-2,057	211	200					
H4	38	299	1,130	533	1,088	0	272	-789	1,130	261	3.09	21.00	9		
H7	-182	1,083	1,590	7,574	19,290	0	19,290	-18,207	1,590	-11,716					
H8	-209	342	1,431	350	2,580	0	2,150	-2,238	1,431	-1,800	3.26	28.00	9		
H9	-171	1,264	4,470	2,809	10,650	0	8,875	-9,386	4,470	-6,066	2.25	80.00	11		
H10	-198	206	316	1,511	8,790	0	7,325	-8,584	316	-5,815					
H11	0	0	0	0	2,272	426	0	-2,272	-426	0					
H12	-166	46	82	393	3,420	0	2,280	-3,374	82	-1,887					
H13	74	2,105	7,922	3,782	15,270	2,291	0	-13,165	5,632	3,782	2.89	147.00	9		
H14	-215	275	1,150	281	2,430	0	2,025	-2,155	1,150	-1,744	2.78	22.50	8		
H15	29	1,435	5,634	2,606	6,000	0	1,500	-4,565	5,634	1,106	2.80	105.00	8		
H16	7	84	149	716	2,432	0	608	-2,348	149	108					
H17	-187	1,713	5,130	3,607	9,570	0	9,570	-7,857	5,130	-5,963				0.94	30.00
Farm Totals		9,451	30,925	25,955	88,096	2,717	54,711	-78,645	28,209	-28,756		427.50			30.00
Available		24	83	43											
Surpluses/Deficits (+/-)		-9,427	-30,842	-25,912											

Planner:	
Plan Description:	
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litter available for off-farm	

- - Manure Distribution Summary, Grouped by Source, Appl Time, Field - - - - - - Manure Distribution Summary, Grouped by Source, Appl Time, Field - - - - - - Manure Distribution Summary, G

- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - -

Fields Shown	P1 M90178											
	1000 gal											
15		Nov-Feb			Annual			March-June			July-Oct	
Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field
(Column Shown Value)												
(**C**olumn **D**efault **V**alue)												
H1					3.29	24.00	9.00					
H2												
H3								5.07	69.00	4	4.63	63.00
H4					3.09	21.00	9.00					
H7								5.65	363.00	4		
H8					3.26	28.00	9.00					
H9					2.25	80.00	11.00					
H10								3.58	105.00	2		
H11												
H12								4.47	51.00	4		
H13					2.89	147.00	9.00					
H14					2.78	22.50	8.00					
H15					2.80	105.00	8.00	4.48	168.00	2		
H16								6.12	93.00	5		
H17	3				0.94	30.00	3.00					
Farm Totals						457.50			849.00			63.00
Available												
Surpluses/Deficits (+/-)												

Planner:	
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rouped by Source, Appl Time, Field - - - - - - Manure Distribution Summary, Grouped by Source, Appl Time, Field - - - - - - Manure Distribution Summary, Grouped by Source, Appl Time, Fie

- -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -A

Fields Shown	P2 M90179											
	1000 gal											
15		Nov-Feb			Annual			March-June			July-Oct	
Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field
(Column Shown Value)												
(**C**olumn **D**efault **V**alue)												
H1												
H2											2.50	15.00
H3	3				9.71	132.00	7.00					
H4												
H7					5.65	363.00	4.00					
H8												
H9												
H10					3.58	105.00	2.00					
H11												
H12					4.47	51.00	4.00					
H13												
H14												
H15					4.48	168.00	2.00					
H16					6.12	93.00	5.00					
H17											3.57	114.00
Farm Totals						912.00						129.00
Available												
Surpluses/Deficits (+/-)												

Planner:	
Plan Description:	
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eld - - - - - - Manure Distribution Summary, Grouped by Source, Appl Time, Field - - - - - - Manure Distribution Summary, Grouped by Source, Appl Time, Field - - - - - - Manure Distribution Sum

pplication Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source- - - - - -Applica

Fields Shown	P1 M90564											
	1000 gal											
15		Nov-Feb			Annual			March-June			July-Oct	
Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field	Appl Pl	Per Acre	Per Field
(Column Shown Value)												
(**C**olumn **D**efault **V**alue)												
H1												
H2	3				2.50	15.00	3.00				5.00	30.00
H3												
H4											4.41	30.00
H7											8.26	531.00
H8												
H9											5.66	201.00
H10											2.66	78.00
H11												
H12												
H13											4.24	216.00
H14												
H15												
H16												
H17	6				3.57	114.00	6.00				5.74	183.00
Farm Totals						129.00						1269.00
Available												
Surpluses/Deficits (+/-)												

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mary, Grouped by Source, Appl Time, Field - - - - - - Manure Distribution Summary, Grouped by Source, Appl Time, Field - - - - - - Manure Distribution Summary, Grouped by Source, App
tion Source- - - - - -Application Source- - - - - -Application Source- - - - - -Application Source

Fields Shown	P2 M90565							Annual Appl Totals: Liquid			Total	Annual	
	1000 gal							1000 gal				Soil only PI	
15		Nov-Feb			Annual								
Field	Appl PI	Per Acre	Per Field	Appl PI	Per Acre	Per Field	Appl PI	Per Acre	Per Field	Appl PI	Appl PI	Assoc. Appl Time	P I Value
(Column Shown Value)													
(**C**olumn **D**efault **V**alue)													
H1								3.29	24.00	9	9	March-June	7
H2	2				5.00	30.00	2.00	7.50	45.00	5	5	July-Oct	8
H3								9.71	132.00	7	7	March-June	21
H4	2				4.41	30.00	2.00	7.50	51.00	11	11	March-June	9
H7	6				8.26	531.00	6.00	13.90	894.00	10	10	March-June	22
H8								3.26	28.00	9	9	March-June	10
H9	4				5.66	201.00	4.00	7.92	281.00	15	15	March-June	15
H10	1				2.66	78.00	1.00	6.25	183.00	3	3	March-June	7
H11												July-Oct	2
H12								4.47	51.00	4	4	March-June	22
H13	2				4.24	216.00	2.00	7.13	363.00	11	11	March-June	4
H14								2.78	22.50	8	8	March-June	6
H15								7.28	273.00	10	10	March-June	11
H16								6.12	93.00	5	5	March-June	12
H17	3				5.74	183.00	3.00	10.25	327.00	12	12	July-Oct	11
Farm Totals						1269.00			2767.50				
Available													
Surpluses/Deficits (+/-)													

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litter available for off farm	

l Time, Field - - -

Fields Shown		Annual Total PI = Soil + Applications	
15			
Field	PI Range	Total PI Value	PI Range
(Column Shown Value)			
(**C**olumn **D**efault **V**alue)			
H1	Low	16	Low
H2	Low	13	Low
H3	Low	28	Low
H4	Low	20	Low
H7	Low	32	Low
H8	Low	19	Low
H9	Low	30	Low
H10	Low	10	Low
H11	Low		
H12	Low	26	Low
H13	Low	15	Low
H14	Low	14	Low
H15	Low	21	Low
H16	Low	17	Low
H17	Low	23	Low

Farm Totals
Available
Surpluses/Deficits (+/-)

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

2017 Certified Manure Testing Program

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

Name:	DR. KARL VanDEVENDER	*Received in lab:*	*2/19/2019*
Address:	2301 S UNIVERSITY AVE	*Report e-mailed:*	*3/06/2019*
City, State, Zip:	LITTLE ROCK, AR 72204	Phone #:	
County:		Payment Info:	BCRET Fund
E-Mail:	kvandevender@uaex.edu, sharpley@uark.edu		

Lab. No.	M90178	M90178
Sample No.	P1C	P1C
Animal type	swine	
-age/lbs	no info	
Bedding type	none	
Manure type	pond liquid	
Sample date	2/19/2019	
Age of manure	no info	
pH	7.6	
Ec(µmhos) 1:2	11800	
% Solids	6.55	

-mg/L on as-is basis-

Total N	1951	Total Mg		Water Extractable P	197
		Total S			
Total P	2681	Total Na			
		Total Fe			
Total K	1243	Total Mn			
Total Ca	2769	Total Zn			
Total C		Total Cu			
NO3-N		Total B			
NH4-N	1096	Total Al			

-lbs/1000 gal on as-is basis-

N	16.3	Mg		Water Extractable P	1.6
P2O5	51.1	S			
K2O	12.5	Na			
Ca	23.1	Fe			
Carbon		Mn			
NO3-N		Zn			
NH4-N	9.1	Cu			
		B			
		Al			

***All analyses performed on as-is basis.

*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, I 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

2017 Certified Manure Testing Program

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

ne:	DR. KARL VanDEVENDER	*Received in lab:*	*2/19/2019*
Address:	2301 S UNIVERSITY AVE	*Report e-mailed:*	*3/06/2019*
City, State, Zip:	LITTLE ROCK, AR 72204	Phone #:	
County:		Payment Info:	BCRET Fund
E-Mail:	kvandevender@uaex.edu, sharpley@uark.edu		

Lab. No.	M90179	M90179
Sample No.	P2C	P2C
Animal type	swine	
-age/lbs	no info	
Bedding type	none	
Manure type	pond liquid	
Sample date	2/19/2019	
Age of manure	no info	
pH	8.2	
Ec(µmhos) 1:2	6210	
% Solids	0.47	

-mg/L on as-is basis-

Total N	146	Total Mg		Water Extractable P	43
		Total S			
Total P	82	Total Na			
		Total Fe			
Total K	761	Total Mn			
Total Ca	53	Total Zn			
Total C		Total Cu			
NO3-N		Total B			
NH4-N	140	Total Al			

-lbs/1000 gal on as-is basis-

N	1.2	Mg		Water Extractable P	0.4
P2O5	1.6	S			
K2O	7.7	Na			
Ca	0.4	Fe			
Carbon		Mn			
NO3-N		Zn			
NH4-N	1.2	Cu			
		B			
		Al			

***All analyses performed on as-is basis.

*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, I hr shake, centrifuged, filtered, acidified, analysis by ICP

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2017 Certified Manure Testing Program

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

Name:	KARL VanDEVENDER	*Received in lab:*	*6/14/2019*
Address:	2301 S UNIVERSITY AVE	*Report e-mailed:*	*6/27/2019*
City, State, Zip:	LITTLE ROCK, AR 72204	Phone #:	501-671-2244
County:		Payment Info:	bill to BCRET fund
E-Mail:	kvandevender@uaex.edu		

Lab. No.	M90564	M90564
Sample No.	P1	P1
Animal type	swine	
-age/lbs	no info	
Bedding type	none	
Manure type	pond liquid	
Sample date	6/12/2019	
Age of manure	no info	
pH	7.5	
Ec(µmhos) 1:2	13920	
% Solids	1.77	

-mg/L on as-is basis-

Total N	1520	Total Mg		Water Extractable P	88
		Total S			
Total P	1492	Total Na			
		Total Fe			
Total K	1384	Total Mn			
Total Ca	1219	Total Zn			
Total C		Total Cu			
NO3-N		Total B			
NH4-N		Total Al			

-lbs/1000 gal on as-is basis-

	12.7	Mg		Water Extractable P	0.7
P2O5	28.5	S			
K2O	13.9	Na			
Ca	10.2	Fe			
Carbon		Mn			
NO3-N		Zn			
NH4-N		Cu			
		B			
		Al			

***All analyses performed on as-is basis.

*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, I hr shake, centrifuged, filtered, acidified, analysis by ICP

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2017 Certified Manure Testing Program

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

e:	KARL VanDEVENDER	*Received in lab:*	*6/14/2019*
Address:	2301 S UNIVERSITY AVE	*Report e-mailed:*	*6/27/2019*
City, State, Zip:	LITTLE ROCK, AR 72204	Phone #:	501-671-2244
County:		Payment Info:	bill to BCRET fund
E-Mail:	kvandevender@uaex.edu		

Lab. No.	M90565	M90565
Sample No.	P2	P2
Animal type	swine	
-age/lbs	no info	
Bedding type	none	
Manure type	pond liquid	
Sample date	6/12/2019	
Age of manure	no info	
pH	7.9	
Ec(µmhos) 1:2	7110	
% Solids	0.76	

-mg/L on as-is basis-

Total N	228	Total Mg		Water Extractable P	52
		Total S			
Total P	98	Total Na			
		Total Fe			
Total K	890	Total Mn			
Total Ca	57	Total Zn			
Total C		Total Cu			
NO3-N		Total B			
NH4-N		Total Al			

-lbs/1000 gal on as-is basis-

	1.9	Mg		Water Extractable P	0.4
P2O5	1.9	S			
K2O	9.0	Na			
Ca	0.5	Fe			
Carbon		Mn			
NO3-N		Zn			
NH4-N		Cu			
		B			
		Al			

***All analyses performed on as-is basis.

*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, I hr shake, centrifuged, filtered, acidified, analysis by ICP

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University of Arkansas System

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

JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683

Date Processed:	12/4/2018
Field ID:	JH1
Acres:	18
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109382
Sample Number:	3464746

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	90	180	Above Optimum
K	301	602	Above Optimum
Ca	3570	7140	--
Mg	165	330	--
SO4-S	18	36	--
Zn	8.7	17.4	
Fe	116	232	--
Mn	216	432	--
Cu	1.2	2.4	--
B	0.6	1.2	--
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	22.57	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Clay	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
88.92	79.08	6.09	3.42	0.33

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	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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 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.

6. Crop 3 Notes:

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Marianna, AR 72360
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JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	JH2
Acres:	9
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109383
Sample Number:	3464747

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	120	240	Above Optimum
K	239	478	Above Optimum
Ca	1264	2528	--
Mg	157	314	--
SO4-S	18	36	--
Zn	7.7	15.4	
Fe	126	252	--
Mn	293	586	--
Cu	1.2	2.4	--
B	0.5	1	--
NO3-N	35	70	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.1	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	11.82	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
70.38	53.49	11.07	5.19	0.63

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	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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 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.

6. Crop 3 Notes:

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JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683

Date Processed:	12/4/2018
Field ID:	CC3
Acres:	17
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109384
Sample Number:	3464748

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	146	292	Above Optimum
K	92	184	Medium
Ca	2058	4116	--
Mg	114	228	--
SO4-S	9	18	--
Zn	7.3	14.6	
Fe	184	368	--
Mn	217	434	--
Cu	1.6	3.2	--
B	0.8	1.6	--
NO3-N	9	18	--

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	14.54	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silty Clay Loam - Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
79.37	70.76	6.53	1.62	0.45

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	60	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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:

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JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	JH4
Acres:	11
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109385
Sample Number:	3464749

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	101	202	Above Optimum
K	168	336	Optimum
Ca	1270	2540	--
Mg	149	298	--
SO4-S	15	30	--
Zn	11.9	23.8	
Fe	206	412	--
Mn	123	246	--
Cu	1	2	--
B	0.8	1.6	--
NO3-N	17	34	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	11.61	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
69.84	54.72	10.70	3.71	0.71

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	0
Crop 2	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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 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.

6. Crop 3 Notes:

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Marianna, AR 72360
http://soiltest.uark.edu

JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683

Date Processed:	12/4/2018
Field ID:	7
Acres:	73
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109386
Sample Number:	3464750

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	150	300	Above Optimum
K	70	140	Low
Ca	1133	2266	--
Mg	143	286	--
SO4-S	14	28	--
Zn	8.5	17	
Fe	194	388	--
Mn	193	386	--
Cu	2.3	4.6	--
B	0.7	1.4	--
NO3-N	12	24	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.3	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	10.13	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
70.39	55.91	11.76	1.77	0.94

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	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	CC8
Acres:	11
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109387
Sample Number:	3464751

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	126	252	Above Optimum
K	112	224	Medium
Ca	1899	3798	--
Mg	124	248	--
SO4-S	12	24	--
Zn	8.4	16.8	
Fe	186	372	--
Mn	207	414	--
Cu	1.2	2.4	--
B	0.8	1.6	--
NO3-N	13	26	--

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	14.01	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
78.59	67.77	7.38	2.05	1.40

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	60	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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:

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JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683

Date Processed:	12/4/2018
Field ID:	CC9YE
Acres:	35
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109391
Sample Number:	3464755

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	102	204	Above Optimum
K	106	212	Medium
Ca	2400	4800	--
Mg	108	216	--
SO4-S	9	18	--
Zn	5.2	10.4	
Fe	173	346	--
Mn	140	280	--
Cu	1.7	3.4	--
B	0.7	1.4	--
NO3-N	6	12	--

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	16.25	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silty Clay Loam - Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
81.53	73.87	5.54	1.67	0.45

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	60	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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:

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Marianna, AR 72360
http://soiltest.uark.edu

JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	10YE
Acres:	29
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109395
Sample Number:	3464758

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	83	166	Above Optimum
K	115	230	Medium
Ca	1733	3466	--
Mg	137	274	--
SO4-S	15	30	--
Zn	6.6	13.2	
Fe	218	436	--
Mn	125	250	--
Cu	2	4	--
B	0.8	1.6	--
NO3-N	12	24	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	13.71	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silty Clay Loam - Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
74.48	63.18	8.32	2.15	0.82

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	60	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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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University of Arkansas System

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

JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	FD11
Acres:	19
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109396
Sample Number:	3464759

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	40	80	Optimum
K	183	366	Above Optimum
Ca	794	1588	--
Mg	136	272	--
SO4-S	18	36	--
Zn	3.4	6.8	
Fe	135	270	--
Mn	145	290	--
Cu	0.7	1.4	--
B	0.5	1	--
NO3-N	10	20	--

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	9.63	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
58.46	41.23	11.77	4.87	0.59

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	30	0	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	45	0	0	0	0	4000
Crop 3	Reg 5 - Analysis Only (21)							

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:

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	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	RF12
Acres:	13
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109397
Sample Number:	3464760

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	152	304	Above Optimum
K	151	302	Optimum
Ca	1192	2384	--
Mg	122	244	--
SO4-S	13	26	--
Zn	6.7	13.4	
Fe	180	360	--
Mn	190	380	--
Cu	1.6	3.2	--
B	0.6	1.2	--
NO3-N	9	18	--

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	10.43	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
71.25	57.12	9.74	3.71	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	40	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	CC13YE
Acres:	51
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109401
Sample Number:	3464764

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	49	98	Optimum
K	201	402	Above Optimum
Ca	1453	2906	--
Mg	109	218	--
SO4-S	11	22	--
Zn	4.5	9	
Fe	96	192	--
Mn	382	764	--
Cu	0.9	1.8	--
B	0.4	0.8	--
NO3-N	15	30	--

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	11.75	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
74.48	61.81	7.73	4.38	0.55

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	30	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	45	0	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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:

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JASON HENSON	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	CC14
Acres:	15
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109402
Sample Number:	3464765

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	74	148	Above Optimum
K	117	234	Medium
Ca	1002	2004	--
Mg	122	244	--
SO4-S	13	26	--
Zn	12.9	25.8	
Fe	129	258	--
Mn	363	726	--
Cu	1.9	3.8	--
B	0.5	1	--
NO3-N	17	34	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.3	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	8.90	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
71.90	56.32	11.43	3.37	0.78

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	60	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	C1C15YE
Acres:	38
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109409
Sample Number:	3464768

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	122	244	Above Optimum
K	152	304	Optimum
Ca	1082	2164	--
Mg	175	350	--
SO4-S	19	38	--
Zn	12.3	24.6	
Fe	143	286	--
Mn	480	960	--
Cu	2.4	4.8	--
B	0.2	0.4	--
NO3-N	22	44	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.1	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	10.34	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
70.99	52.32	14.10	3.77	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 for Pasture (212)	60	0	40	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	BH16
Acres:	21
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109410
Sample Number:	3464769

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	84	168	Above Optimum
K	162	324	Optimum
Ca	812	1624	--
Mg	129	258	--
SO4-S	15	30	--
Zn	5.1	10.2	
Fe	219	438	--
Mn	246	492	--
Cu	1.5	3	--
B	0	0	--
NO3-N	7	14	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	8.60	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
65.13	47.20	12.50	4.83	0.61

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	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

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	**Client ID:** 8706881318
HC 72 BOX 2	
VENDOR	AR 72683
Date Processed:	12/4/2018
Field ID:	JC17
Acres:	36
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	109411
Sample Number:	3464770

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	99	198	Above Optimum
K	78	156	Low
Ca	2331	4662	--
Mg	107	214	--
SO4-S	14	28	--
Zn	11.2	22.4	
Fe	151	302	--
Mn	241	482	--
Cu	2.2	4.4	--
B	0.3	0.6	--
NO3-N	10	20	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	7.3	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	14.86	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
86.54	78.43	6.00	1.35	0.76

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	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	0
Crop 3	Reg 5 - Analysis Only (21)							

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:

From:	C H Hog Farms Inc
To:	Water Permit Application
Subject:	C & H Hog Farms 2019 Annual Report Reg 6
Date:	Friday, January 24, 2020 3:50:35 PM
Attachments:	ADEQ Annual Report 2019.pdf C & H Manure Analysis 2019.pdf C & H P Index for 2019 Year End Report.pdf C & H Soil Samples.pdf

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Please see the attachments for C & H Hog Farms' Annual Report for 2019.

Thank you,
Jason Henson