

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY:

Faial Farms 2

Physical address of dairy:

18683 Magnolia Ave Number and Street	Shafter City	Kern County	93263 Zip Code
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Street and nearest cross street (if no address): _____

Date facility was originally placed in operation: 02-10-2002

Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

0088-0160-0016-0000 0088-0160-0017-0000 0088-0160-0022-0000 0088-0160-0023-0000

B. OPERATORS

Manuel Rosa Jr.

Operator Name: <u>Manuel Rosa Jr.</u>	Telephone no.: <u>(661) 667-1016</u>
P.O. BOX 456 Mailing Address Number and Street	ARVIN City Kern County 93203 Zip Code

C. OWNERS

Manuel Rosa Jr.

Owner Name: <u>Manuel Rosa Jr.</u>	Telephone no.: <u>(661) 667-1016</u>
P.O. BOX 456 Mailing Address Number and Street	ARVIN City Kern County 93203 Zip Code

AVAILABLE NUTRIENTS

A. HERD INFORMATION

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo.to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number open confinement	0	367	1,364	855	364	58
Number under roof	2,196	0	0	0	0	0
Maximum number	2,200	372	1,388	885	390	60
Average number	2,196	367	1,364	855	364	58
Average live weight (lbs)	1400	1450	1000	750		

Predominant milk cow breed: Holsteins
 Average Milk Production: 70 pounds per cow per day

B. MANURE GENERATED

Total manure excreted by the herd:	<u>85,650.32 tons per reporting period</u>		
Total nitrogen from manure:	<u>1,035,619.50 lbs per reporting period</u>	After ammonia losses (30% loss applied):	<u>724,933.65 lbs per reporting period</u>
Total phosphorus from manure:	<u>170,687.19 lbs per reporting period</u>		
Total potassium from manure:	<u>420,554.26 lbs per reporting period</u>		
Total salt from manure:	<u>1,118,378.25 lbs per reporting period</u>		

C. PROCESS WASTEWATER GENERATED

Process wastewater generated:	<u>28,395,196.18 gallons</u>
Total nitrogen generated:	<u>144,460.68 lbs</u>
Total phosphorus generated:	<u>124,785,411.98 lbs</u>
Total potassium generated:	<u>165,375.97 lbs</u>
Total salt generated:	<u>1,131,358.77 lbs</u>

$$\begin{aligned}
 & 28,395,196.18 \text{ gallons applied} \\
 & + 0 \text{ gallons exported} \\
 & - 0 \text{ gallons imported} \\
 & = 28,395,196.18 \text{ gallons generated}
 \end{aligned}$$

D. FRESH WATER SOURCES

Source Description	Type
F2 #1	Ground Water
F2 #2	Ground Water
F2 #3	Ground Water
F2 #4	Ground Water

E. SUBSURFACE (TILE) DRAINAGE SOURCES

No fresh water sources entered.

F. NUTRIENT IMPORTS

No dry manure nutrient imports entered.

No process wastewater nutrient imports entered.

No commercial or other nutrient imports entered.

G. NUTRIENT EXPORTS

Date	Material type	Quantity	Reporting basis	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	TFS (%)
06/27/2023	Separator solids	6,374 tons	as-is	67.1	23,810.00	5,700.00	8,980.00	19.00
07/31/2023	Separator solids	6,947 tons	as-is	67.6	23,810.00	5,700.00	8,980.00	19.00
08/27/2023	Separator solids	6,170 tons	as-is	65.8	23,810.00	5,700.00	8,980.00	19.00

No process wastewater nutrient exports entered.

Material type	N (lbs)	P (lbs)	K (lbs)	TDS (%)
Dry Manure	928,161.42	222,197.40	350,058.36	7,406,580.00
Process wastewater	0.00	0.00	0.00	0.00
Total exports for all materials	928,161.42	222,197.40	350,058.36	7,406,580.00

APPLICATION AREA

A. LIST OF LAND APPLICATION AREAS

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
221	76.34	76.34	7	PROCESS WASTEWATER	0088-0160-0022-0000
222	74.11	74.11	3	PROCESS WASTEWATER	0088-0160-0022-0000
223	77.72	77.72	2	BOTH	0088-0160-0016-0000
224	75.52	75.52	2	BOTH	0088-0160-0017-0000, 0088-0160-0023-0000
225	74.33	74.33	2	BOTH	0088-0160-0022-0000
226	56.35	56.35	3	BOTH	0088-0160-0022-0000
227	7.17	6.98	2	BOTH	0088-0160-0023-0000
228	21.61	21.61	2	BOTH	0088-0160-0023-0000
Totals for areas that were used for application	463.15	462.96	23.00		
Totals for areas that were not used for application	0.19	0.19			
Land application area totals	463.15	463.15	23.00		

B. CROPS AND HARVESTS

221

Field Name: 221**11/01/2020: Alfalfa**Crop: Alfalfa Acres planted: 76.34 Plant date: 11/01/2020

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
03/27/2023	123.67 ton	As-is		0.00	19,257.90	1,566.30	18,209.10	1,386.90	0.00
05/04/2023	123.67 ton	As-is		0.00	19,257.90	1,566.30	18,209.10	1,386.90	0.00
06/11/2023	123.67 ton	As-is		0.00	19,257.90	1,566.30	18,209.10	1,386.90	0.00
07/19/2023	123.67 ton	As-is		0.00	19,257.90	1,566.30	18,209.10	1,386.90	0.00
08/26/2023	123.67 ton	As-is		0.00	19,257.90	1,566.30	18,209.10	1,386.90	0.00
10/03/2023	123.67 ton	As-is		0.00	19,257.90	1,566.30	18,209.10	1,386.90	0.00
11/10/2023	123.67 ton	As-is		0.00	19,257.90	1,566.30	18,209.10	1,386.90	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	12.00	720.00	64.80	504.00	240.00
Total actual harvest content	11.34	436.77	35.52	412.98	0.00

Field Name: 222

10/20/2022: Triticale

Crop: Triticale Acres planted: 74.11 Plant date: 10/20/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/11/2023	1,564.46 ton	As-is		0.00	7,020.00	1,512.00	20,520.00	0.15	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.00	358.80	44.20	195.00	520.00
Total actual harvest content	21.11	296.38	63.84	866.35	0.00

04/21/2023: Corn, Late Silage

Crop: Corn, Late Silage Acres planted: 74.11 Plant date: 04/21/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
08/12/2023	1,574.10 ton	As-is		0.00	4,506.80	1,048.80	7,980.00	64.60	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	23.00	736.00	174.80	920.00	460.00
Total actual harvest content	21.24	191.45	44.55	338.99	0.00

08/10/2023: Sudan

Crop: Sudan Acres planted: 74.11 Plant date: 08/10/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
11/06/2023	1,202.81 ton	As-is		0.00	3,482.40	729.60	9,616.80	127.20	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	15.00	360.00	66.00	495.00	300.00
Total actual harvest content	16.23	113.04	23.68	312.16	0.00

Field Name: 223

11/05/2022: Triticale

Crop: Triticale Acres planted: 77.72 Plant date: 11/05/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/29/2023	1,402.85 ton	As-is		0.00	7,128.00	1,692.00	24,480.00	0.12	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.00	358.80	44.20	195.00	520.00
Total actual harvest content	18.05	257.32	61.08	883.73	0.00

04/08/2023: Corn, Late Silage

Crop: Corn, Late Silage Acres planted: 77.72 Plant date: 04/08/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/07/2023	1,707.51 ton	As-is		0.00	6,167.40	1,026.00	8,386.60	68.40	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	23.00	736.00	174.80	920.00	460.00
Total actual harvest content	21.97	271.00	45.08	368.51	0.00

Field Name: 224

11/05/2022: Triticale

Crop: **Triticale** Acres planted: **75.52** Plant date: **11/05/2022**

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/29/2023	1,823.05 ton	As-is		0.00	6,768.00	1,656.00	23,400.00	0.17	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.00	358.80	44.20	195.00	520.00
Total actual harvest content	24.14	326.76	79.95	1,129.75	0.00

05/10/2023: Corn, Late Silage

Crop: Corn, Late Silage Acres planted: 75.52 Plant date: 05/10/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/10/2023	1,605.56 ton	As-is		0.00	6,429.60	1,197.00	8,105.40	38.00	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	23.00	736.00	174.80	920.00	460.00
Total actual harvest content	21.26	273.39	50.90	344.64	0.00

Field Name: 225

11/10/2022: Triticale

Crop: Triticale Acres planted: 74.33 Plant date: 11/10/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/15/2023	1,664.99 ton	As-is		0.00	6,660.00	1,656.00	23,040.00	0.13	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.00	358.80	44.20	195.00	520.00
Total actual harvest content	22.40	298.37	74.19	1,032.19	0.00

05/12/2023: Corn, Late Silage

Crop: Corn, Late Silage Acres planted: 74.33 Plant date: 05/12/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/12/2023	1,779.46 ton	As-is		0.00	5,703.80	1,105.80	7,349.20	34.20	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	23.00	736.00	174.80	920.00	460.00
Total actual harvest content	23.94	273.10	52.95	351.88	0.00

Field Name: 226

11/01/2022: Triticale

Crop: Triticale Acres planted: 56.35 Plant date: 11/01/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/23/2023	1,402.55 ton	As-is		0.00	7,668.00	1,656.00	23,040.00	0.14	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.00	358.80	44.20	195.00	520.00
Total actual harvest content	24.89	381.71	82.44	1,146.93	0.00

06/15/2023: Sudan

Crop: Sudan Acres planted: 56.35 Plant date: 06/15/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
07/20/2023	678.45 ton	As-is		0.00	1,656.00	240.00	1,464.00	0.00	0.77
09/11/2023	442.35 ton	As-is		0.00	1,656.00	240.00	1,464.00	0.00	0.77

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	15.00	360.00	66.00	495.00	300.00
Total actual harvest content	19.89	65.88	9.55	58.24	304.56

Field Name:

227

11/05/2022: Triticale

Crop: Triticale Acres planted: 6.98 Plant date: 11/05/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/29/2023	145.81 ton	As-is		0.00	7,056.00	1,548.00	21,132.00	0.14	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.00	358.80	44.20	195.00	520.00
Total actual harvest content	20.89	294.80	64.68	882.89	0.00

05/13/2023: Corn, Late Silage

Crop: Corn, Late Silage Acres planted: 6.98 Plant date: 05/13/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/14/2023	154.26 ton	As-is		0.00	6,783.00	1,250.20	7,033.80	41.80	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	23.00	736.00	174.80	920.00	460.00
Total actual harvest content	22.10	299.81	55.26	310.89	0.00

Field Name: 228

11/05/2022: Triticale

Crop: Triticale Acres planted: 21.61 Plant date: 11/05/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/10/2023	451.43 ton	As-is		0.00	6,300.00	1,188.00	16,164.00	0.02	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.00	358.80	44.20	195.00	520.00
Total actual harvest content	20.89	263.21	49.63	675.33	0.00

05/15/2023: Corn, Late Silage

Crop: Corn, Late Silage Acres planted: 21.61 Plant date: 05/15/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/20/2023	477.58 ton	As-is		0.00	6,372.60	1,174.20	8,113.00	41.80	0.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	23.00	736.00	174.80	920.00	460.00
Total actual harvest content	22.10	281.67	51.90	358.59	0.00

NUTRIENT BUDGET

A. LAND APPLICATIONS

221

Field name: 221 Crop: Alfalfa Plant date: 11/01/2020

11/01/2020: Alfalfa

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
01/01/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Atmospheric Deposition	Atmospheric deposition	14.00	0.00	0.00	0.00	1,068.76 Lbs
Application event totals		14.00	0.00	0.00	0.00	

02/15/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	17.27	10,946.26	14.97	80.12	172,055.51 gal
Well Water	Ground water	5.15	0.00	1.16	442.34	9,017,367.38 gal
Application event totals		22.42	10,946.26	16.13	522.46	

03/12/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.81	0.00	1.30	498.27	10,157,494.71 gal
Application event totals		5.81	0.00	1.30	498.27	

04/04/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.86	0.00	1.32	503.35	10,261,142.02 gal
Application event totals		5.86	0.00	1.32	503.35	

05/05/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.98	0.00	1.34	513.52	10,468,438.61 gal
Application event totals		5.98	0.00	1.34	513.52	

06/03/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.92	0.00	1.33	508.44	10,364,790.32 gal

Application event totals		5.92	0.00	1.33	508.44	
07/02/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.10	0.00	1.37	523.69	10,675,734.22 gal
Application event totals		6.10	0.00	1.37	523.69	
08/02/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	7.39	0.00	1.66	634.53	12,935,257.84 gal
Application event totals		7.39	0.00	1.66	634.53	
08/30/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	7.39	0.00	1.66	634.53	12,935,257.84 gal
Application event totals		7.39	0.00	1.66	634.53	
09/27/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	7.18	0.00	1.61	616.23	12,562,125.74 gal
Application event totals		7.18	0.00	1.61	616.23	
11/09/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.75	0.00	1.52	579.62	11,815,860.57 gal
Lagoon Water Effluent	Process wastewater	33.58	35,904.04	41.67	312.64	652,981.78 gal
Application event totals		40.33	35,904.04	43.19	892.26	

Field name: 222

Crop: Corn, Late Silage

Plant date: 04/21/2023

04/21/2023: Corn, Late Silage

Application date		Application method		Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
05/01/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Atmospheric Deposition		Atmospheric deposition	14.00	0.00	0.00	0.00	1,037.54 Lbs	
Application event totals			14.00	0.00	0.00	0.00		
05/03/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	5.86	0.00	1.32	503.35	9,961,400.02 gal	
Application event totals			5.86	0.00	1.32	503.35		
05/10/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Un 32		Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	741.10 Gal.	
Application event totals			35.39	0.00	0.00	0.00		
05/28/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Lagoon Water Effluent		Process wastewater	72.48	61,068.47	116.73	812.18	1,376,484.45 gal	
Well Water		Ground water	5.98	0.00	1.34	513.52	10,162,641.20 gal	
Application event totals			78.46	61,068.47	118.07	1,325.70		
06/19/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	6.35	0.00	1.43	544.64	10,778,436.37 gal	
Application event totals			6.35	0.00	1.43	544.64		
07/07/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.35	0.00	1.43	544.64	10,778,436.37 gal
Application event totals		6.35	0.00	1.43	544.64	

07/23/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	741.10 Gal.
Well Water	Ground water	7.29	0.00	1.64	625.38	12,376,285.54 gal
Application event totals		42.68	0.00	1.64	625.38	

08/01/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	70.03	36,614.66	72.14	599.61	1,132,983.57 gal
Well Water	Ground water	7.24	0.00	1.63	621.31	12,295,789.46 gal
Application event totals		77.27	36,614.66	73.77	1,220.92	

08/10/2023: Sudan

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
08/15/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Atmospheric Deposition	Atmospheric deposition	14.00	0.00	0.00	0.00	1,037.54 Lbs
Application event totals		14.00	0.00	0.00	0.00	

08/17/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.10	0.00	1.37	523.69	10,363,881.42 gal
Application event totals		6.10	0.00	1.37	523.69	

09/03/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.98	0.00	1.34	513.52	10,162,641.20 gal
Lagoon Water Effluent	Process wastewater	13.68	7,153.84	14.09	117.15	221,364.45 gal
Application event totals		19.66	7,153.84	15.43	630.67	

09/24/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.92	0.00	1.33	508.44	10,062,020.61 gal
Lagoon Water Effluent	Process wastewater	12.56	6,568.53	12.94	107.57	203,252.82 gal
Application event totals		18.48	6,568.53	14.27	616.01	
10/15/2023	Surface (Irrigation)		No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.69	0.00	1.28	488.10	9,659,540.17 gal
Application event totals		5.69	0.00	1.28	488.10	
10/31/2023	Surface (Irrigation)		No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.92	0.00	1.33	508.44	10,062,020.61 gal
Lagoon Water Effluent	Process wastewater	10.57	5,527.97	10.89	90.53	171,054.35 gal
Application event totals		16.49	5,527.97	12.22	598.97	

10/20/2022: Tricale

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
11/07/2022	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	11.88	15,081.30	16.33	121.23	215,327.24 gal
Well Water	Ground water	4.00	0.00	1.34	464.80	9,407,989.66 gal
Application event totals		15.88	15,081.30	17.67	586.03	
11/29/2022	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	39.53	50,177.05	54.32	403.35	716,415.88 gal
Well Water	Ground water	3.66	0.00	1.22	425.33	8,609,064.59 gal
Application event totals		43.19	50,177.05	55.54	828.68	
12/24/2022	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	2.43	0.00	0.81	282.86	5,725,289.79 gal
Lagoon Water Effluent	Process wastewater	37.09	47,076.22	50.96	378.43	672,142.96 gal
Application event totals		39.52	47,076.22	51.77	661.29	
01/18/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.32	0.00	1.42	542.71	10,740,200.59 gal
Lagoon Water Effluent	Process wastewater	40.86	51,868.41	56.15	416.95	740,564.72 gal
Application event totals		47.18	51,868.41	57.57	959.66	

02/09/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	96.36	61,061.67	83.53	446.95	931,743.11 gal
Well Water	Ground water	4.15	0.00	0.93	355.81	7,041,402.17 gal
Application event totals		100.51	61,061.67	84.46	802.76	

03/03/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	741.10 Gal.
Well Water	Ground water	4.25	0.00	0.95	364.55	7,214,468.86 gal
Application event totals		39.64	0.00	0.95	364.55	

03/26/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	3.61	0.00	0.81	309.84	6,131,795.22 gal
Lagoon Water Effluent	Process wastewater	79.92	50,642.94	69.28	370.69	772,763.19 gal
Application event totals		83.53	50,642.94	70.09	680.53	

Field name: 223

Crop: Corn, Late Silage

Plant date: 04/08/2023

04/08/2023: Corn, Late Silage

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
04/01/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Atmospheric Deposition	Atmospheric deposition	14.00	0.00	0.00	0.00	1,088.08 Lbs
Corral Solids	Corral Solids	113.82	35.45	96.90	1,521.30	388.60 ton
Application event totals		127.82	35.45	96.90	1,521.30	
04/03/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.86	0.00	1.32	503.35	10,446,633.59 gal
Lagoon Water Effluent	Process wastewater	37.46	23,738.88	32.47	173.76	379,877.61 gal
Application event totals		43.32	23,738.88	33.79	677.11	
05/01/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	777.20 Gal.
Application event totals		35.39	0.00	0.00	0.00	
05/19/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.75	0.00	1.29	493.19	10,235,590.68 gal
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	777.20 Gal.
Application event totals		41.14	0.00	1.29	493.19	
06/10/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.92	0.00	1.33	508.44	10,552,155.55 gal
Lagoon Water Effluent	Process wastewater	62.09	52,318.90	100.01	695.81	1,236,712.68 gal

Application event totals		68.01	52,318.90	101.34	1,204.25	
06/28/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.04	0.00	1.36	518.61	10,763,198.46 gal
Application event totals		6.04	0.00	1.36	518.61	
07/14/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.98	0.00	1.34	513.52	10,657,677.51 gal
Application event totals		5.98	0.00	1.34	513.52	
07/30/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.10	0.00	1.37	523.69	10,868,720.42 gal
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	777.20 Gal.
Application event totals		41.49	0.00	1.37	523.69	
08/15/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.65	0.00	1.27	485.05	10,066,756.35 gal
Application event totals		5.65	0.00	1.27	485.05	

11/05/2022: Triticale

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
11/01/2022	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral Solids	Corral Solids	38.91	9.84	22.72	184.60	388.60 ton
Application event totals		38.91	9.84	22.72	184.60	
11/05/2022	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	

Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water		Ground water	3.08	0.00	1.03	357.92	7,597,551.79 gal
Lagoon Water Effluent		Process wastewater	15.43	19,591.60	21.21	157.49	293,349.92 gal
Application event totals			18.51	19,591.60	22.24	515.41	
11/30/2022		Surface (Irrigation)		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water		Ground water	2.87	0.00	0.96	334.06	7,091,048.31 gal
Lagoon Water Effluent		Process wastewater	14.99	19,027.81	20.60	152.96	284,908.21 gal
Application event totals			17.86	19,027.81	21.56	487.02	
12/25/2022		Surface (Irrigation)		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water		Ground water	3.16	0.00	1.06	367.66	7,804,374.65 gal
Lagoon Water Effluent		Process wastewater	39.53	50,177.05	54.32	403.35	751,313.49 gal
Application event totals			42.69	50,177.05	55.38	771.01	
01/19/2023		Surface (Irrigation)		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent		Process wastewater	38.31	48,626.63	52.64	390.89	728,098.73 gal
Well Water		Ground water	5.04	0.00	1.13	432.17	8,969,332.22 gal
Application event totals			43.35	48,626.63	53.77	823.06	
02/08/2023		Surface (Irrigation)		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water		Ground water	5.27	0.00	1.19	452.51	9,391,418.04 gal
Lagoon Water Effluent		Process wastewater	63.06	39,960.45	54.66	292.49	639,460.63 gal
Application event totals			68.33	39,960.45	55.85	745.00	
02/28/2023		Surface (Irrigation)		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water		Ground water	5.39	0.00	1.21	462.68	9,602,461.95 gal
Un 32		Commercial fertilizer / Other: Liquid commercial fertilizer	24.77	0.00	0.00	0.00	544.04 Gal.
Application event totals			30.16	0.00	1.21	462.68	
03/18/2023		Surface (Irrigation)		No precipitation		No precipitation	

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	4.27	0.00	0.96	366.08	7,597,551.79 gal
Lagoon Water Effluent	Process wastewater	30.38	19,254.87	26.34	140.94	308,122.94 gal
Application event totals		34.65	19,254.87	27.30	507.02	
04/07/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	50.99	32,311.25	44.20	236.51	517,055.63 gal
Well Water	Ground water	5.98	0.00	1.34	513.52	10,657,677.51 gal
Application event totals		56.97	32,311.25	45.54	750.03	

Field name: 224

Crop: Corn, Late Silage

Plant date: 05/10/2023

05/10/2023: Corn, Late Silage

Application date		Application method		Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
05/10/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description	Material type		N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer		35.39	0.00	0.00	0.00	755.20 Gal.	
Application event totals			35.39	0.00	0.00	0.00		
05/12/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description	Material type		N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Atmospheric Deposition	Atmospheric deposition		14.00	0.00	0.00	0.00	1,057.28 Lbs	
Application event totals			14.00	0.00	0.00	0.00		
05/14/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description	Material type		N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water	Ground water		6.04	0.00	1.36	518.61	10,458,526.75 gal	
Application event totals			6.04	0.00	1.36	518.61		
05/28/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description	Material type		N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer		53.09	0.00	0.00	0.00	1,132.80 Gal.	
Well Water	Ground water		5.92	0.00	1.33	508.44	10,253,457.79 gal	
Application event totals			59.01	0.00	1.33	508.44		
06/19/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description	Material type		N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water	Ground water		6.16	0.00	1.38	528.78	10,663,595.71 gal	
Application event totals			6.16	0.00	1.38	528.78		
07/07/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	53.09	0.00	0.00	0.00	1,132.80 Gal.
Well Water	Ground water	6.28	0.00	1.41	538.95	10,868,665.65 gal
Application event totals		59.37	0.00	1.41	538.95	

07/23/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	755.20 Gal.
Well Water	Ground water	6.28	0.00	1.41	538.95	10,868,665.65 gal
Application event totals		41.67	0.00	1.41	538.95	

08/08/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.28	0.00	1.41	538.95	10,868,665.65 gal
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	755.20 Gal.
Application event totals		41.67	0.00	1.41	538.95	

08/26/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.54	0.00	1.25	475.90	9,597,236.14 gal
Lagoon Water Effluent	Process wastewater	58.21	30,436.34	59.96	498.43	959,723.64 gal
Application event totals		63.75	30,436.34	61.21	974.33	

11/05/2022: Tricale

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
11/01/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral Solids	Corral Solids	38.91	9.84	22.72	184.60	377.60 ton
Application event totals		38.91	9.84	22.72	184.60	

11/05/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	35.64	45,243.91	48.98	363.70	658,272.01 gal
Well Water	Ground water	3.58	0.00	1.20	416.08	8,582,144.05 gal
Application event totals		39.22	45,243.91	50.18	779.78	

11/30/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	51.63	65,540.25	70.95	526.85	953,571.58 gal
Well Water	Ground water	3.01	0.00	1.01	349.96	7,218,434.24 gal
Application event totals		54.64	65,540.25	71.96	876.81	

12/25/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	2.94	0.00	0.98	342.01	7,054,379.07 gal
Lagoon Water Effluent	Process wastewater	72.84	92,461.08	100.09	743.26	1,345,253.70 gal
Application event totals		75.78	92,461.08	101.07	1,085.27	

01/19/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.33	0.00	1.20	457.60	9,228,112.01 gal
Lagoon Water Effluent	Process wastewater	48.97	62,157.53	67.29	499.66	904,355.01 gal
Application event totals		54.30	62,157.53	68.49	957.26	

02/08/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	74.09	46,950.23	64.22	343.66	730,046.21 gal
Well Water	Ground water	5.57	0.00	1.25	477.93	9,638,249.93 gal
Application event totals		79.66	46,950.23	65.47	821.59	

02/28/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	4.92	0.00	1.11	422.00	8,510,370.16 gal
Application event totals		4.92	0.00	1.11	422.00	

03/18/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	4.31	0.00	0.97	370.14	7,464,517.48 gal
Lagoon Water Effluent	Process wastewater	63.48	40,224.21	55.02	294.42	625,460.94 gal

Application event totals		67.79	40,224.21	55.99	664.56	
04/07/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.98	0.00	1.34	513.52	10,355,992.76 gal
Application event totals		5.98	0.00	1.34	513.52	

Field name: 225

Crop: Corn, Late Silage

Plant date: 05/12/2023

05/12/2023: Corn, Late Silage

Application date		Application method		Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
05/01/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Atmospheric Deposition		Atmospheric deposition	14.00	0.00	0.00	0.00	1,040.62 Lbs	
Corral Solids		Corral Solids	190.24	45.54	71.75	1,518.10	371.65 ton	
Application event totals			204.24	45.54	71.75	1,518.10		
05/03/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	5.86	0.00	1.32	503.35	9,990,971.20 gal	
Application event totals			5.86	0.00	1.32	503.35		
05/12/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Un 32		Commercial fertilizer / Other: Liquid commercial fertilizer	17.70	0.00	0.00	0.00	371.65 Gal.	
Application event totals			17.70	0.00	0.00	0.00		
05/30/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	5.86	0.00	1.32	503.35	9,990,971.20 gal	
Un 32		Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	743.30 Gal.	
Application event totals			41.25	0.00	1.32	503.35		
06/21/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	6.35	0.00	1.43	544.64	10,810,432.99 gal	
Application event totals			6.35	0.00	1.43	544.64		
07/09/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.41	0.00	1.44	549.93	10,915,388.74 gal
Application event totals		6.41	0.00	1.44	549.93	
07/25/2023	Surface (Irrigation)		No precipitation	No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.28	0.00	1.41	538.95	10,697,404.31 gal
Application event totals		6.28	0.00	1.41	538.95	
08/10/2023	Surface (Irrigation)		No precipitation	No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.16	0.00	1.38	528.78	10,495,565.73 gal
Application event totals		6.16	0.00	1.38	528.78	
08/26/2023	Surface (Irrigation)		No precipitation	No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.65	0.00	1.27	485.05	9,627,663.49 gal
Lagoon Water Effluent	Process wastewater	70.03	36,614.66	72.14	599.61	1,136,346.92 gal
Application event totals		75.68	36,614.66	73.41	1,084.66	

11/10/2022: Tricale

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
11/01/2022	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral Solids	Corral Solids	38.91	9.84	22.72	184.60	371.65 ton
Application event totals		38.91	9.84	22.72	184.60	
11/12/2022	Surface (Irrigation)		No precipitation	No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	3.38	0.00	1.13	393.71	7,992,777.35 gal
Lagoon Water Effluent	Process wastewater	12.99	16,490.77	17.85	132.56	236,150.23 gal
Application event totals		16.37	16,490.77	18.98	526.27	
12/04/2022	Surface (Irrigation)		No precipitation	No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	2.87	0.00	0.96	334.06	6,781,750.20 gal

Lagoon Water Effluent	Process wastewater	18.76	23,820.00	25.78	191.48	341,105.90 gal
Application event totals		21.63	23,820.00	26.74	525.54	
12/29/2022		Surface (Irrigation)		No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	2.80	0.00	0.94	326.10	6,620,280.10 gal
Lagoon Water Effluent	Process wastewater	25.87	32,840.60	35.55	263.99	470,282.09 gal
Application event totals		28.67	32,840.60	36.49	590.09	
01/23/2023		Surface (Irrigation)		No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	36.86	46,794.33	50.65	376.16	670,101.50 gal
Well Water	Ground water	4.86	0.00	1.09	416.92	8,275,350.01 gal
Application event totals		41.72	46,794.33	51.74	793.08	
02/14/2023		Surface (Irrigation)		No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.39	0.00	1.21	462.68	9,183,620.73 gal
Lagoon Water Effluent	Process wastewater	47.24	29,937.37	40.95	219.13	458,171.82 gal
Application event totals		52.63	29,937.37	42.16	681.81	
03/08/2023		Surface (Irrigation)		No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.75	0.00	1.29	493.19	9,789,133.58 gal
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	743.30 Gal.
Application event totals		41.14	0.00	1.29	493.19	
03/31/2023		Surface (Irrigation)		No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	4.48	0.00	1.01	384.38	7,629,468.67 gal
Lagoon Water Effluent	Process wastewater	84.50	53,544.36	73.24	391.92	819,461.48 gal
Application event totals		88.98	53,544.36	74.25	776.30	
04/23/2023		Surface (Irrigation)		No precipitation	No precipitation	No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.81	0.00	1.30	498.27	9,890,052.87 gal
Application event totals		5.81	0.00	1.30	498.27	

Field name: 226 Crop: Sudan Plant date: 06/15/2023

06/15/2023: Sudan

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
06/01/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Atmospheric Deposition	Atmospheric deposition	14.00	0.00	0.00	0.00	788.90 <i>Lbs</i>
Application event totals		14.00	0.00	0.00	0.00	
06/03/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.16	0.00	1.38	528.78	7,956,748.26 <i>gal</i>
Application event totals		6.16	0.00	1.38	528.78	
07/01/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	16.32	13,749.33	26.28	182.86	235,642.17 <i>gal</i>
Well Water	Ground water	6.22	0.00	1.40	533.86	8,033,255.75 <i>gal</i>
Application event totals		22.54	13,749.33	27.68	716.72	
07/22/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	10.28	8,660.30	16.55	115.18	148,423.97 <i>gal</i>
Well Water	Ground water	6.16	0.00	1.38	528.78	7,956,748.26 <i>gal</i>
Application event totals		16.44	8,660.30	17.93	643.96	
08/12/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.28	0.00	1.41	538.95	8,109,763.24 <i>gal</i>
Application event totals		6.28	0.00	1.41	538.95	
08/28/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	12.94	6,763.63	13.33	110.76	159,134.97 <i>gal</i>
Well Water	Ground water	6.22	0.00	1.40	533.86	8,033,255.75 <i>gal</i>

Application event totals		19.16	6,763.63	14.73	644.62	
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11/01/2022: Tricale

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
10/16/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral Solids	Corral Solids	132.97	34.41	120.07	1,394.40	281.75 ton
Application event totals		132.97	34.41	120.07	1,394.40	

11/03/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	3.62	0.00	1.21	420.55	6,472,508.95 gal
Lagoon Water Effluent	Process wastewater	10.55	13,389.94	14.49	107.64	145,363.67 gal
Application event totals		14.17	13,389.94	15.70	528.19	

11/25/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	3.25	0.00	1.09	377.80	5,814,546.95 gal
Lagoon Water Effluent	Process wastewater	21.54	27,343.67	29.60	219.80	296,847.94 gal
Application event totals		24.79	27,343.67	30.69	597.60	

12/20/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	3.08	0.00	1.03	357.92	5,508,518.08 gal
Lagoon Water Effluent	Process wastewater	23.87	30,303.56	32.80	243.60	328,980.96 gal
Application event totals		26.95	30,303.56	33.83	601.52	

01/14/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	23.87	30,303.56	32.80	243.60	328,980.96 gal
Well Water	Ground water	5.04	0.00	1.13	432.17	6,503,111.80 gal
Application event totals		28.91	30,303.56	33.93	675.77	

02/05/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.57	0.00	1.25	477.93	7,191,676.28 gal
Lagoon Water Effluent	Process wastewater	42.25	26,772.18	36.62	195.96	310,619.21 gal

Application event totals		47.82	26,772.18	37.87	673.89	
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02/27/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.09	0.00	1.15	437.26	6,579,619.29 gal
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	563.50 Gal.
Application event totals		40.48	0.00	1.15	437.26	

03/22/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	4.38	0.00	0.98	375.84	5,655,411.83 gal
Lagoon Water Effluent	Process wastewater	61.60	39,037.27	53.40	285.74	452,922.62 gal
Application event totals		65.98	39,037.27	54.38	661.58	

04/14/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.86	0.00	1.32	503.35	7,574,212.27 gal
Application event totals		5.86	0.00	1.32	503.35	

Field name: 227 Crop: Corn, Late Silage Plant date: 05/13/2023

05/13/2023: Corn, Late Silage

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
05/06/2023	Surface (Irrigation)	No precipitation		No precipitation		No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Atmospheric Deposition	Atmospheric deposition	14.00	0.00	0.00	0.00	97.72 Lbs
Corral Solids	Corral Solids	152.19	36.43	57.40	1,214.48	27.92 ton
Application event totals		166.19	36.43	57.40	1,214.48	

05/08/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.92	0.00	1.33	508.44	947,684.57 gal
Lagoon Water Effluent	Process wastewater	11.55	9,731.67	18.60	129.43	20,659.52 gal
Application event totals		17.47	9,731.67	19.93	637.87	

05/13/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	69.80 Gal.
Application event totals		35.39	0.00	0.00	0.00	

05/31/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.86	0.00	1.32	503.35	938,207.69 gal
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	69.80 Gal.
Application event totals		41.25	0.00	1.32	503.35	

06/22/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.04	0.00	1.36	518.61	966,638.24 gal
Lagoon Water Effluent	Process wastewater	40.05	33,748.37	64.51	448.84	71,644.95 gal

Application event totals		46.09	33,748.37	65.87	967.45	
07/10/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	69.80 Gal.
Well Water	Ground water	6.22	0.00	1.40	533.86	995,068.80 gal
Application event totals		41.61	0.00	1.40	533.86	
07/26/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.16	0.00	1.38	528.78	985,591.92 gal
Application event totals		6.16	0.00	1.38	528.78	
08/11/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	69.80 Gal.
Well Water	Ground water	6.28	0.00	1.41	538.95	1,004,545.68 gal
Application event totals		41.67	0.00	1.41	538.95	
08/27/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.54	0.00	1.25	475.90	887,032.73 gal
Application event totals		5.54	0.00	1.25	475.90	

11/05/2022: Triticale

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
11/01/2022	Surface (Irrigation)	No precipitation		No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral Solids	Corral Solids	38.91	9.84	22.72	184.60	34.90 ton
Application event totals		38.91	9.84	22.72	184.60	
11/05/2022	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount

Well Water	Ground water	3.50	0.00	1.17	407.13	776,153.62 gal
Lagoon Water Effluent	Process wastewater	29.76	37,773.73	40.89	303.65	50,795.89 gal
Application event totals		33.26	37,773.73	42.06	710.78	

11/30/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	2.80	0.00	0.94	326.10	621,681.07 gal
Lagoon Water Effluent	Process wastewater	27.31	34,672.91	37.53	278.72	46,626.08 gal
Application event totals		30.11	34,672.91	38.47	604.82	

12/25/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	3.05	0.00	1.02	354.84	676,457.29 gal
Lagoon Water Effluent	Process wastewater	32.64	41,438.35	44.86	333.11	55,723.85 gal
Application event totals		35.69	41,438.35	45.88	687.95	

01/19/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.09	0.00	1.15	437.26	815,008.77 gal
Application event totals		5.09	0.00	1.15	437.26	

02/08/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.63	0.00	1.26	483.02	900,300.34 gal
Lagoon Water Effluent	Process wastewater	89.91	56,973.31	77.94	417.02	81,879.95 gal
Application event totals		95.54	56,973.31	79.20	900.04	

02/28/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	24.77	0.00	0.00	0.00	48.86 Gal.
Well Water	Ground water	4.98	0.00	1.12	427.09	796,055.00 gal
Application event totals		29.75	0.00	1.12	427.09	

03/18/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	85.12	53,940.01	73.79	394.82	77,520.60 gal
Well Water	Ground water	4.60	0.00	1.03	394.55	735,403.25 gal

Application event totals		89.72	53,940.01	74.82	789.37	
04/07/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.63	0.00	1.26	483.02	900,300.34 gal
Application event totals		5.63	0.00	1.26	483.02	

Field name: 228

Crop: Corn, Late Silage

Plant date: 05/15/2023

05/15/2023: Corn, Late Silage

Application date		Application method		Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following
05/11/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Atmospheric Deposition		Atmospheric deposition	14.00	0.00	0.00	0.00	302.54 Lbs	
Application event totals			14.00	0.00	0.00	0.00		
05/13/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	5.81	0.00	1.30	498.27	2,875,340.29 gal	
Application event totals			5.81	0.00	1.30	498.27		
05/15/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Un 32		Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	216.10 Gal.	
Application event totals			35.39	0.00	0.00	0.00		
06/02/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	6.16	0.00	1.38	528.78	3,051,381.36 gal	
Un 32		Commercial fertilizer / Other: Liquid commercial fertilizer	53.09	0.00	0.00	0.00	324.15 Gal.	
Application event totals			59.25	0.00	1.38	528.78		
06/24/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well Water		Ground water	6.04	0.00	1.36	518.61	2,992,701.00 gal	
Application event totals			6.04	0.00	1.36	518.61		
07/12/2023		Surface (Irrigation)		No precipitation		No precipitation		No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	

Well Water	Ground water	6.28	0.00	1.41	538.95	3,110,061.99 gal
Lagoon Water Effluent	Process wastewater	59.97	50,533.27	96.59	672.07	332,131.13 gal
Application event totals		66.25	50,533.27	98.00	1,211.02	

07/28/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.28	0.00	1.41	538.95	3,110,061.99 gal
Lagoon Water Effluent	Process wastewater	64.42	54,283.09	103.76	721.94	356,776.90 gal
Application event totals		70.70	54,283.09	105.17	1,260.89	

08/13/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	6.10	0.00	1.37	523.69	3,022,041.32 gal
Lagoon Water Effluent	Process wastewater	83.83	43,833.54	86.36	717.83	395,506.00 gal
Application event totals		89.93	43,833.54	87.73	1,241.52	

08/29/2023	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.65	0.00	1.27	485.05	2,799,055.68 gal
Application event totals		5.65	0.00	1.27	485.05	

11/05/2022: Triticale

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
11/01/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral Solids	Corral Solids	38.91	9.84	22.72	184.60	108.05 ton
Application event totals		38.91	9.84	22.72	184.60	

11/07/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	3.77	0.00	1.26	438.45	2,587,806.12 gal
Lagoon Water Effluent	Process wastewater	40.42	51,304.62	55.54	412.42	213,596.70 gal
Application event totals		44.19	51,304.62	56.80	850.87	

11/29/2022	Surface (Irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	33.20	42,143.08	45.62	338.77	175,454.43 gal

Well Water	Ground water	2.77	0.00	0.93	322.13	1,901,245.38 gal
Application event totals		35.97	42,143.08	46.55	660.90	
12/24/2022	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Effluent	Process wastewater	32.98	41,861.19	45.31	336.50	174,280.82 gal
Well Water	Ground water	2.77	0.00	0.93	322.13	1,901,245.38 gal
Application event totals		35.75	41,861.19	46.24	658.63	
01/18/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	4.92	0.00	1.11	422.00	2,435,237.19 gal
Lagoon Water Effluent	Process wastewater	43.75	55,533.03	60.11	446.41	231,200.82 gal
Application event totals		48.67	55,533.03	61.22	868.41	
02/09/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.04	0.00	1.13	432.17	2,493,917.55 gal
Lagoon Water Effluent	Process wastewater	72.01	45,631.40	62.42	334.00	203,034.22 gal
Application event totals		77.05	45,631.40	63.55	766.17	
03/03/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Un 32	Commercial fertilizer / Other: Liquid commercial fertilizer	35.39	0.00	0.00	0.00	216.10 Gal.
Well Water	Ground water	5.15	0.00	1.16	442.34	2,552,597.90 gal
Application event totals		40.54	0.00	1.16	442.34	
03/26/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	4.43	0.00	1.00	380.11	2,193,473.78 gal
Application event totals		4.43	0.00	1.00	380.11	
04/18/2023	Surface (Irrigation)		No precipitation	No precipitation	No precipitation	No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well Water	Ground water	5.63	0.00	1.26	483.02	2,787,319.61 gal
Lagoon Water Effluent	Process wastewater	26.64	16,880.98	23.09	123.56	75,110.93 gal
Application event totals		32.27	16,880.98	24.35	606.58	

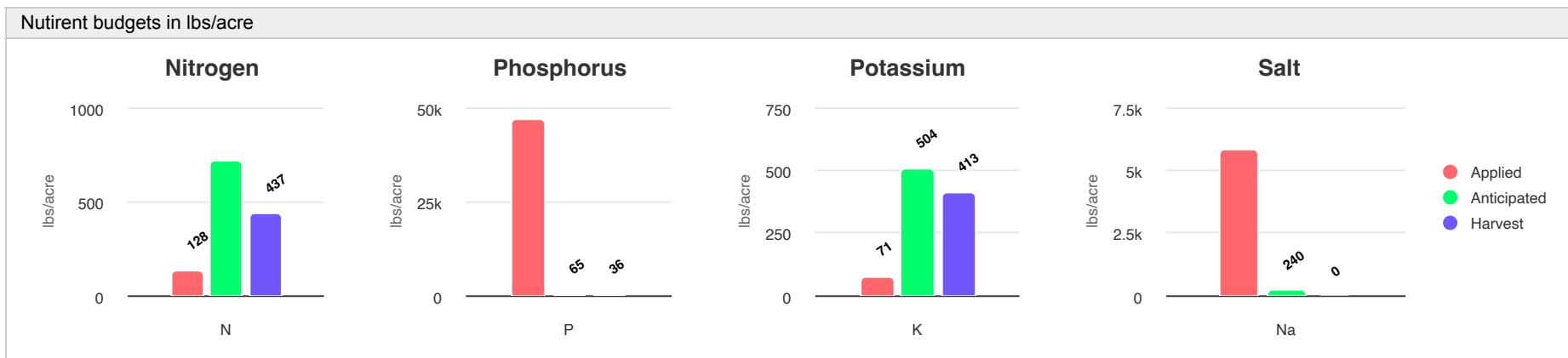
B. NUTRIENT BUDGET

221 - 11/01/2020: Alfalfa

Field name: 221

Crop: Alfalfa

Plant date: 11/01/2020



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	50.85	46,850.30	56.64	392.76
Fresh water	63.53	0.00	14.27	5,454.52
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	128.38	46,850.30	70.91	5,847.28
Anticipated crop nutrient removal	720.00	64.80	504.00	240.00
Actual crop nutrient removal	436.77	35.52	412.98	0.00
Nutrient balance	-308.39	46,814.78	-342.07	5,847.28
Applied to removed ratio	0.29	1,318.85	0.17	0.00

Fresh water applied	
111,193,469.25	gallons
4,094.88	acre-inches
53.64	inches/acre

Process wastewater applied	
825,037.30	gallons
30.38	acre-inches
0.40	inches/acre

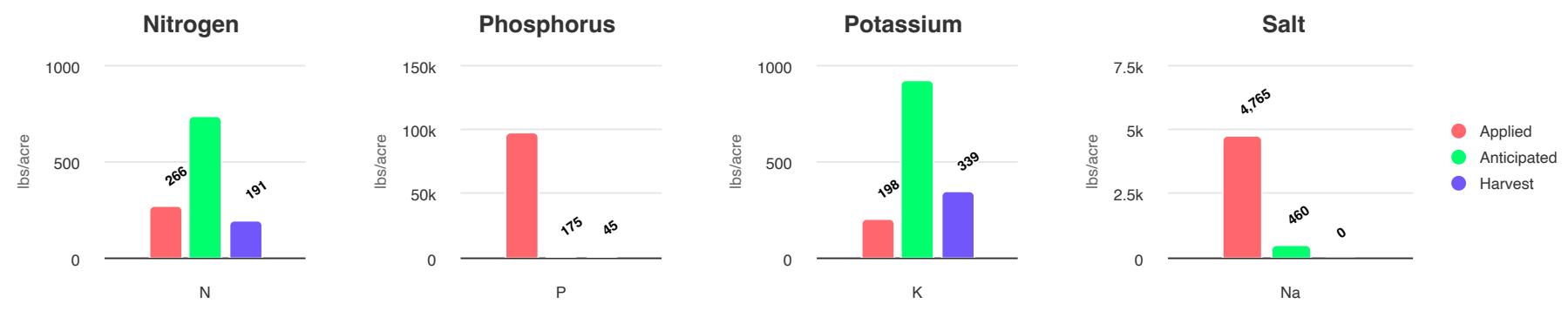
Total Harvests for the crop
7 harvests

Field name: 222

Crop: Corn, Late Silage

Plant date: 04/21/2023

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	70.78	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	142.51	97,683.13	188.87	1,411.79
Fresh water	39.07	0.00	8.79	3,352.84
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	266.36	97,683.13	197.66	4,764.63
Anticipated crop nutrient removal	736.00	174.80	920.00	460.00
Actual crop nutrient removal	191.45	44.55	338.99	0.00
Nutrient balance	74.91	97,638.58	-141.33	4,764.63
Applied to removed ratio	1.39	2,192.51	0.58	0.00

Fresh water applied

66,352,988.97 gallons
2,443.55 acre-inches
32.97 inches/acre

Process wastewater applied

2,509,468.02 gallons
92.42 acre-inches
1.25 inches/acre

Total Harvests for the crop

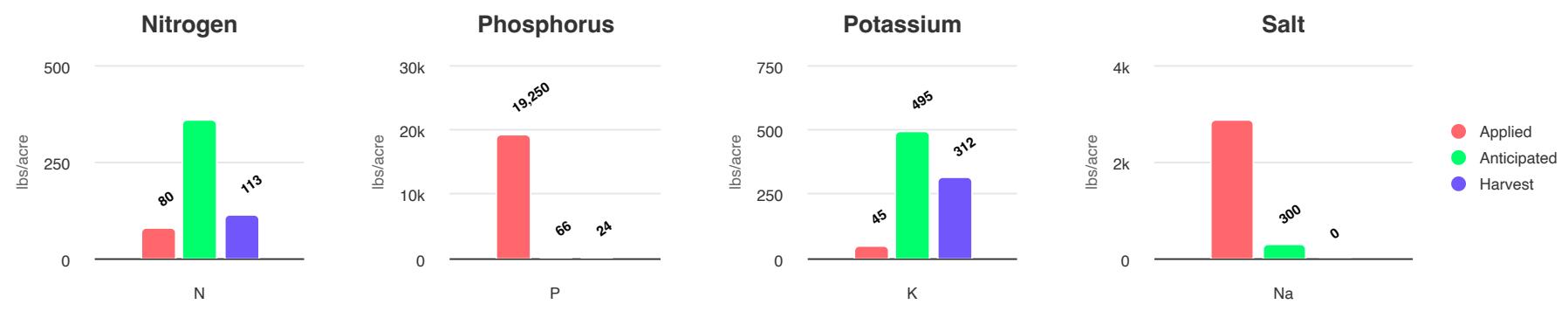
1 harvests

Field name: 222

Crop: Sudan

Plant date: 08/10/2023

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	36.81	19,250.34	37.92	315.25
Fresh water	29.61	0.00	6.65	2,542.19
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	80.42	19,250.34	44.57	2,857.44
Anticipated crop nutrient removal	360.00	66.00	495.00	300.00
Actual crop nutrient removal	113.04	23.68	312.16	0.00
Nutrient balance	-32.62	19,226.66	-267.59	2,857.44
Applied to removed ratio	0.71	812.84	0.14	0.00

Fresh water applied

50,310,104.02 gallons
1,852.75 acre-inches
25.00 inches/acre

Process wastewater applied

595,671.63 gallons
21.94 acre-inches
0.30 inches/acre

Total Harvests for the crop

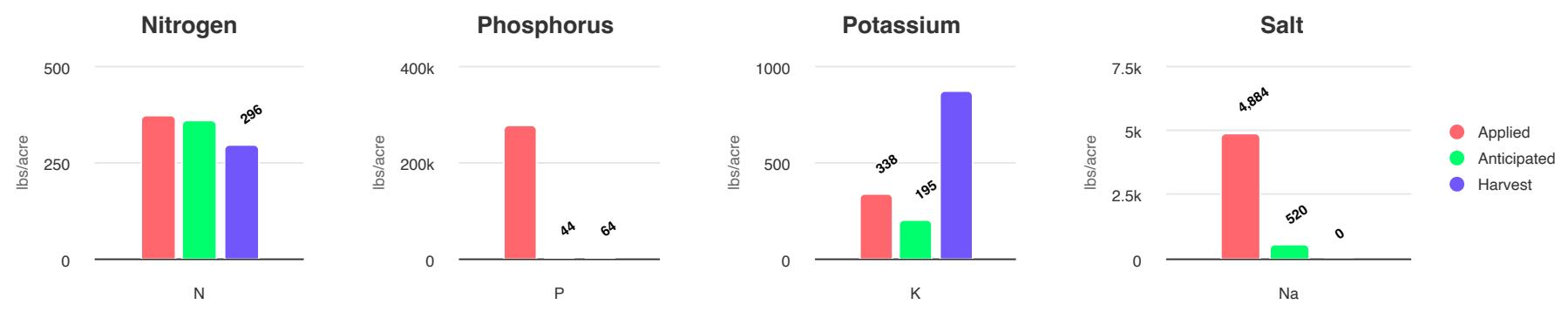
1 harvests

Field name: 222

Crop: Triticale

Plant date: 10/20/2022

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	35.39	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	305.64	275,907.59	330.57	2,137.60
Fresh water	28.42	0.00	7.48	2,745.90
Atmospheric deposition	0.00	0.00	0.00	0.00
Total nutrients applied	369.45	275,907.59	338.05	4,883.50
Anticipated crop nutrient removal	358.80	44.20	195.00	520.00
Actual crop nutrient removal	296.38	63.84	866.35	0.00
Nutrient balance	73.07	275,843.75	-528.30	4,883.50
Applied to removed ratio	1.25	4,322.09	0.39	0.00

Fresh water applied		
54,870,210.87	gallons	
2,020.68	acre-inches	
27.27	inches/acre	

Process wastewater applied		
4,048,957.10	gallons	
149.11	acre-inches	
2.01	inches/acre	

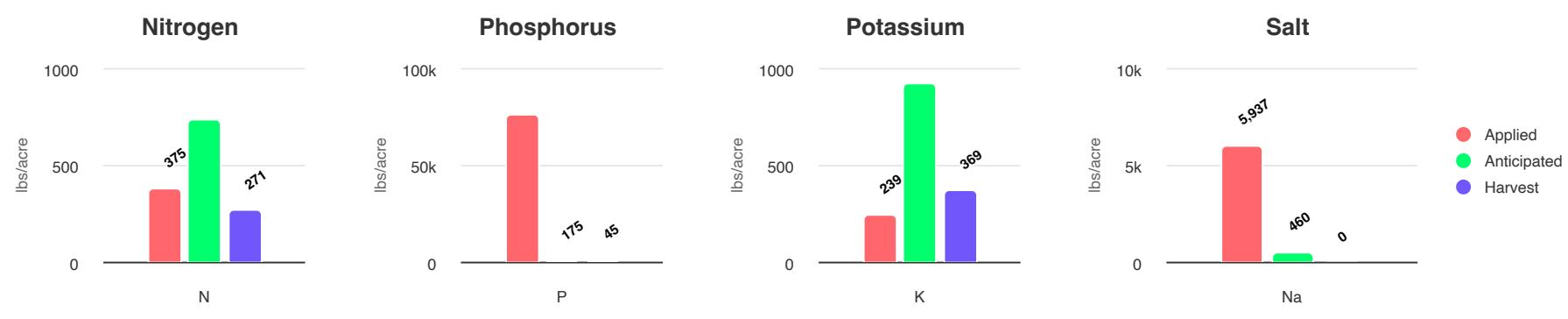
Total Harvests for the crop		
1	harvests	

Field name: 223

Crop: Corn, Late Silage

Plant date: 04/08/2023

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	106.17	0.00	0.00	0.00
Dry manure	113.82	35.45	96.90	1,521.30
Process wastewater	99.55	76,057.78	132.48	869.57
Fresh water	41.30	0.00	9.28	3,545.85
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	374.84	76,093.23	238.66	5,936.72
Anticipated crop nutrient removal	736.00	174.80	920.00	460.00
Actual crop nutrient removal	271.00	45.08	368.51	0.00
Nutrient balance	103.85	76,048.15	-129.84	5,936.72
Applied to removed ratio	1.38	1,687.87	0.65	0.00

Fresh water applied

73,590,732.56 gallons
2,710.10 acre-inches
34.87 inches/acre

Process wastewater applied

1,616,590.30 gallons
59.53 acre-inches
0.77 inches/acre

Total Harvests for the crop

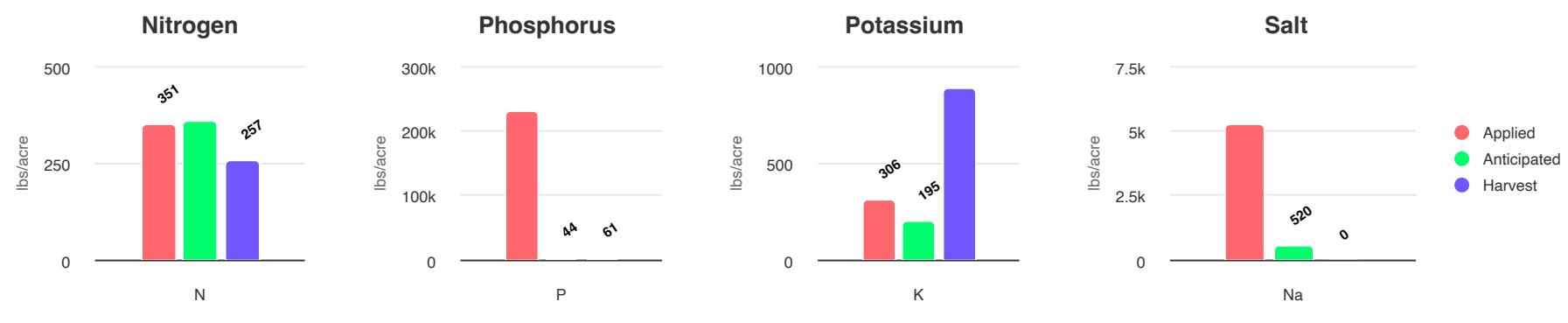
1 harvests

Field name: 223

Crop: Triticale

Plant date: 11/05/2022

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	24.77	0.00	0.00	0.00
Dry manure	38.91	9.84	22.72	184.60
Process wastewater	252.69	228,949.66	273.97	1,774.63
Fresh water	35.06	0.00	8.88	3,286.60
Atmospheric deposition	0.00	0.00	0.00	0.00
Total nutrients applied	351.43	228,959.50	305.57	5,245.83
Anticipated crop nutrient removal	358.80	44.20	195.00	520.00
Actual crop nutrient removal	257.32	61.08	883.73	0.00
Nutrient balance	94.11	228,898.42	-578.16	5,245.83
Applied to removed ratio	1.37	3,748.44	0.35	0.00

Fresh water applied

68,711,416.26 gallons
2,530.41 acre-inches
32.56 inches/acre

Process wastewater applied

3,522,309.55 gallons
129.71 acre-inches
1.67 inches/acre

Total Harvests for the crop

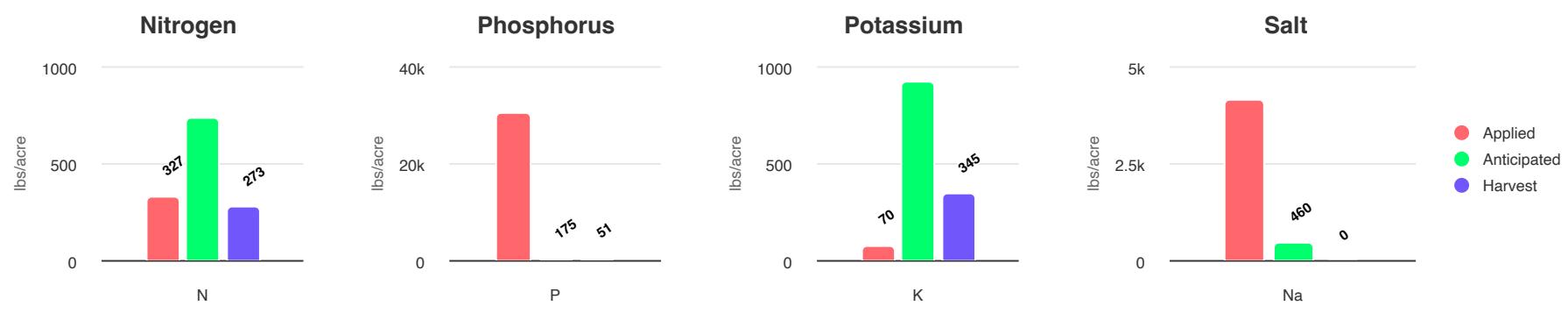
1 harvests

Field name: 224

Crop: Corn, Late Silage

Plant date: 05/10/2023

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	212.35	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	58.21	30,436.34	59.96	498.43
Fresh water	42.50	0.00	9.55	3,648.58
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	327.06	30,436.34	69.51	4,147.01
Anticipated crop nutrient removal	736.00	174.80	920.00	460.00
Actual crop nutrient removal	273.39	50.90	344.64	0.00
Nutrient balance	53.67	30,385.44	-275.13	4,147.01
Applied to removed ratio	1.20	598.01	0.20	0.00

Fresh water applied

73,578,813.31 gallons
2,709.66 acre-inches
35.88 inches/acre

Process wastewater applied

959,723.64 gallons
35.34 acre-inches
0.47 inches/acre

Total Harvests for the crop

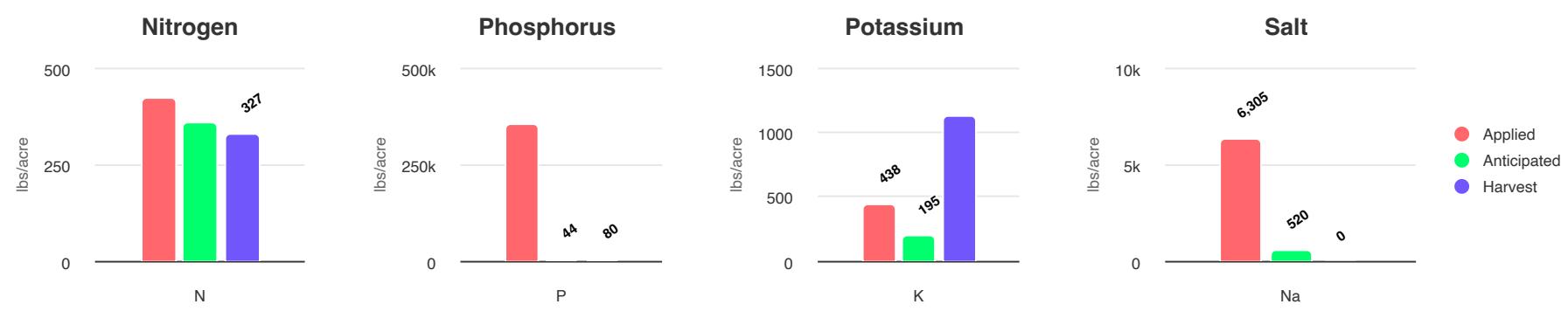
1 harvests

Field name: 224

Crop: Triticale

Plant date: 11/05/2022

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	38.91	9.84	22.72	184.60
Process wastewater	346.65	352,577.21	406.55	2,771.55
Fresh water	35.64	0.00	9.06	3,349.24
Atmospheric deposition	0.00	0.00	0.00	0.00
Total nutrients applied	421.20	352,587.05	438.33	6,305.39
Anticipated crop nutrient removal	358.80	44.20	195.00	520.00
Actual crop nutrient removal	326.76	79.95	1,129.75	0.00
Nutrient balance	94.44	352,507.10	-691.42	6,305.39
Applied to removed ratio	1.29	4,410.00	0.39	0.00

Fresh water applied

68,052,199.70 gallons
2,506.13 acre-inches
33.19 inches/acre

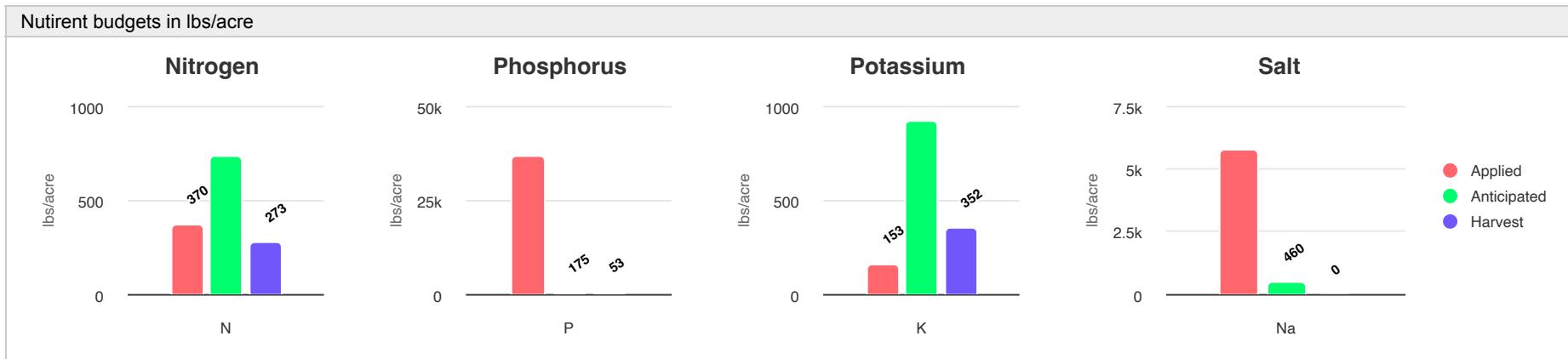
Process wastewater applied

5,216,959.44 gallons
192.12 acre-inches
2.54 inches/acre

Total Harvests for the crop

1 harvests

Field name: 225 Crop: Corn, Late Silage Plant date: 05/12/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	53.09	0.00	0.00	0.00
Dry manure	190.24	45.54	71.75	1,518.10
Process wastewater	70.03	36,614.66	72.14	599.61
Fresh water	42.57	0.00	9.57	3,654.05
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	369.93	36,660.20	153.46	5,771.76
Anticipated crop nutrient removal	736.00	174.80	920.00	460.00
Actual crop nutrient removal	273.10	52.95	351.88	0.00
Nutrient balance	96.83	36,607.26	-198.42	5,771.76
Applied to removed ratio	1.35	692.41	0.44	0.00

Fresh water applied		
72,528,397.66	gallons	
2,670.97	acre-inches	
35.93	inches/acre	

Process wastewater applied		
1,136,346.92	gallons	
41.85	acre-inches	
0.56	inches/acre	

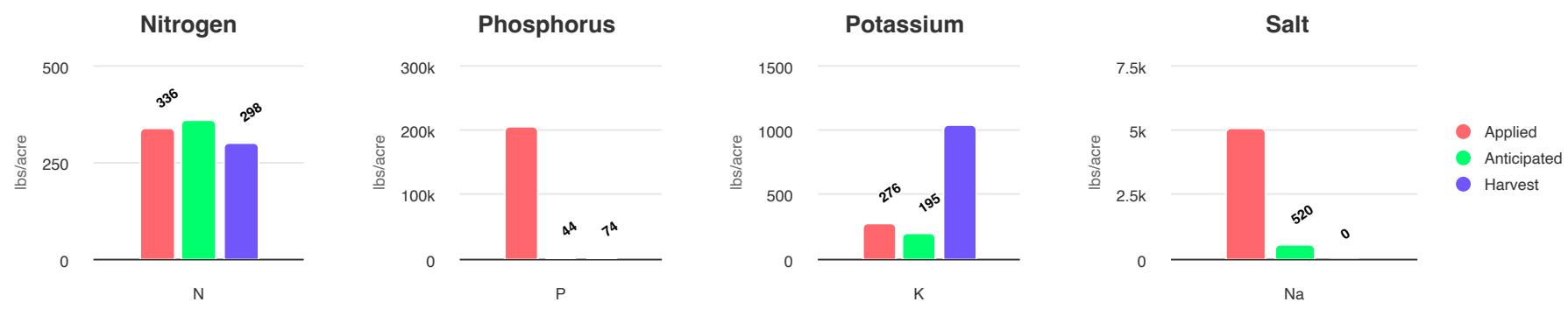
Total Harvests for the crop		
1	harvests	

Field name: 225

Crop: Triticale

Plant date: 11/10/2022

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	35.39	0.00	0.00	0.00
Dry manure	38.91	9.84	22.72	184.60
Process wastewater	226.22	203,427.43	244.02	1,575.24
Fresh water	35.34	0.00	8.93	3,309.31
Atmospheric deposition	0.00	0.00	0.00	0.00
Total nutrients applied	335.86	203,437.27	275.67	5,069.15
Anticipated crop nutrient removal	358.80	44.20	195.00	520.00
Actual crop nutrient removal	298.37	74.19	1,032.19	0.00
Nutrient balance	37.49	203,363.08	-756.52	5,069.15
Applied to removed ratio	1.13	2,742.16	0.27	0.00

Fresh water applied

66,162,433.53 gallons
2,436.54 acre-inches
32.78 inches/acre

Process wastewater applied

2,995,273.03 gallons
110.31 acre-inches
1.48 inches/acre

Total Harvests for the crop

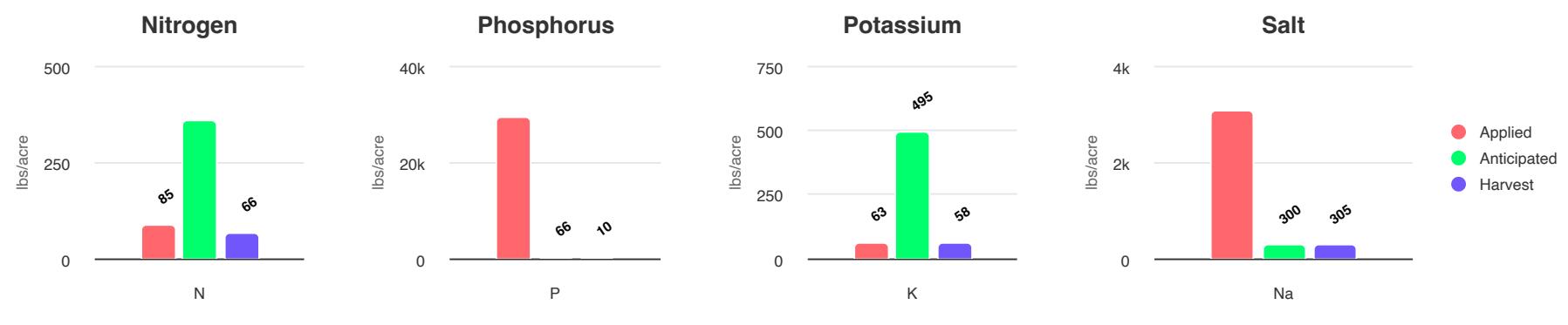
1 harvests

Field name: 226

Crop: Sudan

Plant date: 06/15/2023

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	39.54	29,173.26	56.16	408.80
Fresh water	31.04	0.00	6.97	2,664.23
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	84.58	29,173.26	63.13	3,073.03
Anticipated crop nutrient removal	360.00	66.00	495.00	300.00
Actual crop nutrient removal	65.88	9.55	58.24	304.56
Nutrient balance	18.70	29,163.71	4.89	2,768.47
Applied to removed ratio	1.28	3,055.69	1.08	10.09

Fresh water applied
40,089,771.25 gallons
1,476.37 acre-inches
26.20 inches/acre

Process wastewater applied
543,201.11 gallons
20.00 acre-inches
0.36 inches/acre

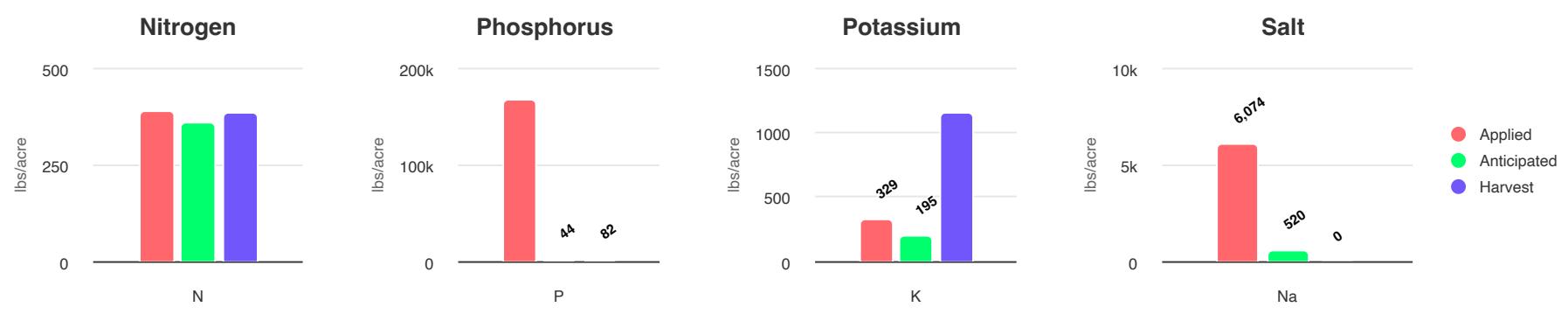
Total Harvests for the crop
2 harvests

Field name: 226

Crop: Triticale

Plant date: 11/01/2022

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	35.39	0.00	0.00	0.00
Dry manure	132.97	34.41	120.07	1,394.40
Process wastewater	183.68	167,150.18	199.71	1,296.34
Fresh water	35.89	0.00	9.16	3,382.82
Atmospheric deposition	0.00	0.00	0.00	0.00
Total nutrients applied	387.93	167,184.59	328.94	6,073.56
Anticipated crop nutrient removal	358.80	44.20	195.00	520.00
Actual crop nutrient removal	381.71	82.44	1,146.93	0.00
Nutrient balance	6.21	167,102.16	-817.99	6,073.56
Applied to removed ratio	1.02	2,028.06	0.29	0.00

Fresh water applied		
51,299,605.44	gallons	
1,889.19	acre-inches	
33.53	inches/acre	

Process wastewater applied		
1,863,715.35	gallons	
68.63	acre-inches	
1.22	inches/acre	

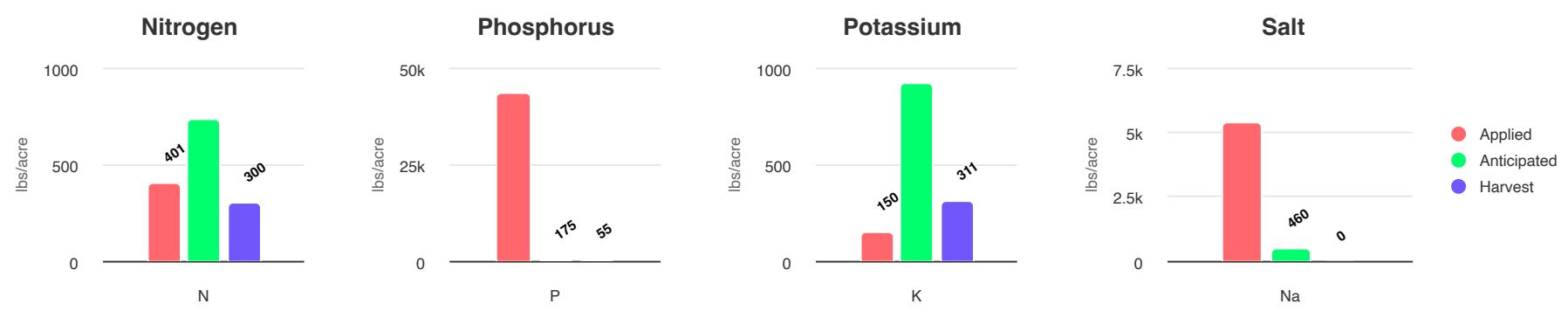
Total Harvests for the crop		
1	harvests	

Field name: 227

Crop: Corn, Late Silage

Plant date: 05/13/2023

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	141.56	0.00	0.00	0.00
Dry manure	152.19	36.43	57.40	1,214.48
Process wastewater	51.60	43,480.04	83.11	578.27
Fresh water	42.02	0.00	9.45	3,607.89
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	401.37	43,516.47	149.96	5,400.64
Anticipated crop nutrient removal	736.00	174.80	920.00	460.00
Actual crop nutrient removal	299.81	55.26	310.89	0.00
Nutrient balance	101.56	43,461.22	-160.93	5,400.64
Applied to removed ratio	1.34	787.50	0.48	0.00

Fresh water applied

6,724,769.62 gallons
247.65 acre-inches
35.48 inches/acre

Process wastewater applied

92,304.47 gallons
3.40 acre-inches
0.49 inches/acre

Total Harvests for the crop

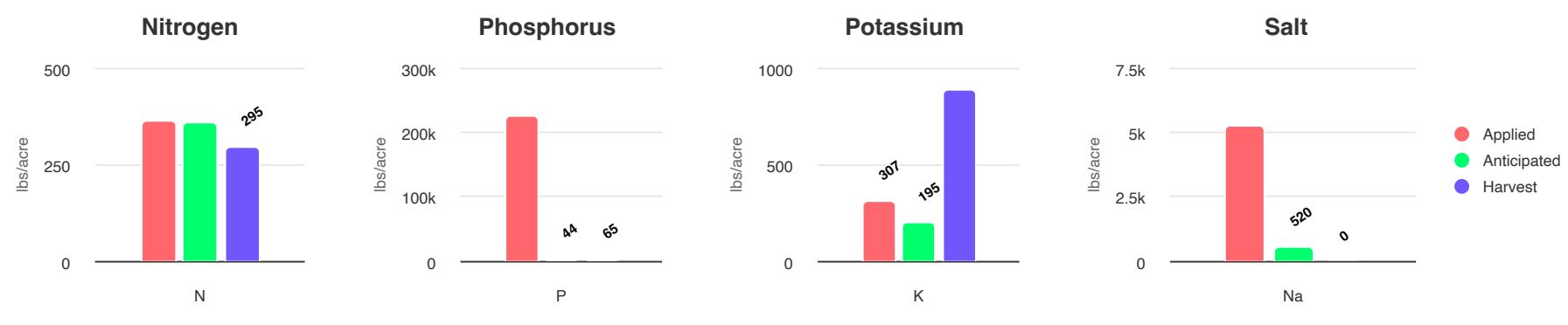
1 harvests

Field name: 227

Crop: Triticale

Plant date: 11/05/2022

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	24.77	0.00	0.00	0.00
Dry manure	38.91	9.84	22.72	184.60
Process wastewater	264.74	224,798.31	275.01	1,727.32
Fresh water	35.28	0.00	8.95	3,313.01
Atmospheric deposition	0.00	0.00	0.00	0.00
Total nutrients applied	363.70	224,808.15	306.68	5,224.93
Anticipated crop nutrient removal	358.80	44.20	195.00	520.00
Actual crop nutrient removal	294.80	64.68	882.89	0.00
Nutrient balance	68.90	224,743.48	-576.21	5,224.93
Applied to removed ratio	1.23	3,475.94	0.35	0.00

Fresh water applied

6,221,359.69 gallons
229.11 acre-inches
32.82 inches/acre

Process wastewater applied

312,546.38 gallons
11.51 acre-inches
1.65 inches/acre

Total Harvests for the crop

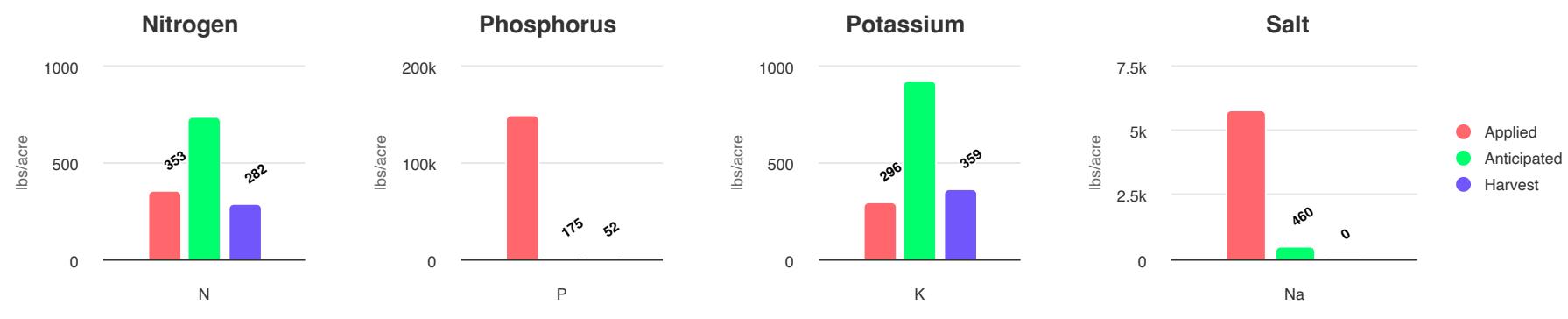
1 harvests

Field name: 228

Crop: Corn, Late Silage

Plant date: 05/15/2023

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	88.48	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	208.22	148,649.90	286.71	2,111.84
Fresh water	42.32	0.00	9.50	3,632.30
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	353.02	148,649.90	296.21	5,744.14
Anticipated crop nutrient removal	736.00	174.80	920.00	460.00
Actual crop nutrient removal	281.67	51.90	358.59	0.00
Nutrient balance	71.35	148,598.00	-62.38	5,744.14
Applied to removed ratio	1.25	2,864.18	0.83	0.00

Fresh water applied

20,960,643.62 gallons
771.91 acre-inches
35.72 inches/acre

Process wastewater applied

1,084,414.02 gallons
39.94 acre-inches
1.85 inches/acre

Total Harvests for the crop

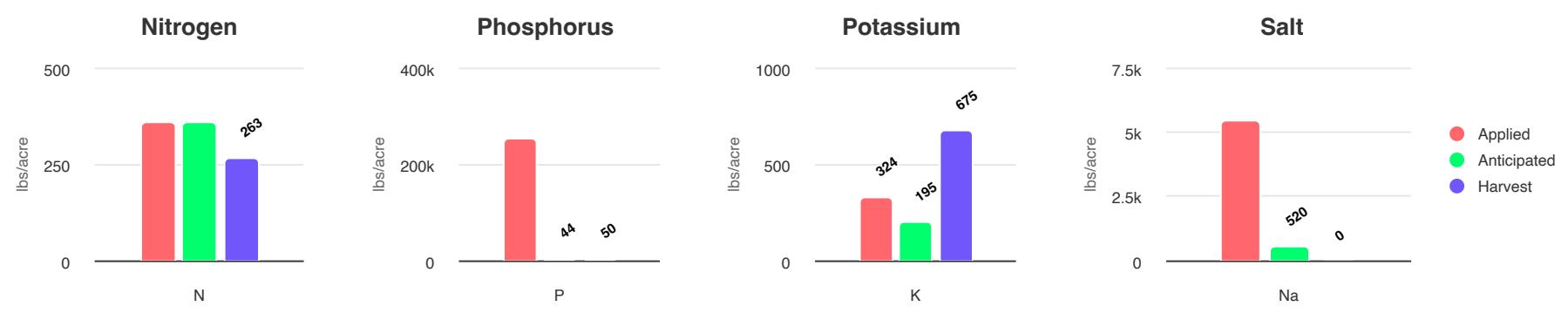
1 harvests

Field name: 228

Crop: Triticale

Plant date: 11/05/2022

Nutrient budgets in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	35.39	0.00	0.00	0.00
Dry manure	38.91	9.84	22.72	184.60
Process wastewater	249.00	253,354.30	292.09	1,991.66
Fresh water	34.48	0.00	8.78	3,242.35
Atmospheric deposition	0.00	0.00	0.00	0.00
Total nutrients applied	357.78	253,364.14	323.59	5,418.61
Anticipated crop nutrient removal	358.80	44.20	195.00	520.00
Actual crop nutrient removal	263.21	49.63	675.33	0.00
Nutrient balance	94.56	253,314.51	-351.74	5,418.61
Applied to removed ratio	1.36	5,104.58	0.48	0.00

Fresh water applied	
18,852,842.91	gallons
694.29	acre-inches
32.13	inches/acre

Process wastewater applied	
1,072,677.93	gallons
39.50	acre-inches
1.83	inches/acre

Total Harvests for the crop	
1	harvests

NUTRIENT ANALYSES

A. MANURE ANALYSES

T3090017A

Sample and source description name:	T3090017A									
Sample date:	03/17/2023	Material type:	Corral solids		Source of analysis:	Lab Analysis		Method of reporting:	As-is	
Moisture:	53.9%									

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	24,690.00	7,690.00	21,020.00	19,090.00	8,560.00	7,430.00	5,000.00	1,515.00	21,020.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

T3090017B

Sample and source description name:	T3090017B									
Sample date:	03/17/2023	Material type:	Corral solids		Source of analysis:	Lab Analysis		Method of reporting:	As-is	
Moisture:	85.8%									

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	30,640.00	7,170.00	8,730.00	16,460.00	7,000.00	2,240.00	3,100.00	1,068.00	8,730.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

T3090017C

Sample and source description name:	T3090017C									
Sample date:	03/17/2023	Material type:	Corral solids		Source of analysis:	Lab Analysis		Method of reporting:	As-is	
Moisture:	77.1%									

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	16,920.00	2,180.00	4,000.00	8,360.00	3,150.00	1,730.00	2,800.00	577.00	4,000.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

T3167036A

Sample and source description name:	T3167036A									
Sample date:	06/12/2023	Material type:	Corral solids		Source of analysis:	Lab Analysis		Method of reporting:	As-is	

Moisture: 20.1%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	23,810.00	5,700.00	8,980.00	13,710.00	5,480.00	3,660.00	2,500.00	992.00	8,980.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

T3167036B

Sample and source description name: T3167036B

Sample date: 06/12/2023

Material type: Corral solids

Source of analysis:

Lab Analysis

Method of reporting:

As-is

Moisture: 76.1%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	15,300.00	2,140.00	3,330.00	8,470.00	2,580.00	1,640.00	2,400.00	578.00	3,330.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

T3167036C

Sample and source description name: T3167036C

Sample date: 06/12/2023

Material type: Corral solids

Source of analysis:

Lab Analysis

Method of reporting:

As-is

Moisture: 86%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	24,630.00	8,050.00	4,450.00	23,260.00	6,560.00	2,260.00	2,300.00	1,458.00	4,450.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

T3263095A

Sample and source description name: T3263095A

Sample date: 09/15/2023

Material type: Corral solids

Source of analysis:

Lab Analysis

Method of reporting:

As-is

Moisture: 9.5%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	21,100.00	8,170.00	36,950.00	24,170.00	10,270.00	10,860.00	12,930.00	2,002.00	36,950.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

Value	15,680.00	2,790.00	3,230.00	3,920.00	1,790.00	1,380.00	2,940.00	474.00	3,230.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

T3362027C

Sample and source description name: T3362027C
Sample date: 12/22/2023 Material type: Corral solids Source of analysis: Lab Analysis Method of reporting: As-is
Moisture: 78.8%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	20,710.00	6,230.00	9,740.00	9,510.00	3,580.00	980.00	2,560.00	599.00	9,740.00	0.00
DL	100.00	200.00	500.00	500.00	500.00	500.00	100.00	.10		.10

B. PROCESS WASTEWATER ANALYSES

T3089030A

Sample and source description name:	T3089030A
Sample date:	03/17/2023

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)
Value	918.40	0.00	369.60	0.02	58.20	796.13	151.71	82.55	285.74	0.00	0.00	225.28	453.42	6.49	4,260.00
DL	0.50	0.50	0.50	0.50	0.20	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10

T3167023A

Sample and source description name:	T3167023A
Sample date:	06/12/2023
Material type:	Process wastewater
Source of analysis:	Lab Analysis
pH:	0

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)
Value	467.60	0.00	428.40	0.00	39.40	753.11	100.42	95.07	293.03	0.00	0.00	276.25	279.86	6.97	5,240.00
DL	0.50	0.50	0.50	0.50	0.20	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10

T3263059A

Sample and source description name: T3263059A

Sample date:		09/15/2023		Material type:				Process wastewater			Source of analysis:		Lab Analysis		pH:	0
	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)	
Value	548.80	0.00	406.00	0.10	28.70	565.44	74.49	63.11	328.01	0.00	0.00	183.51	152.58	7.23	4,700.00	
DL	0.50	0.50	0.50	0.50	0.20	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10	

T3362083A

Sample and source description name: T3362083A

Sample date: 12/22/2023

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)
Value	470.40	0.00	372.40	0.11	50.30	583.72	124.45	72.67	280.07	0.00	0.00	234.21	240.05	6.49	4,380.00
DL	0.50	0.50	0.50	0.50	0.20	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10

C. FRESH WATER ANALYSES

F2 #1

T3228016A

Sample and source description name:

T3228016A

Sample date: 08/14/2023

Source of analysis: Lab Analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)
Value	2.02	0.00	2.02	21.27	0.03	83.44	0.00	0.00	57.30	98.85	0.68	300.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10

F2 #2

T3228016B

Sample and source description name:

T3228016B

Sample date: 08/14/2023

Source of analysis: Lab Analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)
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Value	10.28	0.00	10.28	72.25	0.11	152.57	0.00	0.00	133.47	217.09	1.20	545.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10

F2 #3

T3228016C

Sample and source description name:

T3228016C

Sample date: 08/14/2023

Source of analysis: Lab Analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)
Value	5.26	0.00	5.26	64.55	0.14	141.04	0.00	0.00	177.39	156.31	1.06	535.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10

F2 #4

T3228016D

Sample and source description name:

T3228016D

Sample date: 08/14/2023

Source of analysis: Lab Analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (mmhos/cm)	TDS (mg/L)
Value	3.36	0.00	3.36	39.28	0.07	136.98	0.00	0.00	121.12	153.93	0.93	415.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	2.00	2.00	0.50	0.50	1.00	10

D. SOIL ANALYSES

No soil analyses entered.

E. PLANT TISSUE ANALYSES

221 - 01/01/2023: Alfalfa

T3167027A

Sample
description:

T3167027A

Sample date:

06/09/2023

Source of analysis:

Lab Analysis

Method of reporting: Dry

Moisture:

0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	27,910.00	2,270.00	26,390.00	2,010.00	0.00
DL	100.00	200.00	500.00		0.10

222 - 04/15/2023: Corn, Late Silage

T3342010A

Sample description: T3342010A

Sample date: 11/03/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	11,860.00	2,760.00	21,000.00	170.00	0.00
DL	100.00	200.00	500.00		0.10

223 - 04/01/2023: Corn, Late Silage

T3342010B

Sample description: T3342010B

Sample date: 11/03/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	16,230.00	2,700.00	22,070.00	180.00	0.00
DL	100.00	200.00	500.00		0.10

224 - 05/02/2023: Corn, Late Silage

T3342010C

Sample description:	T3342010C				
Sample date:	11/03/2023	Source of analysis:	Lab Analysis	Method of reporting:	Dry
Mositure:	0%				
	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)

Value	16,920.00	3,150.00	21,330.00	100.00	0.00
DL	100.00	200.00	500.00		0.10

225 - 05/01/2023: Corn, Late Silage

T3342010D

Sample description:	T3342010D				
Sample date:	11/03/2023	Source of analysis:	Lab Analysis	Method of reporting:	Dry
Mositure:	0%				
	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)

Value	15,010.00	2,910.00	19,340.00	90.00	0.00
DL	100.00	200.00	500.00		0.10

227 - 05/06/2023: Corn, Late Silage

T3342010E

Sample description:	T3342010E				
Sample date:	11/03/2023	Source of analysis:	Lab Analysis	Method of reporting:	Dry
Mositure:	0%				
	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)

Value	17,850.00	3,290.00	18,510.00	110.00	0.00
DL	100.00	200.00	500.00		0.10

228 - 05/01/2023: Corn, Late Silage

T3342010F

Sample
description: T3342010F

Sample date: 11/03/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	16,770.00	3,090.00	21,350.00	110.00	0.00
DL	100.00	200.00	500.00		0.10

222 - 10/15/2022: Tricale

T3139029A

Sample
description: T3139029A

Sample date: 05/15/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	19,500.00	4,200.00	57,000.00	0.42	0.00
DL	100.00	200.00	500.00		0.10

223 - 11/01/2022: Tricale

T3139029B

Sample
description: T3139029B

Sample date: 05/15/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	19,800.00	4,700.00	68,000.00	0.34	0.00
DL	100.00	200.00	500.00		0.10

224 - 11/01/2022: Triticale

T3139029C

Sample description: T3139029C

Sample date: 05/15/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	18,800.00	4,600.00	65,000.00	0.48	0.00
DL	100.00	200.00	500.00		0.10

225 - 11/01/2022: Triticale

T3139029D

Sample description: T3139029D

Sample date: 05/15/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	18,500.00	4,600.00	64,000.00	0.37	0.00
DL	100.00	200.00	500.00		0.10

226 - 10/16/2022: Triticale

T3139029E

Sample description:	T3139029E				
Sample date:	05/15/2023	Source of analysis:	Lab Analysis	Method of reporting:	Dry
Mositure:	0%				
	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)

Value	21,300.00	4,600.00	64,000.00	0.40	0.00
DL	100.00	200.00	500.00		0.10

227 - 11/01/2022: Triticale

Sample description:	T3139029F				
Sample date:	05/15/2023	Source of analysis:	Lab Analysis	Method of reporting:	Dry
Mositure:	0%				
	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)

Value	19,600.00	4,300.00	58,700.00	0.39	0.00
DL	100.00	200.00	500.00		0.10

228 - 11/01/2022: Triticale

Sample description:	T3139030A				
Sample date:	05/15/2023	Source of analysis:	Lab Analysis	Method of reporting:	Dry
Mositure:	0%				
	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)

Value	17,500.00	3,300.00	44,900.00	0.05	0.00
DL	100.00	200.00	500.00		0.10

222 - 08/05/2023: Sudan

T3342008A

Sample
description: T3342008A

Sample date: 11/03/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	14,510.00	3,040.00	40,070.00	530.00	0.00
DL	100.00	200.00	500.00		0.10

226 - 06/01/2023: Sudan

ATS-12110015A

Sample
description: ATS-12110015A

Sample date: 10/25/2023

Source of analysis: Lab Analysis

Method of reporting: Dry

Mositure: 0%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total Salt (mg/kg)	TFS (%)
Value	6,900.00	1,000.00	6,100.00	0.00	3.19
DL	100.00	200.00	500.00		0.10

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

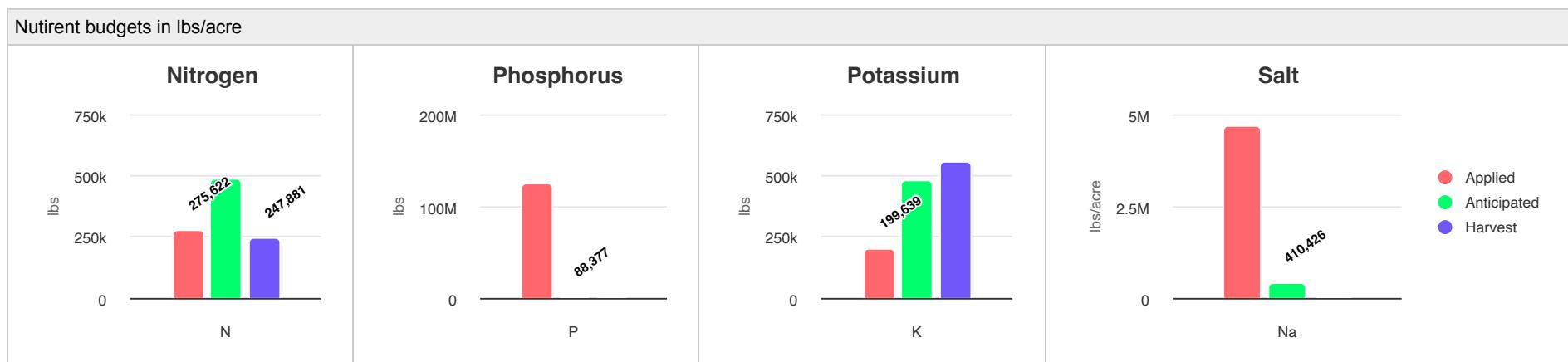
No subsurface (tile) drainage analyses entered.

NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

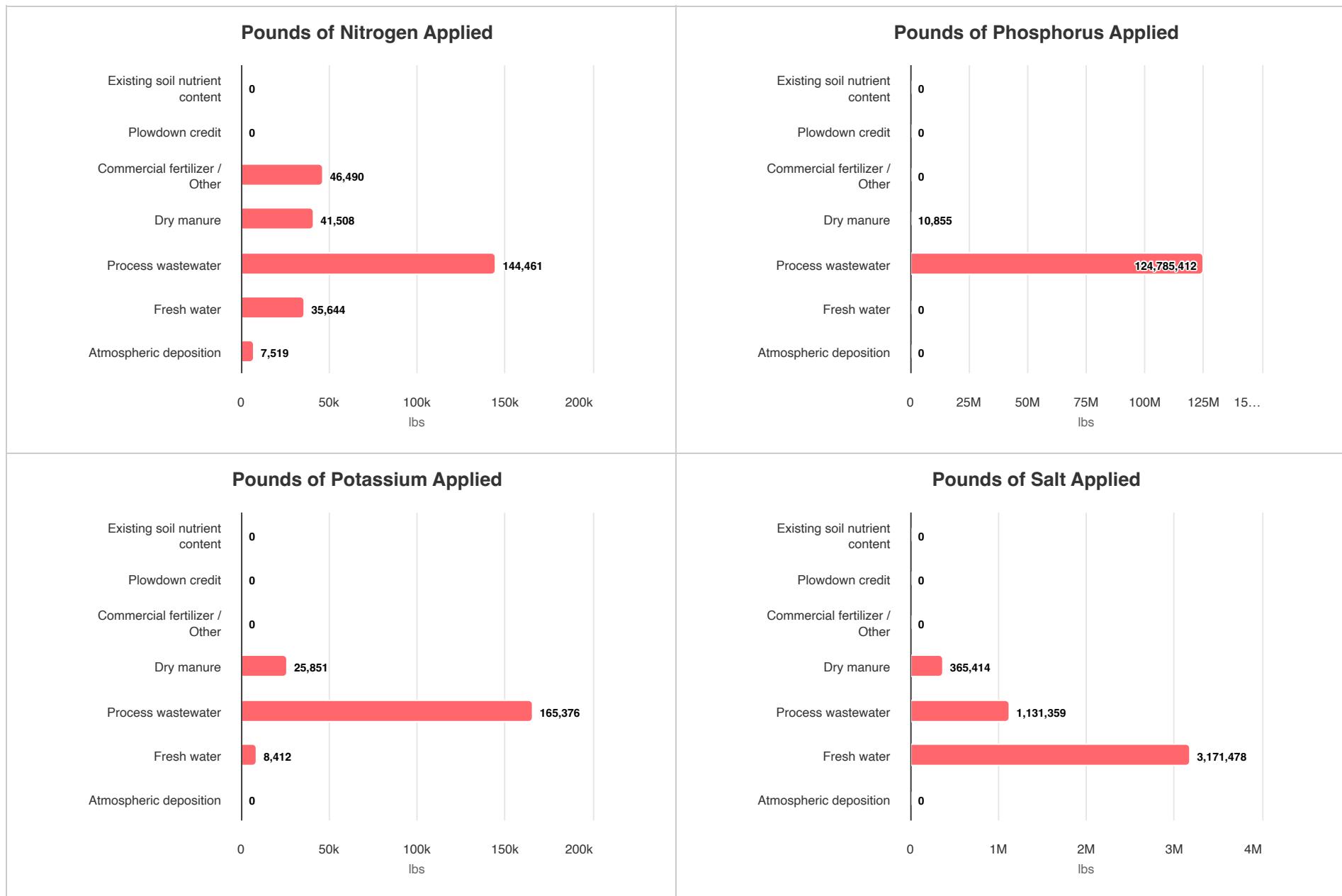
A. SUMMARY OF NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	46,490.35	0.00	0.00	0.00
Dry manure	41,508.46	10,854.64	25,850.86	184.60
Process wastewater	144,460.68	124,785,411.98	165,375.97	1,991.66
Fresh water	35,643.55	0.00	8,412.29	3,242.35
Atmospheric deposition	7,518.98	0.00	0.00	0.00
Total nutrients applied	275,622.02	124,796,266.62	199,639.12	4,668,250.85
Anticipated crop nutrient removal	483,728.38	88,376.99	482,292.36	410,426.20
Actual crop nutrient removal	247,881.30	48,296.90	554,124.50	17,161.71
Nutrient balance	27,740.72	124,747,969.72	-354,485.38	4,651,089.14
Applied to removed ratio	1.11	2,583.94	0.36	272.02

B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL



C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE



EXCEPTION REPORTING

A. MANURE, PROCESS WASTEWATER, AND OTHER DAIRY WASTE DISCHARGES

The following is a summary of all manure and process wastewater discharges from the production area to surface water or to land areas (land application areas or otherwise) when not in accordance with the facility's Nutrient Management Plan.

No manure or process wastewater discharges occurred during the reporting period.

B. STORM WATER DISCHARGES

The following is a summary of all storm water discharges from the production area to surface water during the reporting period when not in accordance with the facility's Nutrient Management Plan.

No stormwater discharges occurred during the reporting period.

C. LAND APPLICATION AREA TO SURFACE WATER DISCHARGES

The following is a summary of all discharges from the land application area to surface water that have occurred during the reporting period when not in accordance with the facility's Nutrient Management Plan.

No land application area to surface water discharges occurred during the reporting period.

NUTRIENT MANAGEMENT PLAN AND EXPORT AGREEMENT STATEMENTS

A. NUTRIENT MANAGEMENT PLAN STATEMENTS

Was the facility's NMP updated in the reporting period?

Yes

Was the facility's NMP developed by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order?

Yes

Was the facility's NMP approved by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order?

Yes

B. EXPORT AGREEMENT STATEMENT

Are there any written agreements with third parties to receive manure or process wastewater that are new or were revised within the reporting period?

No

ADDITIONAL NOTES

A. NOTES

No notes entered for this annual report.

CERTIFICATION

A. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



SIGNATURE OF OWNER OF FACILITY



SIGNATURE OF OPERATOR OF FACILITY

Manuel Rosa Jr.

Manuel Rosa Jr.

PRINT OR TYPE NAME

PRINT OR TYPE NAME

6/29/2024

6/29/2024

DATE

DATE

REQUIRED ATTACHMENTS

A. REQUIRED ATTACHMENTS

The following lists the required documents that should be attached to the Annual Report when submitted.

Annual Dairy Facility Assessment

Provide an Annual Dairy Facility Assessment (an update to the Preliminary Dairy Facility Assessment in Attachment A) for each reporting period. On the PDFA Final page, click on the ADFA Report button to generate an ADFA report after updating information as needed.

Manure/Process Wastewater Tracking Manifests

Provide copies of all manure/process wastewater tracking manifests for the reporting period, signed by both the owner/operator and the hauler.

Corrective Actions Documents

Provide records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements of the General Order. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.

Discharge Maps

Provide map(s) showing the discharge and sample locations for each discharge or release of waste to land areas (land application areas or otherwise) or surface water.

Discharge Lab Reports

Provide copies of laboratory analyses of all discharges (manure, process wastewater, or tailwater), surface water (upstream and downstream of a discharge), and storm water, including chain-of-custody forms and laboratory quality assurance/quality control results.

Groundwater Monitoring

Dischargers that monitor supply wells or subsurface (tile) drainage systems, or that have monitoring well systems must submit monitoring results as directed in the General Order, Groundwater Reporting Section starting on page MRP-13.

Storm Water Monitoring

Dischargers that are required to monitor storm water more frequently than required in the General Order must submit monitoring results as directed in the General Order, Storm Water Reporting Section on page MRP-14.

Solid/Liquid Manure Tracking Manifest

Waste Generator Information:

Name: Manuel Rosa Jr.
Facility Name: Faial Farms 2
Facility Address: 18683 Magnolia Ave
Facility City/State: Shafter, CA 93263

Contact:

Name: Manuel Rosa Jr.
Number: (661) 667-1016

If amount hauled / transferred is liquid, then a "Waste Water Agreement" is required in compliance with Land Application Specification C.2 of the General Order R5-2007-0035.

Does the operator have an agreement, and is a Waste Water Agreement on file with the RWQCD? NO

I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information., including the possibility of a fine and imprisonment for knowing violations.

Manure Hauler / Processor Information:

Name: T/M Composting
Facility Address: 4322 Saco rd.
Facility City/State: Bakersfield, CA 93308

Contact:

Name: Trina Payne
Number: 800-995-8331

Manure Destination Composting Facility

Destination Information:

Name: T/M Composting
Facility Address: 4322 Saco Rd,
Facility City/State: Bakersfield, CA

Contact:

Name: Trina Payne
Number: 800 995 8331

Dates Hauled / Transferred	Amount Hauled / Transferred	Units	Moisture %
Jun 1, 2023 - Jun, 30 2023	6,374	ton	67 %
Jul 1, 2023 - Jul, 31 2023	6,947	ton	68 %
Aug 1, 2023 - Aug, 31 2023	6,170	ton	66 %
Total	19,491		

Signature of Owner:

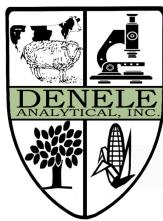
Date:

12/30/2023

Signature of Hauler:

Date:

12/30/2023



Denele Analytical, Inc.

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Phone (209) 634-9055 - Fax (209) 634-9057
www.denelelabs.com

40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

Faial Farms
PO Box 456
Arvin, CA 93203

Grower**Consultant:**

Icon Ag
9530 Hageman Rd, Ste B. #292
Bakersfield, CA 93312

PURCHASE ORDER: 2

RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

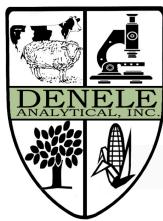
Boron (B)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #1	T3228016A	Boron (B)	EPA 200.7	0.084	ppm

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %

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Compliance Analysis Report

Customer
Faial Farms
PO Box 456
Arvin, CA 93203

Grower

Consultant:
Icon Ag
9530 Hageman Rd, Ste B. #292
Bakersfield, CA 93312

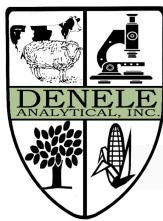
PURCHASE ORDER: 2
RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

Irrigation /Ground Water (H14)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #1	T3228016A	Electrical Conductivity (EC)	EPA 120.1 and SM 2320B-2011	0.679	mmhos/cm
		Bicarbonate Alkalinity (ALK-B)	SM 2320B-2011	28.0	mg/L
		Carbonate Alkalinity (Carb)	SM 2320B-2011	< 2.00	mg/L
		Sulfate (SO4)	EPA 375.2	57.3	mg/L
		Sodium (Na)	EPA 200.7	83.4	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Magnesium (Mg)	EPA 200.7	< 0.500	mg/L
		Nitrate Nitrogen (NO3-N)	EPA 353.2	2.02	mg/L
		Total Dissolved Solids (TDS)	SM 2540 C-1997 and EPA 200.7	300	mg/L
		Calcium (Ca)	EPA 200.7	21.3	mg/L
		Chloride (Cl)	SM 4500-Cl D-2011	98.9	mg/L
		Soluble Salts (SALT-SOL)	Calculation	435	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	Sample mg/L	Dup mg/L	RPD %
Ammonia Nitrogen (NH3-N)	97.8	100 (T3228016A)	102 (T3228016A)			1.78
Calcium (Ca)	92.3	90.9 (T3228021A)	93.1 (T3228021A)			2.36
Chloride (Cl)	103	96.4 (T3228016A)	96.9 (T3228016A)			0.559
Magnesium (Mg)	92.1	91.3 (T3228021A)	95.2 (T3228021A)			4.24
Nitrate Nitrogen (NO3-N)	105	100 (T3228016A)	96.7 (T3228016A)			3.70
Sodium (Na)	99.4	78.9 (T3228021A)	85.1 (T3228021A)			7.63
Sulfate (SO4)	103	114 (T3228016A)	107 (T3228016A)			5.66
Total Dissolved Solids (TDS)	109			410 (T3228024B)	435 (Dup)	5.92

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Compliance Analysis Report

Customer

Faial Farms
PO Box 456
Arvin, CA 93203

Grower**Consultant:**

Icon Ag
9530 Hageman Rd, Ste B. #292
Bakersfield, CA 93312

PURCHASE ORDER: 2

RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

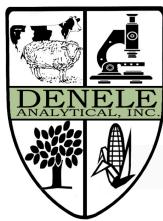
pH (pH)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #1	T3228016A	pH (pH)	SM4500-H+ B-2000	7.4	S.U.

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
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Compliance Analysis Report

Customer

Faial Farms
PO Box 456
Arvin, CA 93203

Grower**Consultant:**

Icon Ag
9530 Hageman Rd, Ste B. #292
Bakersfield, CA 93312

PURCHASE ORDER: 2

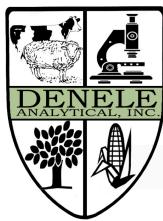
RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/22/23

Total Nitrogen (TN)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #1	T3228016A	Total Nitrogen (TN)	SM 4500-NH3 D,C	2.02	%

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
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Compliance Analysis Report

Customer

Faial Farms
PO Box 456
Arvin, CA 93203

Grower**Consultant:**

Icon Ag
9530 Hageman Rd, Ste B. #292
Bakersfield, CA 93312

PURCHASE ORDER: 2

RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

Boron (B)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #2	T3228016B	Boron (B)	EPA 200.7	0.081	ppm

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
----------------------------	-------	------	-------	-------

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Compliance Analysis Report

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Grower

Consultant:
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Bakersfield, CA 93312

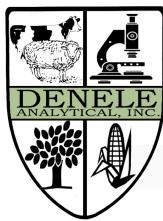
PURCHASE ORDER: 2
RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

Irrigation /Ground Water (H14)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #2	T3228016B	Electrical Conductivity (EC)	EPA 120.1 and SM 2320B-2011	1.20	mmhos/cm
		Bicarbonate Alkalinity (ALK-B)	SM 2320B-2011	24.0	mg/L
		Carbonate Alkalinity (Carb)	SM 2320B-2011	< 2.00	mg/L
		Sulfate (SO4)	EPA 375.2	133	mg/L
		Sodium (Na)	EPA 200.7	153	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Magnesium (Mg)	EPA 200.7	< 0.500	mg/L
		Nitrate Nitrogen (NO3-N)	EPA 353.2	10.3	mg/L
		Total Dissolved Solids (TDS)	SM 2540 C-1997 and EPA 200.7	545	mg/L
		Calcium (Ca)	EPA 200.7	72.3	mg/L
		Chloride (Cl)	SM 4500-Cl D-2011	217	mg/L
		Soluble Salts (SALT-SOL)	Calculation	769	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	Sample mg/L	Dup mg/L	RPD %
Ammonia Nitrogen (NH3-N)	97.8	100 (T3228016A)	102 (T3228016A)			1.78
Calcium (Ca)	92.3	90.9 (T3228021A)	93.1 (T3228021A)			2.36
Chloride (Cl)	103	96.4 (T3228016A)	96.9 (T3228016A)			0.559
Magnesium (Mg)	92.1	91.3 (T3228021A)	95.2 (T3228021A)			4.24
Nitrate Nitrogen (NO3-N)	105	100 (T3228016A)	96.7 (T3228016A)			3.70
Sodium (Na)	99.4	78.9 (T3228021A)	85.1 (T3228021A)			7.63
Sulfate (SO4)	103	114 (T3228016A)	107 (T3228016A)	410 (T3228024B)	435 (Dup)	5.66
Total Dissolved Solids (TDS)	109					5.92

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Denele Analytical, Inc.

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www.denelelabs.com

40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

Faial Farms
PO Box 456
Arvin, CA 93203

Grower**Consultant:**

Icon Ag
9530 Hageman Rd, Ste B. #292
Bakersfield, CA 93312

PURCHASE ORDER: 2

RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

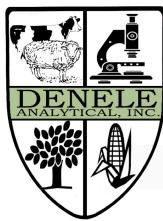
pH (pH)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #2	T3228016B	pH (pH)	SM4500-H+ B-2000	7.3	S.U.

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
----------------------------	-------	------	-------	-------

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Total Nitrogen (TN)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #2	T3228016B	Total Nitrogen (TN)	SM 4500-NH3 D,C	10.3	%

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %

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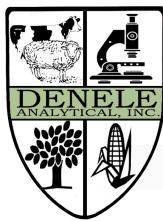
Boron (B)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #3	T3228016C	Boron (B)	EPA 200.7	0.093	ppm

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
----------------------------	-------	------	-------	-------

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Grower

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Bakersfield, CA 93312

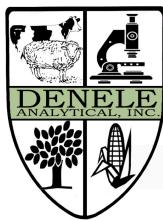
PURCHASE ORDER: 2
RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

Irrigation /Ground Water (H14)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #3	T3228016C	Electrical Conductivity (EC)	EPA 120.1 and SM 2320B-2011	1.06	mmhos/cm
		Bicarbonate Alkalinity (ALK-B)	SM 2320B-2011	30.0	mg/L
		Carbonate Alkalinity (Carb)	SM 2320B-2011	< 2.00	mg/L
		Sulfate (SO4)	EPA 375.2	177	mg/L
		Sodium (Na)	EPA 200.7	141	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Magnesium (Mg)	EPA 200.7	< 0.500	mg/L
		Nitrate Nitrogen (NO3-N)	EPA 353.2	5.26	mg/L
		Total Dissolved Solids (TDS)	SM 2540 C-1997 and EPA 200.7	535	mg/L
		Calcium (Ca)	EPA 200.7	64.5	mg/L
		Chloride (Cl)	SM 4500-Cl D-2011	156	mg/L
		Soluble Salts (SALT-SOL)	Calculation	675	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	Sample mg/L	Dup mg/L	RPD %
Ammonia Nitrogen (NH3-N)	97.8	100 (T3228016A)	102 (T3228016A)			1.78
Calcium (Ca)	92.3	90.9 (T3228021A)	93.1 (T3228021A)			2.36
Chloride (Cl)	103	96.4 (T3228016A)	96.9 (T3228016A)			0.559
Magnesium (Mg)	92.1	91.3 (T3228021A)	95.2 (T3228021A)			4.24
Nitrate Nitrogen (NO3-N)	105	100 (T3228016A)	96.7 (T3228016A)			3.70
Sodium (Na)	99.4	78.9 (T3228021A)	85.1 (T3228021A)			7.63
Sulfate (SO4)	103	114 (T3228016A)	107 (T3228016A)	410 (T3228024B)	435 (Dup)	5.66
Total Dissolved Solids (TDS)	109					5.92

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Bakersfield, CA 93312

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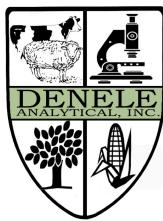
pH (pH)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #3	T3228016C	pH (pH)	SM4500-H+ B-2000	7.4	S.U.

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
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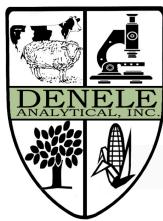
RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/22/23

Total Nitrogen (TN)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #3	T3228016C	Total Nitrogen (TN)	SM 4500-NH3 D,C	5.26	%

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
----------------------------	-------	------	-------	-------

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Bakersfield, CA 93312

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ANALYZED DATE: 8/18/23

Boron (B)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #4	T3228016D	Boron (B)	EPA 200.7	0.088	ppm

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
----------------------------	-------	------	-------	-------

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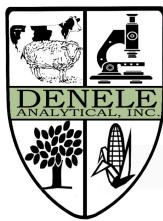
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RECEIVED DATE: 8/16/23 10:00 AM
SUBMITTED BY: Courier
ANALYZED DATE: 8/18/23

Irrigation /Ground Water (H14)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #4	T3228016D	Electrical Conductivity (EC)	EPA 120.1 and SM 2320B-2011	0.931	mmhos/cm
		Bicarbonate Alkalinity (ALK-B)	SM 2320B-2011	24.0	mg/L
		Carbonate Alkalinity (Carb)	SM 2320B-2011	< 2.00	mg/L
		Sulfate (SO4)	EPA 375.2	121	mg/L
		Sodium (Na)	EPA 200.7	137	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Magnesium (Mg)	EPA 200.7	< 0.500	mg/L
		Nitrate Nitrogen (NO3-N)	EPA 353.2	3.36	mg/L
		Total Dissolved Solids (TDS)	SM 2540 C-1997 and EPA 200.7	415	mg/L
		Calcium (Ca)	EPA 200.7	39.3	mg/L
		Chloride (Cl)	SM 4500-Cl D-2011	154	mg/L
		Soluble Salts (SALT-SOL)	Calculation	596	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	Sample mg/L	Dup mg/L	RPD %
Ammonia Nitrogen (NH3-N)	97.8	100 (T3228016A)	102 (T3228016A)			1.78
Calcium (Ca)	92.3	90.9 (T3228021A)	93.1 (T3228021A)			2.36
Chloride (Cl)	103	96.4 (T3228016A)	96.9 (T3228016A)			0.559
Magnesium (Mg)	92.1	91.3 (T3228021A)	95.2 (T3228021A)			4.24
Nitrate Nitrogen (NO3-N)	105	100 (T3228016A)	96.7 (T3228016A)			3.70
Sodium (Na)	99.4	78.9 (T3228021A)	85.1 (T3228021A)			7.63
Sulfate (SO4)	103	114 (T3228016A)	107 (T3228016A)	410 (T3228024B)	435 (Dup)	5.66
Total Dissolved Solids (TDS)	109					5.92

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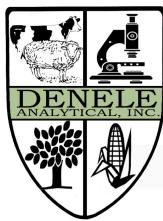
Icon Sampling Fee (ISF)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #4	T3228016D	Icon Sampling Fee (ISF)	1664B	0.000	N/A

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
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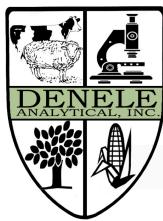
pH (pH)

SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #4	T3228016D	pH (pH)	SM4500-H+ B-2000	7.3	S.U.

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
----------------------------	-------	------	-------	-------

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ANALYZED DATE: 8/22/23

Total Nitrogen (TN)
SOURCE: Well Water

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
F2 #4	T3228016D	Total Nitrogen (TN)	SM 4500-NH3 D,C	3.36	%

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %

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Irrigation / Ground / Tile Water



9530 Hageman Rd. Ste B, #292 Bakersfield, CA 93312

Dominic Patino

(661) 333-7776

(661) 215-5168

dpatino@iconaginc.com

Date

8-14-2023

Sampled By

TONY

Lab Name

Denele

Faial Farms 2

Ranch: Faial Farms #2

***Required Field Measurement

NH4-N Check here if performed

Analysis Types

W5 - Ag Suitability (Non-Compliance)

W2 - W1 + Ca, Mg, Na, Bicard, SO4, Cl, B

W4 - pH, SpCon, TDS, Ca, CO3, Ca, Mg, Na, K, SO4, Cl, B (Reg 3 comp)

W1 - EC, pH, NO3-N, TN, TDS, NH4-N*** (Reg 5 comp)

W3 - W2 + TP, NH4-N, Carb (tile drain)

Weather Conditions

SH - Sunny & Hot

CC - Cold & Cloudy

SW - Sunny & Warm

CCL - Cold & Clear

R - Rainy

Location:

1.

Analysis	Weather	Temp (°F)	# of Bags/Bottles
W2	SH	80	1

CHAIN



23.01

Faial Farms 2

F2 #1

W

Ranch: Faial Farms #2

8:00

Date: 8-14-2023 am

[W]

35.478468, -119.377232

Location:

2.

Analysis	Weather	Temp (°F)	# of Bags/Bottles
W2	SH	80	1

CHAIN



23.01

Faial Farms 2

F2 #2

W

Ranch: Faial Farms #2

8:15

Date: 8-14-2023 am

[W]

35.478591, -119.381604

Location:

3.

Analysis	Weather	Temp (°F)	# of Bags/Bottles
W2	SH	80	1

CHAIN



23.01

Faial Farms 2

F2 #3

W

Ranch: Faial Farms #2

8:30

Date: 8-14-2023 am

[W]

35.478583, -119.368621

Location:

4.

Analysis	Weather	Temp (°F)	# of Bags/Bottles
W2	SH	80	1

CHAIN



23.01

Faial Farms 2

F2 #4

W

Ranch: Faial Farms #2

8:35

Date: 8-14-2023 am

[W]

No Lat/Lng

Location:

5.

Analysis	Weather	Temp (°F)	# of Bags/Bottles

Place CHAIN Label Here

Place additional labels on sample bags/bottles

Location:

6.

Analysis	Weather	Temp (°F)	# of Bags/Bottles

Place CHAIN Label Here

Place additional labels on sample bags/bottles

Chain of Custody Recording Log

	Signature	Company	Received Date/Time	Relinquished Date/Time	Laboratory Use Only
1st	Antonio Nerd	Icon Ag		8-15-2023 7:00 AM	Logged in By: Laboratory #:
2nd					
3rd	J ~	Denele	8-16-23 10:00		
4th					T3228016