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INNOVATIVE
AG SERVICES

John Vander Poel Dairy

2023 Annual Report

X	Report Form	NA	Attachment H
X	Attachment A	NA	Attachment I
X	Attachment B	NA	Attachment J
X	Attachment C	NA	Manure Tracking Manifests
X	Attachment D	NA	New or Revised Waste Water Agreements
X	Attachment E	X	Groundwater Monitoring Samples
X	Attachment F	NA	Monitoring Well Report
X	Attachment G	NA	Owner/Operator Change Form

Enclosed are the required documents to be submitted to the Regional Water Quality Control Board Central Valley Region in compliance with Order No. R5-2013-0122 Waste Discharge Requirements, General Order for Existing Milk Cow Dairies for July 1, 2024.

(See attached delivery confirmation)

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Annual Report

John Vander Poel Dairy 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy	John Vander Poel Dairy
Facility Address	8001 Road 104, Pixley CA 93256

Owner/Operator as of 12/31/2023

Operator Name	Ron Vander Poel
Operator Phone	(559) 786-2551
Owner Name	Ron Vander Poel
Owner Phone	(559) 786-2551

1. Beginning and end dates of the annual reporting period: crops harvested January 1, 2023 through December 31, 2023.

2. Maximum and average number and type of animals (see Attachment A).

3. Estimated amount of total manure and process wastewater generated by the facility (see Attachment A).

4. Estimated amount of total manure and process wastewater applied to each land application area (see Attachment B).

5. Quantified ratio of total nitrogen applied to land application areas and total nitrogen removed by crop harvest (see Attachment B).

6. Estimated amount of total manure and process wastewater transferred to other persons by the facility (see Attachment C).

7. Total number of acres and the Assessor Parcel Numbers for all land application areas that were not used for application of manure or process wastewater (see Attachment D).

8. Total number of acres and the Assessor Parcel Numbers for all land application areas that were used for land application of manure and process wastewater (see Attachment D).

9. Summary of manure and process wastewater discharges from the production area
Provide a summary of all manure and 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, that occurred during the annual reporting period, including the date, time, location, approximate volume, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

X No discharges occurred during the reporting period.

__ Yes. ____ Number of discharges occurred (see Attachment H).

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John Vander Poel Dairy 2023

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10. Summary of storm water discharges from the production area
Provide a summary of all storm water discharges from the production area to surface water, that occurred during the annual reporting period, including the date, time, approximate volume, duration, location, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

X No discharges occurred during the reporting period.

__ Yes. ____ Number of discharges occurred (see Attachment I).

11. Summary of discharges from the land application area
Provide a summary of all discharges from the land application area to surface water, that occurred during the annual reporting period, including the date, time, approximate volume, location, source of discharge (i.e. tailwater, wastewater or blended wastewater), a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

X No discharges occurred during the reporting period.

__ Yes. ____ Number of discharges occurred (see Attachment J).

12. Nutrient Management Plan update
Has the NMP been updated, and if so, was it updated by a Certified Nutrient Management Specialist?

__ No.

X Yes, the new NMP was developed and approved by a Certified Nutrient Management Specialist.

13. Manure/Process Wastewater Tracking Manifests
Did you sell, give away, or otherwise remove manure or process wastewater from your property?

X No.

__ Yes, see attached manifests.

14. Written Agreements
Any process wastewater transferred to a third party that receives process wastewater from your dairy for its own use must have a written agreement consistent with State requirements. Attach copies of revised and/or new agreements not submitted previously. Do not resubmit agreements submitted previously.

X Not applicable; no written agreements.

__ No changes in agreement(s).

__ Yes, a new or revised agreement is attached.

15. Laboratory Analyses for Discharges
If you answered Yes to items #9, 10, or 11 above, attach copies of all laboratory analyses for 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, as applicable. (Results for Manure and process wastewater, storm water, and/or storm water are provided).

X Not Applicable.

__ Yes, provided with Attachment H, I, or J for #9, 10 and 11, respectively.

16. Tabulated Nutrient Analytical Data
Attach tabulated analytical data for samples of manure, process wastewater, irrigation water, soil, and plant tissue. The data shall be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and detection limits (see Attachment E).

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17. Record-Keeping Results

Attach results of the Record-Keeping Requirements for the production and land application areas specified in Record-Keeping Requirements. These include:

* Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.
* Records of the date, time, and estimated volume of any overflow or bypass of the wastewater storage or conveyance structures.
* Expected and actual crop yields (see Attachment F).
* Identification of crop, acreage, and dates of planting and harvest for each field (see Attachment F).
* Dates, locations, and approximate weight and moisture content of manure applied to each field (see Attachment B).
* Dates, locations, and volume of process wastewater applied to each field (see Attachment B).
* Whether precipitation occurred, or standing water was present at the time of manure and process wastewater applications and for 24 hours prior to and following applications (see Attachment G).
* Total amount of nitrogen, phosphorus, and potassium actually applied to each field, including documentation of calculations for the total amount applied (see Attachment B).

18. Groundwater Monitoring Section

X Groundwater monitoring results are attached.

__ Monitoring Well results are attached, if applicable.

A. All dischargers must attach groundwater information for supply wells and subsurface (tile) drainage systems including the location of sample collection and all field and laboratory data, including all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results).

B. Dischargers who have monitoring well systems shall include all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results) and tabular and graphical summaries of the monitoring data. Data shall be tabulated to clearly show the sample dates, constituents analyzed, constituent concentrations, detection limits, depth to groundwater and groundwater elevations. Graphical summaries of groundwater gradients and flow directions shall also be included. Each groundwater monitoring report shall include a summary data table for all historical and current groundwater elevations and analytical results. The groundwater monitoring results shall be certified by a California registered professional.

19. Storm Water Reporting Section

X No significant discharges of storm water occurred from the land application areas.

__ Yes, significant discharge(s) of storm water occurred from land application areas. The following information shall be submitted for those discharges.

__ It was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions.

20. Mortality Management Practices

* Dead cows are picked up and disposed of by rendering service.

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"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."

Same as Owner	DocuSigned by: Ron Vander Poel 1D1966E8692B48B...
Signature of Operator of Facility	Signature of Owner of Facility
Ron Vander Poel	Ron Vander Poel
Print Name	Print Name
6/26/2024	6/26/2024
Title and Date	Title and Date

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John Vander Poel Dairy 2023

Estimated Manure and Nutrients Generated (Attachment A)

Animal Type	Maximum No. of Head	Average No. of Head*	Housing Type	Weight	Total Manure Produced (tons/year)	NITROGEN Net (LB) Available for Land Application	PHOSPHORUS Net (LB) Available for Land Application	POTASSIUM Net (LB) Available for Land Application	SALTS Net (LB) Available for Land Application
Hol Milk Cows	4,805	4,684	Milk Freestall -	1,400	118,874.71	1,692,563.40	290,642.20	393,221.80	3,087,645.96
Hol Dry Cows	442	430	Flushed	1,450	6,274.61	78,475.00	10,986.50	51,793.50	110,743.92
Hol Heifers(15-24)	1,975	1,925	Flushed	1,000	20,094.16	266,997.50	42,157.50	126,472.50	495,772.20
Hol Heifers (7-14)	2,150	2,096	Flushed	750	20,157.81	198,910.40	33,661.76	114,756.00	253,036.98
	9,372	**9,135**			**165,401.29**	**2,236,946.30**	**377,447.96**	**686,243.80**	**3,947,199.06**

* The Average No. of Head is used to calculate manure and nutrient production

Estimated Amount of Total Process Wastewater and Nutrients Generated

Total Gallons of Process Wastewater Generated***	Average TKN Concentration (mg/L)*	Average Total Phosphorus Concentration (mg/L)*	Average Potassium Concentration (mg/L)*	Average Total Dissolved Solids (mg/L)*	Total Nitrogen Generated (lb)**	Total Phosphorus Generated (lb)**	Total Potassium Generated (lb)**	Total Salt Generated (lb)**
232,564,360	319.25	38.68	384.25	3,237.50	618,470.61	74,923.57	744,392.59	6,271,882.8

* The average Total Kjeldahl Nitrogen, Total Phosphorus, Total Potassium, and Total Salt concentrations are based on an average of all process wastewater sample results for the year.
** The total pounds of Nitrogen, Phosphorus, Potassium and Total Dissolved Solids generated = Average Concentration (mg/L) X Total Gallons of Wastewater Generated X 8.33 X 0.000001.
*** The total gallons of process wastewater generated is calculated as the total gallons of process wastewater applied to all land application areas (Attachment B) plus the total gallons of process wastewater transferred offsite (Attachment C).

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 1

Wheat, 70 Acres Planted on 11/07/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			980				
01/05/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			165	0	0	10,260	
01/05/2023	Waste Water: Main Lagoon	3.25	Acre Inches		152.00	23.40	184.00	mg/L		6,177,603	7,822	1,204	9,468	109,609	
02/04/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,583	
02/04/2023	Waste Water: Main Lagoon	2.00	Acre Inches		239.00	54.50	486.00	mg/L		3,801,602	7,568	1,726	15,390	79,801	
02/17/2023	Surface Water: Pixley	3.25	Acre Inches		0.00			mg/L			0	0	0	1,029	
05/01/2023	Harvest	21.70	Tons	53.20	1.72	0.33	1.71	%							24,454
	Acre Inches Applied:	**16.50**						**Totals:**		**9,979,205**	**16,535**	**2,930**	**24,858**	**202,282**	**24,454**
Season Nitrogen Ratio:	0.68							**Lbs Per Acre:**			**236**	**42**	**355**	**2,890**	**349**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 1

Corn, 70 Acres Planted on 06/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/01/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,583	
06/01/2023	Waste Water: Main Lagoon	1.20	Acre Inches		337.00	43.00	372.00	mg/L		2,280,961	6,403	817	7,068	60,041	
06/20/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,900	
06/27/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,900	
07/10/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,583	
07/10/2023	Waste Water: Main Lagoon	1.10	Acre Inches		256.00	42.10	341.00	mg/L		2,090,881	4,459	734	5,940	61,482	
07/25/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,900	
08/18/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			276	0	0	17,100	
08/18/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		1,900,801	4,054	666	5,399	55,893	
09/13/2023	Harvest	28.60	Tons	69.90	1.30	0.27	1.01	%							15,667
	Acre Inches Applied:	**36.30**						**Totals:**		**6,272,643**	**15,191**	**2,217**	**18,406**	**203,383**	**15,667**
Season Nitrogen Ratio:	0.97							**Lbs Per Acre:**			**217**	**32**	**263**	**2,905**	**224**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2

Wheat, 70 Acres Planted on 11/08/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			980				
01/11/2023	Ground Water: Well Avg	4.80	Acre Inches		3.48			mg/L			265	0	0	16,416	
01/11/2023	Waste Water: Main Lagoon	2.50	Acre Inches		152.00	23.40	184.00	mg/L		4,752,002	6,016	926	7,284	84,314	
02/08/2023	Surface Water: Pixley	4.60	Acre Inches		0.00			mg/L			0	0	0	1,457	
02/08/2023	Waste Water: Main Lagoon	1.85	Acre Inches		239.00	54.50	486.00	mg/L		3,516,482	7,001	1,597	14,236	73,816	
05/01/2023	Harvest	21.20	Tons	51.60	1.61	0.32	1.46	%							23,128
	Acre Inches Applied:	**13.75**						**Totals:**		**8,268,484**	**14,262**	**2,523**	**21,519**	**176,004**	**23,128**
Season Nitrogen Ratio:	0.62							**Lbs Per Acre:**			**204**	**36**	**307**	**2,514**	**330**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2

Corn, 70 Acres Planted on 06/10/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/17/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,900	
07/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			276	0	0	17,100	
07/01/2023	Waste Water: Main Lagoon	1.70	Acre Inches		256.00	42.10	341.00	mg/L		3,231,362	6,891	1,133	9,179	95,018	
07/14/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			276	0	0	17,100	
07/14/2023	Waste Water: Main Lagoon	1.70	Acre Inches		256.00	42.10	341.00	mg/L		3,231,362	6,891	1,133	9,179	95,018	
08/11/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			276	0	0	17,100	
08/23/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			303	0	0	18,810	
08/23/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		1,900,801	4,054	666	5,399	55,893	
09/13/2023	Harvest	27.20	Tons	71.70	1.36	0.26	1.16	%							14,656
	Acre Inches Applied:	**30.90**						**Totals:**		**8,363,524**	**18,966**	**2,933**	**23,757**	**317,940**	**14,656**
Season Nitrogen Ratio:	1.29							**Lbs Per Acre:**			**271**	**42**	**339**	**4,542**	**209**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 3

Wheat, 83 Acres Planted on 11/02/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/08/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			273	0	0	17,122	
10/08/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		4,507,614	5,707	879	6,909	79,978	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,162				
01/18/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			261	0	0	16,221	
01/18/2023	Waste Water: Main Lagoon	1.80	Acre Inches		239.00	54.50	486.00	mg/L		4,056,852	8,077	1,842	16,424	85,160	
02/17/2023	Surface Water: Pixley	5.50	Acre Inches		0.00			mg/L			0	0	0	2,065	
05/01/2023	Harvest	18.90	Tons	54.80	1.58	0.32	1.39	%							22,406
	Acre Inches Applied:	**17.30**						**Totals:**		**8,564,466**	**15,480**	**2,721**	**23,333**	**200,545**	**22,406**
Season Nitrogen Ratio:	0.69							**Lbs Per Acre:**			**187**	**33**	**281**	**2,416**	**270**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 3

Corn, 83 Acres Planted on 06/20/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/12/2023	Surface Water: Pixley	6.50	Acre Inches		0.00			mg/L			0	0	0	2,441	
07/05/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			327	0	0	20,276	
07/05/2023	Waste Water: Main Lagoon	1.50	Acre Inches		256.00	42.10	341.00	mg/L		3,380,710	7,209	1,185	9,603	99,409	
07/20/2023	Ground Water: Well Avg	5.20	Acre Inches		3.48			mg/L			339	0	0	21,087	
07/20/2023	Waste Water: Main Lagoon	1.40	Acre Inches		256.00	42.10	341.00	mg/L		3,155,330	6,729	1,106	8,963	92,782	
08/26/2023	Surface Water: Pixley	6.50	Acre Inches		0.00			mg/L			0	0	0	2,441	
09/21/2023	Ground Water: Well Avg	5.10	Acre Inches		3.48			mg/L			333	0	0	20,682	
09/21/2023	Waste Water: Main Lagoon	0.75	Acre Inches		445.00	15.10	338.00	mg/L		1,690,355	6,266	212	4,759	52,662	
09/30/2023	Harvest	27.40	Tons	70.50	1.41	0.29	1.14	%							18,919
	Acre Inches Applied:	**31.95**						**Totals:**		**8,226,395**	**21,203**	**2,504**	**23,325**	**311,780**	**18,919**
Season Nitrogen Ratio:	1.12							**Lbs Per Acre:**			**255**	**30**	**281**	**3,756**	**228**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: 4

Wheat, 53 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/10/2022	Ground Water: Well Avg	4.60	Acre Inches		3.64			mg/L			201	0	0	12,573	
10/10/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		2,878,356	3,644	561	4,412	51,070	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			742				
02/20/2023	Surface Water: Pixley	4.50	Acre Inches		0.00			mg/L			0	0	0	1,079	
02/20/2023	Waste Water: Main Lagoon	1.70	Acre Inches		239.00	54.50	486.00	mg/L		2,446,602	4,871	1,111	9,905	51,358	
05/01/2023	Harvest	21.00	Tons	55.70	1.69	0.29	1.25	%							16,665
	Acre Inches Applied:	**12.80**						**Totals:**		**5,324,958**	**9,458**	**1,672**	**14,316**	**116,081**	**16,665**
Season Nitrogen Ratio:	0.57							**Lbs Per Acre:**			**178**	**32**	**270**	**2,190**	**314**

Field Name: 4

Corn, 53 Acres Planted on 06/02/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/18/2023	Corral Solids: Main Corral	12.00	Tons	50.20	2.34	0.52	1.38	%	636		14,823	3,300	8,742	0	
06/11/2023	Surface Water: Pixley	7.00	Acre Inches		0.00			mg/L			0	0	0	1,679	
06/25/2023	Surface Water: Pixley	7.00	Acre Inches		0.00			mg/L			0	0	0	1,679	
07/04/2023	Ground Water: Well Avg	6.50	Acre Inches		3.48			mg/L			271	0	0	16,832	
07/21/2023	Ground Water: Well Avg	6.50	Acre Inches		3.48			mg/L			271	0	0	16,832	
08/06/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			229	0	0	14,242	
08/23/2023	Ground Water: Well Avg	5.35	Acre Inches		3.48			mg/L			223	0	0	13,854	
09/14/2023	Harvest	27.30	Tons	60.50	1.29	0.27	0.96	%							14,745
	Acre Inches Applied:	**37.85**						**Totals:**	**636**		**15,818**	**3,300**	**8,742**	**65,116**	**14,745**
Season Nitrogen Ratio:	1.07							**Lbs Per Acre:**			**298**	**62**	**165**	**1,229**	**278**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 5

Wheat, 76 Acres Planted on 11/03/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/07/2022	Ground Water: Well Avg	3.20	Acre Inches		3.64			mg/L			200	0	0	12,542	
10/07/2022	Waste Water: Main Lagoon	2.90	Acre Inches		152.00	23.40	184.00	mg/L		5,984,808	7,578	1,167	9,173	106,188	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064				
02/04/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,719	
02/13/2023	Surface Water: Pixley	3.40	Acre Inches		0.00			mg/L			0	0	0	1,169	
02/13/2023	Waste Water: Main Lagoon	1.75	Acre Inches		239.00	54.50	486.00	mg/L		3,611,522	7,190	1,639	14,621	75,812	
04/22/2023	Surface Water: Pixley	4.50	Acre Inches		0.00			mg/L			0	0	0	1,547	
05/01/2023	Harvest	19.90	Tons	63.60	1.74	0.31	1.49	%							19,158
	Acre Inches Applied:	**20.75**						**Totals:**		**9,596,330**	**16,032**	**2,806**	**23,794**	**198,977**	**19,158**
Season Nitrogen Ratio:	0.84							**Lbs Per Acre:**			**211**	**37**	**313**	**2,618**	**252**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: 5

Corn, 76 Acres Planted on 06/19/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/12/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	2,063	
06/26/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	2,063	
07/07/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			329	0	0	20,423	
07/07/2023	Waste Water: Main Lagoon	1.50	Acre Inches		256.00	42.10	341.00	mg/L		3,095,590	6,601	1,085	8,793	91,025	
07/22/2023	Ground Water: Well Avg	5.40	Acre Inches		3.48			mg/L			323	0	0	20,051	
07/22/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		2,063,727	4,401	724	5,862	60,684	
08/13/2023	Ground Water: Well Avg	5.40	Acre Inches		3.48			mg/L			323	0	0	20,051	
08/25/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			299	0	0	18,566	
08/25/2023	Waste Water: Main Lagoon	0.85	Acre Inches		256.00	42.10	341.00	mg/L		1,754,168	3,741	615	4,983	51,581	
09/16/2023	Harvest	26.80	Tons	65.30	1.37	0.25	1.03	%							19,366
	Acre Inches Applied:	**36.65**						**Totals:**		**6,913,485**	**16,018**	**2,424**	**19,638**	**286,506**	**19,366**
Season Nitrogen Ratio:	0.83							**Lbs Per Acre:**			**211**	**32**	**258**	**3,770**	**255**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 6

Wheat, 66 Acres Planted on 11/16/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/11/2022	Ground Water: Well Avg	3.20	Acre Inches		3.64			mg/L			174	0	0	10,892	
10/11/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		3,584,368	4,538	699	5,494	63,597	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			924				
02/04/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,791	
02/19/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,791	
02/19/2023	Waste Water: Main Lagoon	0.75	Acre Inches		239.00	54.50	486.00	mg/L		1,344,138	2,676	610	5,442	28,216	
04/14/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,791	
05/01/2023	Harvest	17.70	Tons	58.00	1.57	0.30	1.68	%							15,406
	Acre Inches Applied:	**23.95**						**Totals:**		**4,928,505**	**8,312**	**1,309**	**10,936**	**108,078**	**15,406**
Season Nitrogen Ratio:	0.54							**Lbs Per Acre:**			**126**	**20**	**166**	**1,638**	**233**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 6

Corn, 66 Acres Planted on 06/23/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/01/2023	Surface Water: Pixley	6.75	Acre Inches		0.00			mg/L			0	0	0	2,016	
07/02/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,791	
07/02/2023	Waste Water: Main Lagoon	1.20	Acre Inches		256.00	42.10	341.00	mg/L		2,150,621	4,586	754	6,109	63,239	
07/18/2023	Ground Water: Well Avg	5.40	Acre Inches		3.48			mg/L			280	0	0	17,413	
07/18/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		1,792,184	3,822	628	5,091	52,699	
08/19/2023	Ground Water: Well Avg	5.00	Acre Inches					mg/L			0	0	0	0	
08/19/2023	Waste Water: Main Lagoon	0.85	Acre Inches		256.00	42.10	341.00	mg/L		1,523,356	3,249	534	4,327	44,794	
08/29/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			286	0	0	17,736	
09/20/2023	Harvest	26.00	Tons	67.10	1.34	0.24	1.19	%							15,130
	Acre Inches Applied:	**31.70**						**Totals:**		**5,466,161**	**12,223**	**1,917**	**15,526**	**199,687**	**15,130**
Season Nitrogen Ratio:	0.81							**Lbs Per Acre:**			**185**	**29**	**235**	**3,026**	**229**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: 9
Wheat, 57 Acres Planted on 11/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/02/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			188	0	0	11,759	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			798				
04/25/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			180	0	0	11,140	
05/01/2023	Harvest	16.00	Tons	50.90	1.59	0.32	1.34	%							14,240
	Acre Inches Applied:	**8.00**						**Totals:**			**1,165**	**0**	**0**	**22,898**	**14,240**
Season Nitrogen Ratio:	0.08							**Lbs Per Acre:**			**20**	**0**	**0**	**402**	**250**

Field Name: 9
Corn, 57 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/19/2023	Corral Solids: Main Corral	10.00	Tons	50.20	2.34	0.52	1.38	%	570		13,284	2,958	7,835	0	
07/01/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			269	0	0	16,710	
08/10/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			269	0	0	16,710	
08/27/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			269	0	0	16,710	
09/11/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			269	0	0	16,710	
09/25/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			269	0	0	16,710	
10/15/2023	Harvest	24.30	Tons	71.20	1.59	0.30	1.50	%							12,685
	Acre Inches Applied:	**30.00**						**Totals:**	**570**		**14,630**	**2,958**	**7,835**	**83,548**	**12,685**
Season Nitrogen Ratio:	1.15							**Lbs Per Acre:**			**257**	**52**	**137**	**1,466**	**223**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-4

Wheat, 54 Acres Planted on 11/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/12/2022	Ground Water: Well Avg	5.00	Acre Inches		3.64			mg/L			222	0	0	13,924	
10/12/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		2,932,664	3,713	572	4,495	52,034	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			756				
01/19/2023	Ground Water: Well Avg	4.20	Acre Inches		3.48			mg/L			179	0	0	11,081	
01/19/2023	Waste Water: Main Lagoon	1.50	Acre Inches		239.00	54.50	486.00	mg/L		2,199,498	4,379	998	8,905	46,171	
02/10/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			170	0	0	10,553	
04/19/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			213	0	0	13,192	
04/19/2023	Waste Water: Main Lagoon	1.10	Acre Inches		239.00	54.50	486.00	mg/L		1,612,965	3,211	732	6,530	33,859	
05/26/2023	Harvest	20.40	Tons	56.10	1.67	0.33	1.90	%							16,152
	Acre Inches Applied:	**22.80**						**Totals:**		**6,745,128**	**12,843**	**2,303**	**19,929**	**180,814**	**16,152**
Season Nitrogen Ratio:	0.80							**Lbs Per Acre:**			**238**	**43**	**369**	**3,348**	**299**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-5

Wheat, 57 Acres Planted on 11/21/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/17/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			188	0	0	11,759	
10/17/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		3,095,590	3,919	604	4,745	54,925	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			798				
01/19/2023	Ground Water: Well Avg	4.80	Acre Inches		3.48			mg/L			215	0	0	13,368	
02/23/2023	Ground Water: Well Avg	4.20	Acre Inches		3.48			mg/L			189	0	0	11,696	
04/24/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			180	0	0	11,140	
04/24/2023	Waste Water: Main Lagoon	1.50	Acre Inches		239.00	54.50	486.00	mg/L		2,321,693	4,622	1,054	9,399	48,736	
05/14/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			135	0	0	8,354	
05/26/2023	Harvest	20.30	Tons	56.40	1.70	0.32	2.02	%							17,153
	Acre Inches Applied:	**23.50**						**Totals:**		**5,417,283**	**10,245**	**1,658**	**14,144**	**159,977**	**17,153**
Season Nitrogen Ratio:	0.60							**Lbs Per Acre:**			**180**	**29**	**248**	**2,807**	**301**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-5

Corn, 57 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
07/10/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,547	
07/10/2023	Waste Water: Main Lagoon	0.90	Acre Inches		256.00	42.10	341.00	mg/L		1,393,016	2,971	488	3,957	40,961	
07/29/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,547	
07/29/2023	Waste Water: Main Lagoon	0.90	Acre Inches		256.00	42.10	341.00	mg/L		1,393,016	2,971	488	3,957	40,961	
08/16/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,547	
09/02/2023	Surface Water: Pixley	5.80	Acre Inches		0.00			mg/L			0	0	0	1,496	
09/02/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		1,547,795	3,301	543	4,396	45,513	
09/20/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,547	
09/20/2023	Waste Water: Main Lagoon	0.50	Acre Inches		445.00	15.10	338.00	mg/L		773,898	2,869	97	2,179	24,110	
10/18/2023	Harvest	29.20	Tons	70.40	1.25	0.29	1.01	%							12,317
	Acre Inches Applied:	**33.10**						**Totals:**		**5,107,724**	**12,111**	**1,617**	**14,489**	**159,230**	**12,317**
Season Nitrogen Ratio:	0.98							**Lbs Per Acre:**			**212**	**28**	**254**	**2,794**	**216**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-6

Wheat, 59 Acres Planted on 11/21/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/01/2022	Ground Water: Well Avg	5.00	Acre Inches		3.64			mg/L			243	0	0	15,214	
10/01/2022	Waste Water: Main Lagoon	1.90	Acre Inches		152.00	23.40	184.00	mg/L		3,043,997	3,854	594	4,666	54,009	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			826				
01/10/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
01/10/2023	Waste Water: Main Lagoon	1.90	Acre Inches		152.00	23.40	184.00	mg/L		3,043,997	3,854	594	4,666	54,009	
02/04/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
04/17/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
05/08/2023	Harvest	22.50	Tons	59.00	1.58	0.30	1.81	%							17,199
	Acre Inches Applied:	**23.80**						**Totals:**		**6,087,994**	**9,475**	**1,187**	**9,331**	**166,471**	**17,199**
Season Nitrogen Ratio:	0.55							**Lbs Per Acre:**			**161**	**20**	**158**	**2,822**	**292**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-6

Corn, 59 Acres Planted on 06/25/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/16/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			186	0	0	11,530	
07/05/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			209	0	0	12,972	
07/05/2023	Waste Water: Main Lagoon	0.70	Acre Inches		256.00	42.10	341.00	mg/L		1,121,473	2,391	394	3,185	32,977	
07/14/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
07/14/2023	Waste Water: Main Lagoon	0.70	Acre Inches		256.00	42.10	341.00	mg/L		1,121,473	2,391	394	3,185	32,977	
07/24/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
07/24/2023	Waste Water: Main Lagoon	0.70	Acre Inches		256.00	42.10	341.00	mg/L		1,121,473	2,391	394	3,185	32,977	
08/12/2023	Ground Water: Well Avg	5.40	Acre Inches		3.48			mg/L			251	0	0	15,566	
09/15/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
09/15/2023	Waste Water: Main Lagoon	0.50	Acre Inches		445.00	15.10	338.00	mg/L		801,052	2,969	101	2,256	24,956	
10/18/2023	Harvest	29.10	Tons	70.80	1.30	0.28	1.11	%							13,035
	Acre Inches Applied:	**31.50**						**Totals:**		**4,165,470**	**11,486**	**1,281**	**11,812**	**207,194**	**13,035**
Season Nitrogen Ratio:	0.88							**Lbs Per Acre:**			**195**	**22**	**200**	**3,512**	**221**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-7

Wheat, 59 Acres Planted on 11/18/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/10/2022	Ground Water: Well Avg	5.00	Acre Inches		3.64			mg/L			243	0	0	15,214	
10/10/2022	Waste Water: Main Lagoon	1.50	Acre Inches		152.00	23.40	184.00	mg/L		2,403,156	3,043	468	3,683	42,639	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			826				
01/11/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
01/11/2023	Waste Water: Main Lagoon	1.90	Acre Inches		152.00	23.40	184.00	mg/L		3,043,997	3,854	594	4,666	54,009	
02/15/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
04/27/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
04/27/2023	Waste Water: Main Lagoon	1.00	Acre Inches		239.00	54.50	486.00	mg/L		1,602,104	3,190	727	6,486	33,631	
05/26/2023	Harvest	21.90	Tons	53.50	1.52	0.28	1.87	%							18,265
	Acre Inches Applied:	**24.40**						**Totals:**		**7,049,256**	**11,853**	**1,789**	**14,835**	**188,732**	**18,265**
Season Nitrogen Ratio:	0.65							**Lbs Per Acre:**			**201**	**30**	**251**	**3,199**	**310**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-7

Corn, 59 Acres Planted on 06/22/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/01/2023	Ground Water: Well Avg	5.20	Acre Inches		3.48			mg/L			241	0	0	14,990	
06/01/2023	Waste Water: Main Lagoon	0.60	Acre Inches		337.00	43.00	372.00	mg/L		961,262	2,699	345	2,979	25,303	
07/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			232	0	0	14,413	
07/01/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		1,281,683	2,733	450	3,641	37,688	
07/23/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			255	0	0	15,854	
07/23/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		1,281,683	2,733	450	3,641	37,688	
08/14/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			255	0	0	15,854	
09/15/2023	Ground Water: Well Avg	5.25	Acre Inches		3.48			mg/L			244	0	0	15,134	
09/15/2023	Waste Water: Main Lagoon	0.50	Acre Inches		445.00	15.10	338.00	mg/L		801,052	2,969	101	2,256	24,956	
10/02/2023	Harvest	28.30	Tons	67.00	1.14	0.18	0.92	%							12,563
	Acre Inches Applied:	**29.15**						**Totals:**		**4,325,680**	**12,362**	**1,345**	**12,516**	**201,881**	**12,563**
Season Nitrogen Ratio:	0.98							**Lbs Per Acre:**			**210**	**23**	**212**	**3,422**	**213**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-8

Wheat, 38 Acres Planted on 11/19/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/05/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			125	0	0	7,839	
10/05/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		2,063,727	2,613	402	3,163	36,616	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
01/10/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			120	0	0	7,426	
01/10/2023	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		2,063,727	2,613	402	3,163	36,616	
02/08/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			150	0	0	9,283	
04/22/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			150	0	0	9,283	
05/01/2023	Harvest	19.20	Tons	46.50	1.69	0.32	1.69	%							13,193
	Acre Inches Applied:	**22.00**						**Totals:**		**4,127,454**	**6,302**	**805**	**6,326**	**107,064**	**13,193**
Season Nitrogen Ratio:	0.48							**Lbs Per Acre:**			**166**	**21**	**166**	**2,817**	**347**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-8

Corn, 38 Acres Planted on 07/05/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
07/14/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			165	0	0	10,211	
07/14/2023	Waste Water: Main Lagoon	1.90	Acre Inches		256.00	42.10	341.00	mg/L		1,960,540	4,181	687	5,569	57,649	
08/15/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			150	0	0	9,283	
09/04/2023	Ground Water: Well Avg	5.80	Acre Inches		3.48			mg/L			174	0	0	10,768	
09/04/2023	Waste Water: Main Lagoon	1.90	Acre Inches		256.00	42.10	341.00	mg/L		1,960,540	4,181	687	5,569	57,649	
10/02/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			165	0	0	10,211	
10/18/2023	Harvest	26.30	Tons	65.90	1.33	0.26	1.10	%							9,065
	Acre Inches Applied:	**25.60**						**Totals:**		**3,921,081**	**9,014**	**1,375**	**11,138**	**155,773**	**9,065**
Season Nitrogen Ratio:	0.99							**Lbs Per Acre:**			**237**	**36**	**293**	**4,099**	**239**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-9

Corn, 36 Acres Planted on 06/25/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			504				
06/03/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			156	0	0	9,674	
06/03/2023	Waste Water: Main Lagoon	0.85	Acre Inches		337.00	43.00	372.00	mg/L		830,922	2,332	298	2,575	21,872	
07/01/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			156	0	0	9,674	
07/14/2023	Ground Water: Well Avg	5.20	Acre Inches		3.48			mg/L			147	0	0	9,146	
07/14/2023	Waste Water: Main Lagoon	0.75	Acre Inches		256.00	42.10	341.00	mg/L		733,166	1,563	257	2,083	21,559	
07/27/2023	Ground Water: Well Avg	5.30	Acre Inches		3.48			mg/L			150	0	0	9,322	
07/27/2023	Waste Water: Main Lagoon	0.75	Acre Inches		256.00	42.10	341.00	mg/L		733,166	1,563	257	2,083	21,559	
08/17/2023	Ground Water: Well Avg	5.20	Acre Inches		3.48			mg/L			147	0	0	9,146	
08/17/2023	Waste Water: Main Lagoon	0.70	Acre Inches		256.00	42.10	341.00	mg/L		684,288	1,459	240	1,944	20,121	
09/25/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			142	0	0	8,794	
10/18/2023	Harvest	29.70	Tons	69.30	1.29	0.26	1.12	%							8,469
	Acre Inches Applied:	**34.75**						**Totals:**		**2,981,542**	**8,321**	**1,052**	**8,684**	**140,868**	**8,469**
Season Nitrogen Ratio:	0.98							**Lbs Per Acre:**			**231**	**29**	**241**	**3,913**	**235**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-10

Wheat, 37 Acres Planted on 11/22/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Corral Solids: Main Corral	7.00	Tons	20.60	2.08	0.70	3.49	%	259		8,555	2,887	14,354	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			518				
01/24/2023	Surface Water: Pixley	7.00	Acre Inches		0.00			mg/L			0	0	0	1,172	
02/04/2023	Surface Water: Pixley	7.00	Acre Inches		0.00			mg/L			0	0	0	1,172	
04/17/2023	Surface Water: Pixley	7.00	Acre Inches		0.00			mg/L			0	0	0	1,172	
05/30/2023	Harvest	17.20	Tons	52.60	1.71	0.30	1.58	%							10,317
	Acre Inches Applied:	**21.00**						**Totals:**	**259**		**9,073**	**2,887**	**14,354**	**3,515**	**10,317**
Season Nitrogen Ratio:	0.88							**Lbs Per Acre:**			**245**	**78**	**388**	**95**	**279**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-11

Wheat, 38 Acres Planted on 11/22/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Corral Solids: Main Corral	7.00	Tons	20.60	2.08	0.70	3.49	%	266		8,786	2,965	14,742	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/07/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			209	0	0	12,996	
04/26/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			209	0	0	12,996	
05/30/2023	Harvest	18.20	Tons	54.30	1.76	0.31	1.84	%							11,125
	Acre Inches Applied:	**14.00**						**Totals:**	**266**		**9,737**	**2,965**	**14,742**	**25,993**	**11,125**
Season Nitrogen Ratio:	0.88							**Lbs Per Acre:**			**256**	**78**	**388**	**684**	**293**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2-12

Wheat, 77 Acres Planted on 11/23/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Corral Solids: Main Corral	7.00	Tons	20.60	2.08	0.70	3.49	%	539		17,803	6,008	29,872	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,078				
02/04/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			424	0	0	26,335	
05/01/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			424	0	0	26,335	
05/30/2023	Harvest	17.10	Tons	63.20	1.73	0.31	2.03	%							16,765
	Acre Inches Applied:	**14.00**						**Totals:**	**539**		**19,730**	**6,008**	**29,872**	**52,670**	**16,765**
Season Nitrogen Ratio:	1.18							**Lbs Per Acre:**			**256**	**78**	**388**	**684**	**218**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR1

Wheat, 39 Acres Planted on 11/17/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
02/18/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			154	0	0	9,527	
02/18/2023	Waste Water: Main Lagoon	1.80	Acre Inches		239.00	54.50	486.00	mg/L		1,906,232	3,795	865	7,717	40,015	
03/05/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			154	0	0	9,527	
03/05/2023	Waste Water: Main Lagoon	1.75	Acre Inches		239.00	54.50	486.00	mg/L		1,853,281	3,690	841	7,503	38,903	
05/01/2023	Harvest	17.40	Tons	66.70	1.62	0.29	1.94	%							7,321
	Acre Inches Applied:	**13.55**						**Totals:**		**3,759,513**	**8,338**	**1,707**	**15,220**	**97,973**	**7,321**
Season Nitrogen Ratio:	1.14							**Lbs Per Acre:**			**214**	**44**	**390**	**2,512**	**188**

Field Name: PR1

Corn, 39 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/28/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			154	0	0	9,527	
05/28/2023	Waste Water: Main Lagoon	1.30	Acre Inches		337.00	43.00	372.00	mg/L		1,376,723	3,865	493	4,266	36,239	
06/18/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			215	0	0	13,338	
07/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			154	0	0	9,527	
07/01/2023	Waste Water: Main Lagoon	1.75	Acre Inches		256.00	42.10	341.00	mg/L		1,853,281	3,952	650	5,264	54,495	
08/01/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			215	0	0	13,338	
08/16/2023	Harvest	27.50	Tons	67.50	1.27	0.27	1.03	%							8,853
	Acre Inches Applied:	**27.05**						**Totals:**		**3,230,004**	**8,554**	**1,143**	**9,530**	**136,466**	**8,853**
Season Nitrogen Ratio:	0.97							**Lbs Per Acre:**			**219**	**29**	**244**	**3,499**	**227**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR2

Wheat, 35 Acres Planted on 11/18/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			490				
02/02/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			138	0	0	8,550	
03/22/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			138	0	0	8,550	
03/22/2023	Waste Water: Main Lagoon	1.00	Acre Inches		239.00	54.50	486.00	mg/L		950,400	1,892	432	3,848	19,950	
04/20/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			165	0	0	10,260	
04/20/2023	Waste Water: Main Lagoon	1.00	Acre Inches		239.00	54.50	486.00	mg/L		950,400	1,892	432	3,848	19,950	
05/26/2023	Harvest	19.70	Tons	64.30	1.58	0.30	1.49	%							7,778
	Acre Inches Applied:	**18.00**						**Totals:**		**1,900,801**	**4,715**	**863**	**7,695**	**67,261**	**7,778**
Season Nitrogen Ratio:	0.61							**Lbs Per Acre:**			**135**	**25**	**220**	**1,922**	**222**

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Nutrient Applications (Attachment B)

Field Name: PR3

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			518				
	Acre Inches Applied:	**0.00**						**Totals:**			**518**				
Season Nitrogen Ratio:								**Lbs Per Acre:**			**14**				

Season Notes: Fallow

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: PR4
Wheat, 38 Acres Planted on 11/27/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/18/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			120	0	0	7,426	
03/25/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			135	0	0	8,355	
03/25/2023	Waste Water: Main Lagoon	1.00	Acre Inches		239.00	54.50	486.00	mg/L		1,031,863	2,054	469	4,177	21,660	
04/14/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			120	0	0	7,426	
05/26/2023	Harvest	15.70	Tons	65.00	1.75	0.33	1.42	%							7,309
	Acre Inches Applied:	**13.50**						**Totals:**		**1,031,863**	**2,960**	**469**	**4,177**	**44,868**	**7,309**
Season Nitrogen Ratio:	0.41							**Lbs Per Acre:**			**78**	**12**	**110**	**1,181**	**192**

Field Name: PR4
Corn, 38 Acres Planted on 07/04/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
07/22/2023	Surface Water: Pixley	6.00	Acre Inches		0.00			mg/L			0	0	0	1,031	
08/07/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			135	0	0	8,355	
08/07/2023	Waste Water: Main Lagoon	1.75	Acre Inches		256.00	42.10	341.00	mg/L		1,805,761	3,851	633	5,129	53,098	
08/12/2023	Ground Water: Well Avg	5.20	Acre Inches		3.48			mg/L			155	0	0	9,654	
08/17/2023	Ground Water: Well Avg	4.80	Acre Inches		3.48			mg/L			144	0	0	8,912	
09/12/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			120	0	0	7,426	
09/12/2023	Waste Water: Main Lagoon	1.00	Acre Inches		445.00	15.10	338.00	mg/L		1,031,863	3,825	130	2,905	32,147	
10/15/2023	Harvest	23.70	Tons	68.90	1.20	0.18	0.83	%							6,722
	Acre Inches Applied:	**27.25**						**Totals:**		**2,837,624**	**8,229**	**763**	**8,034**	**120,623**	**6,722**
Season Nitrogen Ratio:	1.22							**Lbs Per Acre:**			**217**	**20**	**211**	**3,174**	**177**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: PR5
Wheat, 42 Acres Planted on 11/26/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			588				
02/16/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			165	0	0	10,260	
02/16/2023	Waste Water: Main Lagoon	1.50	Acre Inches		239.00	54.50	486.00	mg/L		1,710,721	3,406	777	6,926	35,911	
04/12/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			132	0	0	8,208	
04/12/2023	Waste Water: Main Lagoon	1.90	Acre Inches		239.00	54.50	486.00	mg/L		2,166,913	4,314	984	8,773	45,487	
05/26/2023	Harvest	20.10	Tons	67.70	1.73	0.35	1.98	%							9,434
	Acre Inches Applied:	**12.40**						**Totals:**		**3,877,634**	**8,606**	**1,760**	**15,698**	**99,866**	**9,434**
Season Nitrogen Ratio:	0.91							**Lbs Per Acre:**			**205**	**42**	**374**	**2,378**	**225**

Field Name: PR5
Corn, 42 Acres Planted on 06/19/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/24/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			165	0	0	10,260	
07/09/2023	Ground Water: Well Avg	4.80	Acre Inches		3.48			mg/L			159	0	0	9,850	
07/09/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		1,140,481	2,432	400	3,239	33,536	
08/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			165	0	0	10,260	
08/17/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			149	0	0	9,234	
08/17/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		1,140,481	2,432	400	3,239	33,536	
09/17/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			149	0	0	9,234	
10/10/2023	Harvest	24.20	Tons	68.70	1.10	0.19	0.82	%							6,999
	Acre Inches Applied:	**25.80**						**Totals:**		**2,280,961**	**5,652**	**800**	**6,479**	**115,910**	**6,999**
Season Nitrogen Ratio:	0.81							**Lbs Per Acre:**			**135**	**19**	**154**	**2,760**	**167**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR6

Wheat, 34 Acres Planted on 11/23/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			476				
02/19/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			134	0	0	8,306	
04/08/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			107	0	0	6,645	
04/08/2023	Waste Water: Main Lagoon	1.90	Acre Inches		239.00	54.50	486.00	mg/L		1,754,168	3,492	796	7,102	36,823	
04/24/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			134	0	0	8,306	
04/24/2023	Waste Water: Main Lagoon	1.90	Acre Inches		239.00	54.50	486.00	mg/L		1,754,168	3,492	796	7,102	36,823	
05/26/2023	Harvest	20.70	Tons	63.80	1.66	0.31	1.31	%							8,459
	Acre Inches Applied:	**17.80**						**Totals:**		**3,508,336**	**7,836**	**1,593**	**14,203**	**96,902**	**8,459**
Season Nitrogen Ratio:	0.93							**Lbs Per Acre:**			**230**	**47**	**418**	**2,850**	**249**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: PR6

Corn, 34 Acres Planted on 06/18/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/30/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			107	0	0	6,645	
05/30/2023	Waste Water: Main Lagoon	1.00	Acre Inches		337.00	43.00	372.00	mg/L		923,246	2,592	331	2,861	24,303	
07/01/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			107	0	0	6,645	
07/18/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			120	0	0	7,475	
07/18/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		738,597	1,575	259	2,098	21,719	
07/26/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			120	0	0	7,475	
07/26/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		738,597	1,575	259	2,098	21,719	
08/13/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			134	0	0	8,306	
09/13/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			120	0	0	7,475	
09/13/2023	Waste Water: Main Lagoon	0.50	Acre Inches		445.00	15.10	338.00	mg/L		461,623	1,711	58	1,300	14,382	
09/25/2023	Harvest	26.70	Tons	65.00	1.26	0.21	0.74	%							8,007
	Acre Inches Applied:	**29.60**						**Totals:**		**2,862,063**	**8,162**	**907**	**8,357**	**126,142**	**8,007**
Season Nitrogen Ratio:	1.02							**Lbs Per Acre:**			**240**	**27**	**246**	**3,710**	**235**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR7

Wheat, 38 Acres Planted on 11/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/23/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			150	0	0	9,283	
02/23/2023	Waste Water: Main Lagoon	2.00	Acre Inches		239.00	54.50	486.00	mg/L		2,063,727	4,109	937	8,355	43,321	
04/04/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			120	0	0	7,426	
04/24/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			120	0	0	7,426	
04/24/2023	Waste Water: Main Lagoon	1.80	Acre Inches		239.00	54.50	486.00	mg/L		1,857,354	3,698	843	7,519	38,989	
05/26/2023	Harvest	22.40	Tons	64.80	1.72	0.32	1.38	%							10,307
	Acre Inches Applied:	**16.80**						**Totals:**		**3,921,081**	**8,727**	**1,780**	**15,874**	**106,445**	**10,307**
Season Nitrogen Ratio:	0.85							**Lbs Per Acre:**			**230**	**47**	**418**	**2,801**	**271**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR7

Corn, 38 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/24/2023	Ground Water: Well Avg	5.80	Acre Inches		3.48			mg/L			174	0	0	10,768	
07/06/2023	Ground Water: Well Avg	3.50	Acre Inches		3.48			mg/L			105	0	0	6,498	
07/06/2023	Waste Water: Main Lagoon	1.80	Acre Inches		256.00	42.10	341.00	mg/L		1,857,354	3,961	651	5,276	54,616	
07/26/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			150	0	0	9,283	
08/03/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			179	0	0	11,140	
08/20/2023	Ground Water: Well Avg	3.50	Acre Inches		3.48			mg/L			105	0	0	6,498	
08/20/2023	Waste Water: Main Lagoon	1.50	Acre Inches		256.00	42.10	341.00	mg/L		1,547,795	3,301	543	4,397	45,513	
09/02/2023	Ground Water: Well Avg	3.50	Acre Inches		3.48			mg/L			105	0	0	6,498	
09/02/2023	Waste Water: Main Lagoon	1.50	Acre Inches		256.00	42.10	341.00	mg/L		1,547,795	3,301	543	4,397	45,513	
09/20/2023	Harvest	28.50	Tons	62.30	1.34	0.28	0.85	%							10,942
	Acre Inches Applied:	**32.10**						**Totals:**		**4,952,944**	**11,379**	**1,737**	**14,069**	**196,326**	**10,942**
Season Nitrogen Ratio:	1.04							**Lbs Per Acre:**			**299**	**46**	**370**	**5,166**	**288**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR8

Wheat, 40 Acres Planted on 11/24/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			560				
01/12/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			158	0	0	9,772	
02/05/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			126	0	0	7,817	
02/05/2023	Waste Water: Main Lagoon	2.00	Acre Inches		239.00	54.50	486.00	mg/L		2,172,344	4,325	986	8,794	45,601	
03/13/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			158	0	0	9,772	
05/01/2023	Harvest	17.90	Tons	61.10	1.63	0.30	1.55	%							9,080
	Acre Inches Applied:	**16.00**						**Totals:**		**2,172,344**	**5,326**	**986**	**8,794**	**72,961**	**9,080**
Season Nitrogen Ratio:	0.59							**Lbs Per Acre:**			**133**	**25**	**220**	**1,824**	**227**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR8

Corn, 40 Acres Planted on 05/20/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/12/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			158	0	0	9,772	
06/12/2023	Waste Water: Main Lagoon	0.75	Acre Inches		337.00	43.00	372.00	mg/L		814,629	2,287	292	2,524	21,443	
06/22/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			158	0	0	9,772	
06/22/2023	Waste Water: Main Lagoon	0.75	Acre Inches		337.00	43.00	372.00	mg/L		814,629	2,287	292	2,524	21,443	
07/05/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			189	0	0	11,726	
07/20/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			189	0	0	11,726	
07/20/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		868,938	1,853	305	2,468	25,551	
08/05/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			158	0	0	9,772	
08/16/2023	Harvest	26.40	Tons	68.40	1.20	0.27	1.20	%							8,009
	Acre Inches Applied:	**29.30**						**Totals:**		**2,498,196**	**7,277**	**888**	**7,517**	**121,204**	**8,009**
Season Nitrogen Ratio:	0.91							**Lbs Per Acre:**			**182**	**22**	**188**	**3,030**	**200**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR9

Wheat, 39 Acres Planted on 11/27/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			128	0	0	8,045	
10/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		2,118,035	2,682	413	3,246	37,580	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
02/07/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			154	0	0	9,527	
03/04/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			154	0	0	9,527	
05/08/2023	Harvest	17.30	Tons	65.10	1.58	0.30	1.61	%							7,441
	Acre Inches Applied:	**16.00**						**Totals:**		**2,118,035**	**3,663**	**413**	**3,246**	**64,680**	**7,441**
Season Nitrogen Ratio:	0.49							**Lbs Per Acre:**			**94**	**11**	**83**	**1,658**	**191**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR10

Wheat, 38 Acres Planted on 11/28/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/07/2023	Ground Water: Well Avg	5.50	Acre Inches		3.48			mg/L			165	0	0	10,211	
03/08/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			120	0	0	7,426	
03/08/2023	Waste Water: Main Lagoon	2.00	Acre Inches		239.00	54.50	486.00	mg/L		2,063,727	4,109	937	8,355	43,321	
05/08/2023	Harvest	16.10	Tons	55.60	1.65	0.32	1.48	%							8,964
	Acre Inches Applied:	**11.50**						**Totals:**		**2,063,727**	**4,925**	**937**	**8,355**	**60,958**	**8,964**
Season Nitrogen Ratio:	0.55							**Lbs Per Acre:**			**130**	**25**	**220**	**1,604**	**236**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR11

Wheat, 37 Acres Planted on 11/27/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			518				
03/27/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			146	0	0	9,039	
03/27/2023	Waste Water: Main Lagoon	2.00	Acre Inches		239.00	54.50	486.00	mg/L		2,009,418	4,000	912	8,135	42,181	
04/11/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			146	0	0	9,039	
05/30/2023	Harvest	16.90	Tons	58.70	1.50	0.28	1.60	%							7,747
	Acre Inches Applied:	**12.00**						**Totals:**		**2,009,418**	**4,810**	**912**	**8,135**	**60,258**	**7,747**
Season Nitrogen Ratio:	0.62							**Lbs Per Acre:**			**130**	**25**	**220**	**1,629**	**209**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR12

Wheat, 40 Acres Planted on 11/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			132	0	0	8,252	
10/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		152.00	23.40	184.00	mg/L		2,172,344	2,750	424	3,330	38,544	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			560				
02/08/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			158	0	0	9,772	
04/10/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			158	0	0	9,772	
04/10/2023	Waste Water: Main Lagoon	1.50	Acre Inches		239.00	54.50	486.00	mg/L		1,629,258	3,244	740	6,596	34,201	
05/30/2023	Harvest	20.80	Tons	58.70	1.52	0.29	1.54	%							10,446
	Acre Inches Applied:	**17.50**						**Totals:**		**3,801,602**	**7,001**	**1,163**	**9,926**	**100,539**	**10,446**
Season Nitrogen Ratio:	0.67							**Lbs Per Acre:**			**175**	**29**	**248**	**2,513**	**261**

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Nutrient Applications (Attachment B)

Field Name: PR13

Wheat, 82 Acres Planted on 11/26/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/28/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			270	0	0	16,916	
10/28/2022	Waste Water: Main Lagoon	1.30	Acre Inches		152.00	23.40	184.00	mg/L		2,894,648	3,665	564	4,437	51,359	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,148				
02/04/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			323	0	0	20,032	
03/04/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			290	0	0	18,029	
03/04/2023	Waste Water: Main Lagoon	1.00	Acre Inches		239.00	54.50	486.00	mg/L		2,226,653	4,433	1,011	9,014	46,741	
03/22/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			323	0	0	20,032	
05/30/2023	Harvest	20.00	Tons	60.10	1.59	0.30	1.41	%							20,808
	Acre Inches Applied:	**20.80**						**Totals:**		**5,121,301**	**10,453**	**1,575**	**13,451**	**173,108**	**20,808**
Season Nitrogen Ratio:	0.50							**Lbs Per Acre:**			**127**	**19**	**164**	**2,111**	**254**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR13

Corn, 82 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/04/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			258	0	0	16,025	
06/04/2023	Waste Water: Main Lagoon	0.60	Acre Inches		337.00	43.00	372.00	mg/L		1,335,992	3,751	479	4,140	35,167	
07/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			323	0	0	20,032	
07/01/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		2,226,653	4,749	781	6,325	65,475	
07/18/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			323	0	0	20,032	
07/18/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		1,781,322	3,798	625	5,060	52,380	
08/20/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			387	0	0	24,038	
08/27/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			387	0	0	24,038	
08/27/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		1,781,322	3,798	625	5,060	52,380	
09/04/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			323	0	0	20,032	
09/26/2023	Harvest	27.90	Tons	61.10	1.27	0.28	0.80	%							22,605
	Acre Inches Applied:	**34.20**						**Totals:**		**7,125,288**	**18,097**	**2,509**	**20,585**	**329,599**	**22,605**
Season Nitrogen Ratio:	0.80							**Lbs Per Acre:**			**221**	**31**	**251**	**4,020**	**276**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: PR14
Almonds, 39 Acres Planted on 02/02/2018

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/17/2022	Ground Water: Well Avg	1.50	Acre Inches		3.64			mg/L			48	0	0	3,017	
10/20/2022	Ground Water: Well Avg	1.50	Acre Inches		3.64			mg/L			48	0	0	3,017	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
03/23/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,559	0	0	0	
03/23/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			77	0	0	4,764	
04/20/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			77	0	0	4,764	
04/27/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			77	0	0	4,764	
05/05/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
05/13/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
05/20/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
05/29/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,559	0	0	0	
05/29/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
06/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/09/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/04/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/10/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/14/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/19/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/24/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/29/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
08/05/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,559	0	0	0	
08/05/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	

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08/09/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	265	
08/14/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	265	
08/29/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	265	
09/07/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	353	
09/12/2023	Harvest	2.70 Tons	6.90	2.17	0.30	1.70	%					4,255
	Acre Inches Applied:	**41.00**					**Totals:**	**5,735**	**0**	**0**	**36,084**	**4,255**
Season Nitrogen Ratio:	1.35						**Lbs Per Acre:**	**147**	**0**	**0**	**925**	**109**

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Nutrient Applications (Attachment B)

Field Name: PR15

Almonds, 38 Acres Planted on 02/05/2018

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/12/2022	Ground Water: Well Avg	2.00	Acre Inches		3.64			mg/L			63	0	0	3,920	
10/20/2022	Ground Water: Well Avg	2.00	Acre Inches		3.64			mg/L			63	0	0	3,920	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
03/23/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			75	0	0	4,642	
04/20/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			1,013	0	0	0	
04/20/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			60	0	0	3,713	
04/27/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			60	0	0	3,713	
05/05/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
05/13/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
05/20/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
05/29/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
06/02/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			1,013	0	0	0	
06/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/09/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/04/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/10/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/14/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/19/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/24/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/29/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
08/05/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
08/09/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	

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08/14/2023	Fertilize - UN32	10.00 Gallons		32.00	0.00	0.00	%	1,013	0	0	0	
08/14/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	258	
08/29/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	258	
09/07/2023	Surface Water: Pixley	2.50 Acre Inches		0.00			mg/L	0	0	0	430	
09/12/2023	Harvest	2.85 Tons	7.28	2.44	0.25	1.84	%					4,900
	Acre Inches Applied:	**41.50**					**Totals:**	**4,070**	**0**	**0**	**35,348**	**4,900**
Season Nitrogen Ratio:	0.83						**Lbs Per Acre:**	**107**	**0**	**0**	**930**	**129**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: PR16

Almonds, 39 Acres Planted on 11/10/2017

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/10/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			96	0	0	6,034	
10/12/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			96	0	0	6,034	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
03/24/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,559	0	0	0	
03/24/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			77	0	0	4,764	
04/17/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
04/22/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
04/29/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
05/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
05/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
05/24/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/05/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,559	0	0	0	
06/05/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/17/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/22/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/28/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
08/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	

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08/08/2023	Fertilize - UN32	15.00 Gallons		32.00	0.00	0.00	%	1,559	0	0	0	
08/08/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	265	
09/04/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	353	
09/06/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	353	
09/12/2023	Harvest	2.70 Tons	7.71	2.44	0.32	1.59	%					4,742
	Acre Inches Applied:	**42.50**					**Totals:**	**5,631**	**0**	**0**	**30,615**	**4,742**
Season Nitrogen Ratio:	1.19						**Lbs Per Acre:**	**144**	**0**	**0**	**785**	**122**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: PR17

Almonds, 39 Acres Planted on 11/04/2017

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/10/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			96	0	0	6,034	
10/13/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			96	0	0	6,034	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
03/24/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			92	0	0	5,716	
04/17/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,559	0	0	0	
04/17/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
04/22/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
04/29/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			46	0	0	2,858	
05/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
05/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
05/24/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/05/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/17/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/22/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
06/28/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,559	0	0	0	
06/28/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
07/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	265	
08/01/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	353	

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08/08/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	353	
09/04/2023	Fertilize - UN32	15.00 Gallons		32.00	0.00	0.00	%	1,559	0	0	0	
09/04/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	353	
09/06/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	353	
09/12/2023	Harvest	2.60 Tons	7.48	2.40	0.32	1.78	%					4,503
	Acre Inches Applied:	**44.00**					**Totals:**	**5,646**	**0**	**0**	**31,743**	**4,503**
Season Nitrogen Ratio:	1.25						**Lbs Per Acre:**	**145**	**0**	**0**	**814**	**115**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: PR18

Almonds, 37 Acres Planted on 02/20/2016

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/08/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			91	0	0	5,725	
10/11/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			91	0	0	5,725	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			518				
03/27/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,479	0	0	0	
03/27/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			73	0	0	4,520	
04/18/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			58	0	0	3,616	
04/24/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			58	0	0	3,616	
05/03/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/10/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/18/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/26/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
06/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/14/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/19/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/23/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/01/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,479	0	0	0	
07/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/06/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/17/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/25/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
08/16/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	502	
09/05/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,479	0	0	0	

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09/05/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	335	
09/08/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	335	
09/12/2023	Harvest	2.90 Tons	7.71	2.29	0.28	1.66	%					4,535
	Acre Inches Applied:	**42.00**					**Totals:**	**5,502**	**0**	**0**	**37,982**	**4,535**
Season Nitrogen Ratio:	1.21						**Lbs Per Acre:**	**149**	**0**	**0**	**1,027**	**123**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR19

Almonds, 47 Acres Planted on 03/05/2016

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/08/2022	Ground Water: Well Avg	2.00	Acre Inches		3.64			mg/L			78	0	0	4,848	
10/11/2022	Ground Water: Well Avg	2.00	Acre Inches		3.64			mg/L			78	0	0	4,848	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			658				
03/27/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			111	0	0	6,889	
04/18/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,879	0	0	0	
04/18/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			74	0	0	4,593	
04/24/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			74	0	0	4,593	
05/03/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			55	0	0	3,445	
05/10/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			55	0	0	3,445	
05/18/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			55	0	0	3,445	
05/26/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			55	0	0	3,445	
06/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
06/14/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,879	0	0	0	
06/14/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
06/19/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
06/23/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
06/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
07/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
07/06/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
07/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
07/17/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
07/25/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	319	
08/16/2023	Fertilize - UN32	5.00	Gallons		32.00	0.00	0.00	%			627	0	0	0	
08/16/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	638	

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Nutrient Applications (Attachment B)

09/05/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	425	
09/08/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	425	
09/12/2023	Harvest	3.00 Tons	7.89	2.34	0.30	1.87	%					6,078
	Acre Inches Applied:	**40.50**					**Totals:**	**5,678**	**0**	**0**	**44,548**	**6,078**
Season Nitrogen Ratio:	0.93						**Lbs Per Acre:**	**121**	**0**	**0**	**948**	**129**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR20

Almonds, 38 Acres Planted on 01/30/2019

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/14/2022	Ground Water: Well Avg	2.00	Acre Inches		3.64			mg/L			63	0	0	3,920	
10/15/2022	Ground Water: Well Avg	2.00	Acre Inches		3.64			mg/L			63	0	0	3,920	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
03/28/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			90	0	0	5,570	
04/15/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			1,013	0	0	0	
04/15/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			75	0	0	4,642	
04/21/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			75	0	0	4,642	
05/01/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
05/06/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
05/15/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
05/22/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
05/29/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			1,013	0	0	0	
05/29/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			45	0	0	2,785	
06/04/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/09/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/15/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
06/24/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/13/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/18/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/22/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
07/26/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	258	
08/07/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			1,013	0	0	0	

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Nutrient Applications (Attachment B)

08/07/2023	Surface Water: Pixley	2.50 Acre Inches		0.00			mg/L	0	0	0	430	
08/11/2023	Surface Water: Pixley	2.50 Acre Inches		0.00			mg/L	0	0	0	430	
08/29/2023	Surface Water: Pixley	2.50 Acre Inches		0.00			mg/L	0	0	0	430	
09/07/2023	Surface Water: Pixley	2.50 Acre Inches		0.00			mg/L	0	0	0	430	
09/12/2023	Harvest	2.70 Tons	8.04	2.08	0.28	1.88	%					3,925
	Acre Inches Applied:	**46.00**					**Totals:**	**4,160**	**0**	**0**	**41,175**	**3,925**
Season Nitrogen Ratio:	1.06						**Lbs Per Acre:**	**109**	**0**	**0**	**1,084**	**103**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR21

Almonds, 37 Acres Planted on 02/01/2015

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/09/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			91	0	0	5,725	
10/08/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			91	0	0	5,725	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			518				
03/27/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			87	0	0	5,423	
04/18/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
04/22/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,479	0	0	0	
04/22/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
04/29/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/03/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/08/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/12/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/17/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
05/24/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			44	0	0	2,712	
06/03/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,479	0	0	0	
06/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/07/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
06/28/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/17/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	251	
08/02/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	335	

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Nutrient Applications (Attachment B)

08/08/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	335	
08/29/2023	Fertilize - UN32	15.00 Gallons		32.00	0.00	0.00	%	1,479	0	0	0	
08/29/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	502	
09/07/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	502	
09/12/2023	Harvest	3.20 Tons	8.03	2.24	0.27	2.03	%					4,878
	Acre Inches Applied:	**46.00**					**Totals:**	**5,575**	**0**	**0**	**42,752**	**4,878**
Season Nitrogen Ratio:	1.14						**Lbs Per Acre:**	**151**	**0**	**0**	**1,155**	**132**

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Nutrient Applications (Attachment B)

Field Name: PR22

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			196				
	Acre Inches Applied:	**0.00**						**Totals:**			**196**				
Season Nitrogen Ratio:								**Lbs Per Acre:**			**14**				

Season Notes: Fallow

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: PR23

Almonds, 31 Acres Planted on 02/01/2015

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			434				
03/27/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			73	0	0	4,544	
04/18/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			49	0	0	3,029	
04/22/2023	Fertilize - UN32	20.00	Gallons		32.00	0.00	0.00	%			1,653	0	0	0	
04/22/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			37	0	0	2,272	
04/26/2023	Ground Water: Well Avg	1.00	Acre Inches		3.48			mg/L			24	0	0	1,515	
04/30/2023	Ground Water: Well Avg	1.00	Acre Inches		3.48			mg/L			24	0	0	1,515	
05/04/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			37	0	0	2,272	
05/08/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			37	0	0	2,272	
05/12/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			37	0	0	2,272	
05/16/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			37	0	0	2,272	
05/20/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			37	0	0	2,272	
05/24/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			37	0	0	2,272	
05/29/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
06/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
06/06/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
06/10/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
06/15/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
06/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
06/25/2023	Fertilize - UN32	20.00	Gallons		32.00	0.00	0.00	%			1,653	0	0	0	
06/25/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
06/29/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
07/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
07/07/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	
07/11/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	210	

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07/17/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
07/21/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
07/21/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
07/24/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
08/02/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
08/04/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
08/08/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
08/29/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	210	
09/07/2023	Fertilize - UN32	5.00 Gallons		32.00	0.00	0.00	%	413	0	0	0	
09/07/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	421	
09/12/2023	Harvest	2.80 Tons	**	6.50	1.09	7.06	%					11,284
	Acre Inches Applied:	**49.00**					**Totals:**	**4,579**	**0**	**0**	**30,926**	**11,284**
Season Nitrogen Ratio:	0.41						**Lbs Per Acre:**	**148**	**0**	**0**	**998**	**364**

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Nutrient Applications (Attachment B)

Field Name: PR24

Almonds, 50 Acres Planted on 02/03/2015

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/08/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			124	0	0	7,736	
10/10/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			124	0	0	7,736	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			700				
03/28/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,999	0	0	0	
03/28/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			78	0	0	4,886	
04/17/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			78	0	0	4,886	
04/21/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			78	0	0	4,886	
04/25/2023	Ground Water: Well Avg	2.00	Acre Inches		3.48			mg/L			78	0	0	4,886	
05/01/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			59	0	0	3,664	
05/05/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			59	0	0	3,664	
05/10/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			59	0	0	3,664	
05/15/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			59	0	0	3,664	
05/20/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			59	0	0	3,664	
05/25/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			59	0	0	3,664	
06/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
06/07/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
06/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
06/19/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
06/23/2023	Fertilize - UN32	20.00	Gallons		32.00	0.00	0.00	%			2,666	0	0	0	
06/23/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
06/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
07/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
07/04/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
07/10/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	
07/15/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	340	

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07/19/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	340	
07/22/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	340	
08/03/2023	Fertilize - UN32	10.00 Gallons		32.00	0.00	0.00	%	1,333	0	0	0	
08/03/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	340	
08/07/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	340	
08/09/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	340	
08/29/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	340	
09/07/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	452	
09/12/2023	Harvest	3.10 Tons	7.41	2.63	0.28	1.58	%					7,549
	Acre Inches Applied:	**49.00**					**Totals:**	**7,612**	**0**	**0**	**62,888**	**7,549**
Season Nitrogen Ratio:	1.01						**Lbs Per Acre:**	**152**	**0**	**0**	**1,258**	**151**

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Nutrient Applications (Attachment B)

Field Name: PR25

Pistachios, 48 Acres Planted on 05/10/2020

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos. Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00		%			672				
04/20/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48		mg/L			151	0	0	9,381	
04/27/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48		mg/L			151	0	0	9,381	
05/06/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
05/12/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
05/31/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
07/03/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
07/06/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
07/14/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
07/18/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
07/20/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
07/25/2023	Surface Water: Pixley	4.00	Acre Inches		0.00		mg/L			0	0	0	869	
	Acre Inches Applied:	**44.00**					**Totals:**			**974**	**0**	**0**	**26,580**	
Season Nitrogen Ratio:							**Lbs Per Acre:**			**20**	**0**	**0**	**554**	

Season Notes: Young trees. Did not bear harvest.

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Nutrient Applications (Attachment B)

Field Name: SR-1

Almonds, 36 Acres Planted on 01/30/2019

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			504				
03/23/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	489	
04/15/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			960	0	0	0	
04/15/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	326	
04/22/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	326	
05/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
05/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
05/14/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
05/19/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
05/26/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
06/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
06/07/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,439	0	0	0	
06/07/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
06/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
06/17/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
06/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
06/30/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
07/13/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
07/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
07/26/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
08/04/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			960	0	0	0	
08/04/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	
08/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	244	

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08/10/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	244	
09/07/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	489	
09/12/2023	Harvest	3.00 Tons	10.30	2.30	0.24	1.81	%					4,456
	Acre Inches Applied:	**38.50**					**Totals:**	**3,863**	**0**	**0**	**6,273**	**4,456**
Season Nitrogen Ratio:	0.87						**Lbs Per Acre:**	**107**	**0**	**0**	**174**	**124**

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Nutrient Applications (Attachment B)

Field Name: SR-2

Almonds, 41 Acres Planted on 01/30/2019

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			574				
03/23/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			1,093	0	0	0	
03/23/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	556	
04/15/2023	Surface Water: Pixley	2.50	Acre Inches		0.00			mg/L			0	0	0	464	
04/22/2023	Surface Water: Pixley	2.50	Acre Inches		0.00			mg/L			0	0	0	464	
05/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
05/11/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
05/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
05/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
05/27/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,639	0	0	0	
05/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
06/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
06/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
06/13/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
06/17/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
06/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
06/30/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
07/13/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
07/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
07/26/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,639	0	0	0	
07/26/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	278	
08/04/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	371	
08/08/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	371	

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08/10/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	371	
09/07/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	556	
09/12/2023	Harvest	2.60 Tons	10.10	2.14	0.29	2.14	%					4,102
	Acre Inches Applied:	**41.00**					**Totals:**	**4,945**	**0**	**0**	**7,608**	**4,102**
Season Nitrogen Ratio:	1.21						**Lbs Per Acre:**	**121**	**0**	**0**	**186**	**100**

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Nutrient Applications (Attachment B)

Field Name: SR-3

Almonds, 19 Acres Planted on 01/30/2019

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			266				
03/23/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	258	
04/15/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			507	0	0	0	
04/15/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	172	
04/22/2023	Surface Water: Pixley	2.00	Acre Inches		0.00			mg/L			0	0	0	172	
05/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
05/11/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
05/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
05/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
05/31/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
06/05/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			760	0	0	0	
06/05/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
06/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
06/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
06/22/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
06/27/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
07/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
07/13/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
07/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
07/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
07/26/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
08/04/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
08/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	129	
08/10/2023	Fertilize - UN32	10.00	Gallons		32.00	0.00	0.00	%			507	0	0	0	

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08/10/2023	Surface Water: Pixley	2.00 Acre Inches		0.00			mg/L	0	0	0	172	
09/07/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	258	
09/12/2023	Harvest	2.90 Tons	10.10	1.87	0.31	1.92	%					1,853
	Acre Inches Applied:	**39.00**					**Totals:**	**2,039**	**0**	**0**	**3,354**	**1,853**
Season Nitrogen Ratio:	1.10						**Lbs Per Acre:**	**107**	**0**	**0**	**177**	**98**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-1

Corn, 79 Acres Planted on 04/02/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,106				
02/15/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			186	0	0	11,579	
03/15/2023	Corral Solids: Main Corral	5.00	Tons	50.20	2.34	0.52	1.38	%	395		9,206	2,050	5,429	0	
03/20/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			311	0	0	19,299	
04/17/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			373	0	0	23,159	
06/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			311	0	0	19,299	
06/01/2023	Waste Water: Main Lagoon	0.55	Acre Inches		337.00	43.00	372.00	mg/L		1,179,854	3,312	423	3,656	31,057	
07/03/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			373	0	0	23,159	
07/25/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			311	0	0	19,299	
07/25/2023	Waste Water: Main Lagoon	0.55	Acre Inches		256.00	42.10	341.00	mg/L		1,179,854	2,516	414	3,351	34,694	
08/16/2023	Harvest	29.50	Tons	71.50	1.16	0.25	1.12	%							15,409
	Acre Inches Applied:	**31.10**						**Totals:**	**395**	**2,359,709**	**18,006**	**2,887**	**12,436**	**181,544**	**15,409**
Season Nitrogen Ratio:	1.17							**Lbs Per Acre:**			**228**	**37**	**157**	**2,298**	**195**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-2

Wheat, 78 Acres Planted on 11/10/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Corral Solids: Main Corral	5.00	Tons	20.60	2.08	0.70	3.49	%	390		12,882	4,348	21,615	0	
12/08/2022	Ground Water: Well Avg	3.50	Acre Inches		3.64			mg/L			225	0	0	14,079	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,092				
01/08/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			184	0	0	11,432	
02/06/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			184	0	0	11,432	
02/17/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			246	0	0	15,244	
02/17/2023	Waste Water: Main Lagoon	0.80	Acre Inches		239.00	54.50	486.00	mg/L		1,694,428	3,374	769	6,859	35,569	
03/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			307	0	0	19,055	
05/26/2023	Harvest	22.15	Tons	56.90	1.54	0.28	1.67	%							22,935
	Acre Inches Applied:	**19.30**						**Totals:**	**390**	**1,694,428**	**18,493**	**5,117**	**28,474**	**106,811**	**22,935**
Season Nitrogen Ratio:	0.81							**Lbs Per Acre:**			**237**	**66**	**365**	**1,369**	**294**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-2

Corn, 78 Acres Planted on 06/11/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/28/2023	Corral Solids: Main Corral	5.00	Tons	50.20	2.34	0.52	1.38	%	390		9,089	2,024	5,360	0	
05/31/2023	Ground Water: Well Avg	5.70	Acre Inches		3.48			mg/L			350	0	0	21,722	
06/23/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			307	0	0	19,055	
07/03/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			307	0	0	19,055	
07/03/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		1,694,428	3,613	594	4,813	49,825	
07/21/2023	Ground Water: Well Avg	6.50	Acre Inches		3.48			mg/L			399	0	0	24,771	
08/05/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			368	0	0	22,866	
08/05/2023	Waste Water: Main Lagoon	0.75	Acre Inches		256.00	42.10	341.00	mg/L		1,588,527	3,388	557	4,512	46,710	
08/16/2023	Harvest	27.60	Tons	69.60	1.22	0.24	0.81	%							15,969
	Acre Inches Applied:	**29.75**						**Totals:**	**390**	**3,282,955**	**17,822**	**3,175**	**14,686**	**204,004**	**15,969**
Season Nitrogen Ratio:	1.12							**Lbs Per Acre:**			**228**	**41**	**188**	**2,615**	**205**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-3

Corn, 74 Acres Planted on 05/01/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,036				
02/15/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			349	0	0	21,693	
04/14/2023	Corral Solids: Main Corral	5.00	Tons	50.20	2.34	0.52	1.38	%	370		8,623	1,920	5,085	0	
04/18/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			292	0	0	18,077	
05/17/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			349	0	0	21,693	
06/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			292	0	0	18,077	
06/01/2023	Waste Water: Main Lagoon	1.00	Acre Inches		337.00	43.00	372.00	mg/L		2,009,418	5,641	720	6,226	52,894	
07/03/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			408	0	0	25,309	
07/25/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			292	0	0	18,077	
07/25/2023	Waste Water: Main Lagoon	0.50	Acre Inches		256.00	42.10	341.00	mg/L		1,004,709	2,142	352	2,854	29,543	
08/16/2023	Harvest	29.60	Tons	71.00	1.27	0.26	1.00	%							16,134
	Acre Inches Applied:	**35.50**						**Totals:**	**370**	**3,014,127**	**19,424**	**2,993**	**14,166**	**205,364**	**16,134**
Season Nitrogen Ratio:	1.20							**Lbs Per Acre:**			**262**	**40**	**191**	**2,775**	**218**

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John Vander Poel Dairy 2023
Nutrient Applications (Attachment B)

Field Name: VT-4
Corn, 77 Acres Planted on 05/02/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,078				
02/15/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			363	0	0	22,573	
04/14/2023	Corral Solids: Main Corral	5.00	Tons	50.20	2.34	0.52	1.38	%	385		8,973	1,998	5,291	0	
04/20/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			303	0	0	18,810	
05/17/2023	Ground Water: Well Avg	7.00	Acre Inches		3.48			mg/L			424	0	0	26,335	
06/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			303	0	0	18,810	
06/01/2023	Waste Water: Main Lagoon	0.85	Acre Inches		337.00	43.00	372.00	mg/L		1,777,249	4,989	637	5,507	46,782	
07/03/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			363	0	0	22,573	
07/25/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			303	0	0	18,810	
07/25/2023	Waste Water: Main Lagoon	0.65	Acre Inches		256.00	42.10	341.00	mg/L		1,359,073	2,898	477	3,861	39,964	
08/16/2023	Harvest	29.40	Tons	70.30	1.17	0.29	1.05	%							15,733
	Acre Inches Applied:	**35.50**						**Totals:**	**385**	**3,136,322**	**19,999**	**3,112**	**14,659**	**214,657**	**15,733**
Season Nitrogen Ratio:	1.27							**Lbs Per Acre:**			**260**	**40**	**190**	**2,788**	**204**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-5

Wheat, 80 Acres Planted on 11/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/26/2022	Ground Water: Well Avg	3.50	Acre Inches		3.64			mg/L			230	0	0	14,440	
10/26/2022	Waste Water: Main Lagoon	0.70	Acre Inches		152.00	23.40	184.00	mg/L		1,520,641	1,926	297	2,330	26,981	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,120				
01/03/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			252	0	0	15,634	
02/15/2023	Ground Water: Well Avg	3.50	Acre Inches		3.48			mg/L			221	0	0	13,680	
02/15/2023	Waste Water: Main Lagoon	0.60	Acre Inches		239.00	54.50	486.00	mg/L		1,303,406	2,595	592	5,277	27,361	
03/01/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			252	0	0	15,634	
04/04/2023	Ground Water: Well Avg	3.50	Acre Inches		3.48			mg/L			221	0	0	13,680	
04/04/2023	Waste Water: Main Lagoon	0.50	Acre Inches		239.00	54.50	486.00	mg/L		1,086,172	2,162	493	4,398	22,801	
05/26/2023	Harvest	19.80	Tons	54.40	1.55	0.31	1.63	%							22,391
	Acre Inches Applied:	**20.30**						**Totals:**		**3,910,219**	**8,979**	**1,382**	**12,005**	**150,211**	**22,391**
Season Nitrogen Ratio:	0.40							**Lbs Per Acre:**			**112**	**17**	**150**	**1,878**	**280**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-5

Corn, 80 Acres Planted on 06/11/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/29/2023	Corral Solids: Main Corral	5.50	Tons	50.20	2.34	0.52	1.38	%	440		10,255	2,283	6,048	0	
06/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			315	0	0	19,543	
06/23/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			315	0	0	19,543	
07/03/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			315	0	0	19,543	
07/03/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		2,172,344	4,633	762	6,170	63,878	
07/19/2023	Ground Water: Well Avg	5.70	Acre Inches		3.48			mg/L			359	0	0	22,279	
08/02/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			378	0	0	23,452	
08/02/2023	Waste Water: Main Lagoon	0.50	Acre Inches		256.00	42.10	341.00	mg/L		1,086,172	2,316	381	3,086	31,938	
08/16/2023	Harvest	26.20	Tons	66.60	1.39	0.27	1.02	%							19,462
	Acre Inches Applied:	**28.20**						**Totals:**	**440**	**3,258,516**	**18,886**	**3,426**	**15,304**	**200,177**	**19,462**
Season Nitrogen Ratio:	0.97							**Lbs Per Acre:**			**236**	**43**	**191**	**2,502**	**243**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-6

Wheat, 75 Acres Planted on 11/23/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/27/2022	Ground Water: Well Avg	3.80	Acre Inches		3.64			mg/L			235	0	0	14,698	
10/27/2022	Waste Water: Main Lagoon	0.75	Acre Inches		152.00	23.40	184.00	mg/L		1,527,429	1,934	298	2,341	27,101	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,050				
01/05/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			236	0	0	14,657	
02/20/2023	Ground Water: Well Avg	4.00	Acre Inches		3.48			mg/L			236	0	0	14,657	
03/15/2023	Ground Water: Well Avg	4.50	Acre Inches		3.48			mg/L			266	0	0	16,490	
03/15/2023	Waste Water: Main Lagoon	0.70	Acre Inches		239.00	54.50	486.00	mg/L		1,425,601	2,838	647	5,771	29,926	
04/27/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			177	0	0	10,993	
05/26/2023	Harvest	17.80	Tons	53.50	1.60	0.30	1.78	%							19,864
	Acre Inches Applied:	**20.75**						**Totals:**		**2,953,030**	**6,972**	**945**	**8,112**	**128,522**	**19,864**
Season Nitrogen Ratio:	0.35							**Lbs Per Acre:**			**93**	**13**	**108**	**1,714**	**265**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: VT-6

Corn, 75 Acres Planted on 06/11/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/29/2023	Corral Solids: Main Corral	5.00	Tons	50.20	2.34	0.52	1.38	%	375		8,740	1,946	5,154	0	
06/01/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			296	0	0	18,322	
07/03/2023	Ground Water: Well Avg	5.00	Acre Inches		3.48			mg/L			296	0	0	18,322	
07/03/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		2,036,572	4,343	714	5,785	59,885	
07/21/2023	Ground Water: Well Avg	6.50	Acre Inches		3.48			mg/L			384	0	0	23,818	
08/05/2023	Ground Water: Well Avg	6.00	Acre Inches		3.48			mg/L			354	0	0	21,986	
08/05/2023	Waste Water: Main Lagoon	0.80	Acre Inches		256.00	42.10	341.00	mg/L		1,629,258	3,474	572	4,628	47,908	
08/16/2023	Harvest	26.10	Tons	71.00	1.28	0.30	1.00	%							14,533
	Acre Inches Applied:	**24.30**						**Totals:**	**375**	**3,665,830**	**17,886**	**3,232**	**15,567**	**190,242**	**14,533**
Season Nitrogen Ratio:	1.23							**Lbs Per Acre:**			**238**	**43**	**208**	**2,537**	**194**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: W1

Wheat, 77 Acres Planted on 11/02/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/16/2022	Corral Solids: Main Corral	5.00	Tons	20.60	2.08	0.70	3.49	%	385		12,717	4,292	21,337	0	
12/08/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			253	0	0	15,884	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,078				
02/22/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
02/22/2023	Waste Water: Main Lagoon	0.50	Acre Inches		239.00	54.50	486.00	mg/L		1,045,441	2,081	474	4,233	21,946	
03/08/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
04/06/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
04/06/2023	Waste Water: Main Lagoon	0.50	Acre Inches		239.00	54.50	486.00	mg/L		1,045,441	2,081	474	4,233	21,946	
04/11/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
05/20/2023	Harvest	18.10	Tons	64.00	1.90	0.33	1.44	%							19,066
	Acre Inches Applied:	**21.00**						**Totals:**	**385**	**2,090,881**	**18,210**	**5,241**	**29,803**	**65,351**	**19,066**
Season Nitrogen Ratio:	0.96							**Lbs Per Acre:**			**236**	**68**	**387**	**849**	**248**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: W1

Corn, 77 Acres Planted on 06/22/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/29/2023	Corral Solids: Main Corral	10.00	Tons	50.20	2.34	0.52	1.38	%	770		17,946	3,996	10,584	0	
06/01/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
06/07/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
07/29/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
08/01/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
08/01/2023	Waste Water: Main Lagoon	0.85	Acre Inches		256.00	42.10	341.00	mg/L		1,777,249	3,790	623	5,048	52,260	
09/11/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
09/22/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
10/12/2023	Harvest	29.80	Tons	**	0.42	0.08	0.34	%							19,275
	Acre Inches Applied:	**24.85**						**Totals:**	**770**	**1,777,249**	**21,736**	**4,618**	**15,632**	**60,622**	**19,275**
Season Nitrogen Ratio:	1.13							**Lbs Per Acre:**			**282**	**60**	**203**	**787**	**250**

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Nutrient Applications (Attachment B)

Field Name: W2

Corn, 77 Acres Planted on 04/21/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,078				
04/10/2023	Corral Solids: Main Corral	10.00	Tons	50.20	2.34	0.52	1.38	%	770		17,946	3,996	10,584	0	
05/01/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	1,045	
05/18/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	1,045	
06/02/2023	Surface Water: Pixley	3.50	Acre Inches		0.00			mg/L			0	0	0	1,219	
06/26/2023	Surface Water: Pixley	3.50	Acre Inches		0.00			mg/L			0	0	0	1,219	
07/01/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
07/01/2023	Waste Water: Main Lagoon	1.00	Acre Inches		256.00	42.10	341.00	mg/L		2,090,881	4,459	733	5,939	61,482	
07/20/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,394	
08/01/2023	Surface Water: Pixley	3.50	Acre Inches		0.00			mg/L			0	0	0	1,219	
08/13/2023	Surface Water: Pixley	3.50	Acre Inches		0.00			mg/L			0	0	0	1,219	
08/25/2023	Harvest	28.80	Tons	70.10	1.27	0.28	0.95	%							16,841
	Acre Inches Applied:	**29.00**						**Totals:**	**770**	**2,090,881**	**23,483**	**4,729**	**16,523**	**71,235**	**16,841**
Season Nitrogen Ratio:	1.39							**Lbs Per Acre:**			**305**	**61**	**215**	**925**	**219**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: W3

Corn, 76 Acres Planted on 05/25/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064				
02/15/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	1,031	
04/10/2023	Corral Solids: Main Corral	8.00	Tons	50.20	2.34	0.52	1.38	%	608		14,170	3,155	8,357	0	
04/15/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	1,031	
05/23/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	1,031	
06/08/2023	Surface Water: Pixley	3.50	Acre Inches		0.00			mg/L			0	0	0	1,203	
06/19/2023	Surface Water: Pixley	3.00	Acre Inches		0.00			mg/L			0	0	0	1,031	
06/19/2023	Waste Water: Main Lagoon	0.80	Acre Inches		337.00	43.00	372.00	mg/L		1,650,981	4,634	591	5,116	43,458	
07/04/2023	Surface Water: Pixley	3.80	Acre Inches		0.00			mg/L			0	0	0	1,306	
07/26/2023	Surface Water: Pixley	3.75	Acre Inches		0.00			mg/L			0	0	0	1,289	
08/27/2023	Surface Water: Pixley	4.50	Acre Inches		0.00			mg/L			0	0	0	1,547	
09/13/2023	Harvest	27.10	Tons	71.30	1.23	0.27	1.00	%							14,541
	Acre Inches Applied:	**28.35**						**Totals:**	**608**	**1,650,981**	**19,869**	**3,746**	**13,473**	**52,929**	**14,541**
Season Nitrogen Ratio:	1.37							**Lbs Per Acre:**			**261**	**49**	**177**	**696**	**191**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: W4

Wheat, 75 Acres Planted on 11/06/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/13/2022	Corral Solids: Main Corral	4.50	Tons	20.60	2.08	0.70	3.49	%	338		11,148	3,762	18,705	0	
10/18/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			247	0	0	15,472	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,050				
02/09/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,358	
03/03/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,358	
03/03/2023	Waste Water: Main Lagoon	0.50	Acre Inches		239.00	54.50	486.00	mg/L		1,018,286	2,027	462	4,123	21,376	
04/11/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,358	
04/11/2023	Waste Water: Main Lagoon	0.50	Acre Inches		239.00	54.50	486.00	mg/L		1,018,286	2,027	462	4,123	21,376	
05/01/2023	Harvest	16.80	Tons	59.80	1.98	0.31	1.69	%							20,058
	Acre Inches Applied:	**17.00**						**Totals:**	**338**	**2,036,572**	**16,499**	**4,686**	**26,950**	**62,296**	**20,058**
Season Nitrogen Ratio:	0.82							**Lbs Per Acre:**			**220**	**62**	**359**	**831**	**267**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: W4

Corn, 75 Acres Planted on 06/16/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/18/2023	Corral Solids: Main Corral	10.00	Tons	50.20	2.34	0.52	1.38	%	750		17,480	3,892	10,309	0	
05/25/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,358	
06/25/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,696	
07/13/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,696	
08/01/2023	Surface Water: Pixley	4.50	Acre Inches		0.00			mg/L			0	0	0	1,527	
08/01/2023	Waste Water: Main Lagoon	0.70	Acre Inches		256.00	42.10	341.00	mg/L		1,425,601	3,040	500	4,049	41,920	
08/09/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,696	
08/22/2023	Surface Water: Pixley	5.00	Acre Inches		0.00			mg/L			0	0	0	1,696	
09/02/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	1,358	
09/25/2023	Harvest	28.40	Tons	69.40	1.21	0.26	0.82	%							15,773
	Acre Inches Applied:	**33.20**						**Totals:**	**750**	**1,425,601**	**20,519**	**4,392**	**14,358**	**52,948**	**15,773**
Season Nitrogen Ratio:	1.30							**Lbs Per Acre:**			**274**	**59**	**191**	**706**	**210**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: W5

Almonds, 92 Acres Planted on 02/05/2020

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/08/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			227	0	0	14,234	
10/06/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			227	0	0	14,234	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,288				
03/28/2023	Fertilize - UN32	5.00	Gallons		32.00	0.00	0.00	%			1,226	0	0	0	
03/28/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			217	0	0	13,484	
04/24/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			109	0	0	6,743	
04/28/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			109	0	0	6,743	
05/06/2023	Ground Water: Well Avg	1.00	Acre Inches		3.48			mg/L			73	0	0	4,495	
05/14/2023	Ground Water: Well Avg	1.00	Acre Inches		3.48			mg/L			73	0	0	4,495	
05/18/2023	Ground Water: Well Avg	1.00	Acre Inches		3.48			mg/L			73	0	0	4,495	
05/24/2023	Ground Water: Well Avg	1.00	Acre Inches		3.48			mg/L			73	0	0	4,495	
05/29/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
06/03/2023	Fertilize - UN32	5.00	Gallons		32.00	0.00	0.00	%			1,226	0	0	0	
06/03/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
06/08/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
06/13/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
06/18/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
06/22/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
06/27/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
07/02/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
07/07/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
07/12/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
07/17/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
07/21/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	416	
07/25/2023	Fertilize - UN32	5.00	Gallons		32.00	0.00	0.00	%			1,226	0	0	0	

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07/25/2023	Surface Water: Pixley	1.00 Acre Inches		0.00			mg/L	0	0	0	416	
07/30/2023	Surface Water: Pixley	1.00 Acre Inches		0.00			mg/L	0	0	0	416	
08/05/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	1,248	
08/12/2023	Surface Water: Pixley	3.00 Acre Inches		0.00			mg/L	0	0	0	1,248	
09/12/2023	Harvest	1.80 Tons	10.50	2.69	0.30	2.20	%					7,974
	Acre Inches Applied:	**36.00**					**Totals:**	**6,147**	**0**	**0**	**81,737**	**7,974**
Season Nitrogen Ratio:	0.77						**Lbs Per Acre:**	**67**	**0**	**0**	**888**	**87**

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John Vander Poel Dairy 2023

Nutrient Applications (Attachment B)

Field Name: W6

Wheat, 28 Acres Planted on 11/14/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/13/2022	Corral Solids: Main Corral	4.00	Tons	20.60	2.08	0.70	3.49	%	112		3,699	1,249	6,207	0	
10/19/2022	Ground Water: Well Avg	4.00	Acre Inches		3.64			mg/L			92	0	0	5,776	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			392				
02/10/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	507	
03/05/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	507	
03/05/2023	Waste Water: Main Lagoon	0.55	Acre Inches		239.00	54.50	486.00	mg/L		418,176	832	190	1,693	8,778	
04/15/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	507	
04/15/2023	Waste Water: Main Lagoon	0.50	Acre Inches		239.00	54.50	486.00	mg/L		380,160	757	172	1,539	7,980	
05/26/2023	Harvest	17.00	Tons	54.00	1.58	0.30	1.54	%							6,919
	Acre Inches Applied:	**17.05**						**Totals:**	**112**	**798,336**	**5,773**	**1,611**	**9,439**	**24,055**	**6,919**
Season Nitrogen Ratio:	0.83							**Lbs Per Acre:**			**206**	**58**	**337**	**859**	**247**

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Nutrient Applications (Attachment B)

Field Name: W7

Wheat, 27 Acres Planted on 11/14/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			378				
02/04/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	489	
02/04/2023	Waste Water: Main Lagoon	0.70	Acre Inches		239.00	54.50	486.00	mg/L		513,216	1,022	233	2,078	10,773	
04/28/2023	Surface Water: Pixley	4.00	Acre Inches		0.00			mg/L			0	0	0	489	
05/26/2023	Harvest	14.20	Tons	55.40	1.68	0.30	1.29	%							5,746
	Acre Inches Applied:	**8.70**						**Totals:**		**513,216**	**1,400**	**233**	**2,078**	**11,751**	**5,746**
Season Nitrogen Ratio:	0.24							**Lbs Per Acre:**			**52**	**9**	**77**	**435**	**213**

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Nutrient Applications (Attachment B)

Field Name: WB-1

Almonds, 76 Acres Planted on 02/05/2016

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/19/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			188	0	0	11,759	
10/15/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			188	0	0	11,759	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064				
03/23/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			3,038	0	0	0	
03/23/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			179	0	0	11,139	
04/21/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			150	0	0	9,283	
04/26/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			150	0	0	9,283	
05/02/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			90	0	0	5,570	
05/07/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			90	0	0	5,570	
05/11/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			90	0	0	5,570	
05/16/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			90	0	0	5,570	
05/22/2023	Ground Water: Well Avg	1.50	Acre Inches		3.48			mg/L			90	0	0	5,570	
06/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
06/15/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			3,038	0	0	0	
06/15/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
06/21/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
06/26/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/01/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/07/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/13/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/25/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
08/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
08/07/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			3,038	0	0	0	
08/07/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
08/20/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	

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09/12/2023	Harvest	3.10 Tons	10.20	2.74	0.33	1.80	%						11,594
	Acre Inches Applied:	**38.00**					**Totals:**	**11,482**	**0**	**0**	**86,750**		**11,594**
Season Nitrogen Ratio:	0.99						**Lbs Per Acre:**	**151**	**0**	**0**	**1,141**		**153**

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Nutrient Applications (Attachment B)

Field Name: WB-2

Almonds, 76 Acres Planted on 02/08/2017

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
08/22/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			188	0	0	11,759	
09/19/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			188	0	0	11,759	
10/08/2022	Ground Water: Well Avg	3.00	Acre Inches		3.64			mg/L			188	0	0	11,759	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064				
03/27/2023	Ground Water: Well Avg	3.00	Acre Inches		3.48			mg/L			179	0	0	11,139	
04/22/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			3,038	0	0	0	
04/22/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			150	0	0	9,283	
04/27/2023	Ground Water: Well Avg	2.50	Acre Inches		3.48			mg/L			150	0	0	9,283	
05/04/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	344	
05/09/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	344	
05/15/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	344	
05/20/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	344	
05/24/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	344	
06/05/2023	Surface Water: Pixley	1.00	Acre Inches		0.00			mg/L			0	0	0	344	
06/16/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			3,038	0	0	0	
06/16/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
06/22/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
06/28/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/03/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/08/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/12/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/22/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
07/26/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
08/02/2023	Surface Water: Pixley	1.50	Acre Inches		0.00			mg/L			0	0	0	516	
08/10/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			3,038	0	0	0	

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Nutrient Applications (Attachment B)

08/10/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	516	
08/17/2023	Surface Water: Pixley	1.50 Acre Inches		0.00			mg/L	0	0	0	516	
09/12/2023	Harvest	3.10 Tons	10.40	2.77	0.35	1.62	%					11,695
	Acre Inches Applied:	**39.50**					**Totals:**	**11,221**	**0**	**0**	**72,720**	**11,695**
Season Nitrogen Ratio:	0.96						**Lbs Per Acre:**	**148**	**0**	**0**	**957**	**154**

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Nutrient Applications (Attachment B)

Summary of Nutrient Applications, Removal, and Balance

	Total N (Lbs)	Total P (Lbs)	Total K (Lbs)	Total Salts (Lbs)	Total Manure Applied	
Solid Manure	226,124.12	59,028.44	215,609.73	0.00	8,747.50	tons
Process Wastewater	454,361.48	77,884.64	665,562.07	5,549,994.22	232,564,360.06	gallons
Irrigation Water	53,857.63					
Fertilizer / Total Imports	74,500.48					
Atmospheric Deposition	43,246.00					
Total Nitrogen Applied	**852,089.71**					
Crop Nitrogen Removal	988,449.38					
Nitrogen Balance	**(136,359.67)**					
Nitrogen Ratio	**0.86**					

- **Nutrient applications shown in Attachment B are on a crop year basis.**
- **Lab sample data results for applications are based on the sample taken closest to the application date. Lab sample data results are shown on 100% dry basis for manure applications and harvest events.**
- **Well Avg: Irrigation source representing the average nutrient values of all irrigation wells sampled for the facility during the reporting year.**

**** Book Value: No sample data results were available. For manure applications and plant tissue harvests, the calculations were based off book values.**

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Nutrient Applications (Attachment B)

FIELD NITROGEN RATIO Calculation:

"Field Nitrogen Ratio" = "Total Nitrogen Applied to Field" / "Total Nitrogen Extracted from Field at Harvest"

ATMOSHERIC DEPOSITION Applied (lbs) Calculation:

"Nitrogen Applied (Lbs)" = "14 Lbs (per year) * "Acres Planted"

HARVEST Nitrogen Extraction (Lbs) Calculation:

"Nitrogen Extracted (Lbs)" = ("Yield" (tons per acre) * 2000) * ((100 - "% Moisture") / 100 * "Lab Sample Data Nitrogen Value" / 100) * "Acres Planted"

IRRIGATION Nitrogen and Salts Applied (Lbs) Calculations:

"Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Nitrogen Value" * 0.000001) * "Acres Planted"

"Salts Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data TDS Value" * 0.000001) * "Acres Planted"

PROCESS WASTEWATER Nitrogen, Phosphorus, Potassium and Salts Applied (Lbs) Calculations:

Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Nitrogen Value" * 0.000001) * "Acres Planted"

Phosphorus Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Phosphorus Value" * 0.000001) * "Acres Planted"

Potassium Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Potassium Value" * 0.000001) * "Acres Planted"

Salt Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data TDS Value" * 0.000001) * "Acres Planted"

SOLID MANURE (Corral, Separator, or Compost) Nitrogen, Phosphorus, Potassium and Salts Applied (Lbs) Calculations:

Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Nitrogen Value"/100) * "Acres Planted"

Phosphorus Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Phosphorus Value"/100) * "Acres Planted"

Potassium Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Potassium Value"/100) * "Acres Planted"

Salt Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Ash Value"/100) * "Acres Planted"

"Lbs Applied per Acre" Calculations:

If "Application Units" = Tons, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) * 2000

If "Application Units" = Acres Inches, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) * 8.33 *27,154.3

If "Application Units" = Acre Feet, Then Lbs Applied per Acre" = "Application Amount" (per Acre) * 8.33 * 325,851

If "Application Units" = Gallons, Then "Lbs Applied per Acre" = "Application Amount' (per Acre) * 8.33

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John Vander Poel Dairy 2023

Estimated Manure and Process Wastewater/Nutrients Transferred Off-Site (Attachment C)

A. ESTIMATED TOTAL MANURE TRANSFERRED OFFSITE

Total Manure Exported (tons)*	Total Nitrogen Exported (lbs)**	Total Phosphorus Exported (lbs)**	Total Potassium Exported (lbs)**	Total Salts Exported (lbs)**

* The Total Manure (tons) should be calculated as the sum of all manure transferred offsite as reported in all the Manure/Process Wastewater Tracking Manifests for the reporting period.
** Total (N, P, K, Salts) (lbs) = Sum of (N, P, K, Salts) for each manure export event based on (Manure(tons) x 2000lb/ton) x ((100-moisture%)/100) x (N, P, K, and Ash) Concentration (%, dry weight) / 100 using the samples closest in date to the export event.

B. ESTIMATED TOTAL PROCESS WASTEWATER TRANSFERRED OFFSITE

Total Process Wastewater Exported (gal)*	Total Nitrogen Exported (lbs)**	Total Phosphorus Exported (lbs)**	Total Potassium Exported (lbs)**	Total TDS Exported (lbs)**

* The Total Manure (gals) should be calculated as the sum of all manure transferred offsite as reported in all the Manure/Process Wastewater Tracking Manifests for the reporting period.
** Total (Nitrogen, Phosphorus, Potassium, TDS) (lbs) = Sum of (Nitrogen, Phosphorus, Potassium, TDS) for each wastewater export event based on (Process Wastewater(gals) x 8.33lb/gal) x (N03-N or TKN, P, K, TDS) x 10-6 using the samples closest in date to the export event.

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John Vander Poel Dairy 2023

Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
1	x313 x240 x003 xxxx	70	Process Wastewater
2	x313 x240 x003 xxxx	70	Process Wastewater
3	x313 x240 x003 xxxx	83	Process Wastewater
4	x313 x240 x003 xxxx	53	Both
5	x313 x240 x003 xxxx	76	Process Wastewater
6	x313 x240 x003 xxxx	66	Process Wastewater
9	x295 x220 x011 xxxx	57	Manure
2-4	x313 x250 x017 xxxx	54	Process Wastewater
2-5	x313 x250 x017 xxxx	57	Process Wastewater
2-6	x313 x250 x017 xxxx	59	Process Wastewater
2-7	x313 x250 x017 xxxx	59	Process Wastewater
2-8	x313 x250 x001 xxxx	38	Process Wastewater
2-9	x313 x250 x001 xxxx	36	Process Wastewater
2-10	x313 x250 x001 xxxx	37	Manure
2-11	x313 x250 x001 xxxx	38	Manure
2-12	x313 x250 x002 xxxx	77	Manure
PR1	x313 x260 x005 xxxx	39	Process Wastewater
PR2	x313 x260 x005 xxxx	35	Process Wastewater
PR3	x313 x260 x003 xxxx, x313 x260 x004 xxxx	37	None
PR4	x313 x260 x001 xxxx	38	Process Wastewater
PR5	x313 x260 x001 xxxx, x313 x260 x002 xxxx	42	Process Wastewater
PR6	x313 x260 x002 xxxx	34	Process Wastewater
PR7	x313 x260 x005 xxxx	38	Process Wastewater
PR8	x313 x260 x005 xxxx	40	Process Wastewater
PR9	x313 x260 x006 xxxx	39	Process Wastewater
PR10	x313 x260 x006 xxxx	38	Process Wastewater

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John Vander Poel Dairy 2023

Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
PR11	x313 x260 x006 xxxx	37	Process Wastewater
PR12	x313 x260 x006 xxxx	40	Process Wastewater
PR13	x314 x200 x002 xxxx	82	Process Wastewater
PR14	x314 x200 x022 xxxx	39	None
PR15	x314 x200 x004 xxxx	38	None
PR16	x314 x200 x004 xxxx	39	None
PR17	x314 x200 x022 xxxx	39	None
PR18	x314 x200 x004 xxxx	37	None
PR19	x314 x200 x004 xxxx, x314 x200 x022 xxxx	47	None
PR20	x314 x200 x022 xxxx	38	None
PR21	x314 x200 x005 xxxx	37	None
PR22	x314 x200 x005 xxxx	14	None
PR23	x314 x200 x005 xxxx	31	None
PR24	x314 x200 x005 xxxx	50	None
PR25	x314 x200 x005 xxxx	48	None
SR-1	x313 x250 x023 xxxx	36	None
SR-2	x313 x250 x022 xxxx	41	None
SR-3	x313 x250 x007 xxxx, x313 x250 x008 xxxx	19	None
VT-1	x313 x250 x006 xxxx	79	Both
VT-2	x313 x250 x006 xxxx	78	Both
VT-3	x313 x250 x006 xxxx	74	Both
VT-4	x313 x250 x006 xxxx	77	Both
VT-5	x313 x250 x018 xxxx, x313 x250 x020 xxxx	80	Both
VT-6	x313 x250 x019 xxxx, x313 x250 x021 xxxx	75	Both
W1	x293 x150 x012 xxxx	77	Both
W2	x293 x150 x012 xxxx	77	Both

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Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
W3	x293 x150 x013 xxxx	76	Both
W4	x293 x150 x013 xxxx	75	Both
W5	x313 x200 x010 xxxx	92	None
W6	x313 x200 x010 xxxx	28	Both
W7	x313 x200 x010 xxxx	27	Process Wastewater
WB-1	x313 x200 x004 xxxx	76	None
WB-2	x313 x200 x004 xxxx	76	None
		3,089	

Production Area APN(s): x313 x240 x003 xxxx, x313 x240 x009 xxxx

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Process Wastewater
(mgl/ppm unless noted otherwise)

Sample Date:	TKN	TP	TK	EC (umhos/cm)	NH4N	NO3N	TDS	pH (units)	General Minerals CA	MG	NA	HCO3	CO3	SO4	CL
03/09/2023	239.00	54.50	486.00	3,800	114.00		2,520.00								
06/16/2023	337.00	43.00	372.00	4,760	267.00	0.00	3,160.00	7.68							
07/10/2023	256.00	42.10	341.00	5,310	234.00		3,530.00								
11/01/2023	445.00	15.10	338.00	5,640	440.00		3,740.00								
Averages:	319.25	38.68	384.25	4,878	263.75	0.00	3,237.50	7.68							

Manure - Corral Solids
(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/14/2023	2.34	0.52	1.38	50.20						%
11/01/2023	2.61	0.84	2.06	46.60						%
Averages:	2.48	0.68	1.72	48.40						

Plant Tissue
(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
1	1	Wheat	05/01/2023	34.40	6.54	34.20	53.20	9.40
1	2	Corn	10/31/2023	26.00	5.32	20.20	69.90	4.71

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Plant Tissue
(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
2	1	Wheat	05/01/2023	32.20	6.30	29.20	51.60	10.70
2	2	Corn	10/31/2023	27.20	5.22	23.20	71.70	5.16
3	1	Wheat	05/01/2023	31.60	6.38	27.80	54.80	12.50
3	2	Corn	10/31/2023	28.20	5.78	22.80	70.50	5.29
4	1	Wheat	05/01/2023	33.80	5.84	25.00	55.70	7.76
4	2	Corn	10/31/2023	25.80	5.48	19.18	60.50	4.83
5	1	Wheat	05/01/2023	34.80	6.22	29.80	63.60	8.71
5	2	Corn	10/31/2023	27.40	5.02	20.60	65.30	5.20
6	1	Wheat	05/01/2023	31.40	6.08	33.60	58.00	7.70
6	2	Corn	10/31/2023	26.80	4.72	23.80	67.10	5.53
9	1	Wheat	05/01/2023	31.80	6.36	26.80	50.90	6.89
9	2	Corn	12/01/2023	31.80	5.92	30.00	71.20	6.21
2-4	1	Wheat	05/26/2023	33.40	6.52	38.00	56.10	7.91
2-5	1	Wheat	05/26/2023	34.00	6.34	40.40	56.40	8.52
2-5	2	Corn	10/18/2023	25.00	5.84	20.20	70.40	5.29
2-6	1	Wheat	05/08/2023	31.60	5.96	36.20	59.00	7.82
2-6	2	Corn	10/18/2023	26.00	5.60	22.20	70.80	5.74
2-7	1	Wheat	05/26/2023	30.40	5.58	37.40	53.50	8.89

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Plant Tissue
(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
2-7	2	Corn	12/01/2023	22.80	3.66	18.42	67.00	4.72
2-8	1	Wheat	05/01/2023	33.80	6.46	33.80	46.50	7.20
2-8	2	Corn	10/18/2023	26.60	5.12	22.00	65.90	5.34
2-9	1	Corn	10/18/2023	25.80	5.14	22.40	69.30	5.23
2-10	1	Wheat	05/30/2023	34.20	5.92	31.60	52.60	7.48
2-11	1	Wheat	05/30/2023	35.20	6.12	36.80	54.30	8.94
2-12	1	Wheat	05/30/2023	34.60	6.28	40.60	63.20	8.87
PR1	1	Wheat	05/01/2023	32.40	5.88	38.80	66.70	9.51
PR1	2	Corn	08/16/2023	25.40	5.34	20.60	67.50	5.59
PR2	1	Wheat	05/26/2023	31.60	5.92	29.80	64.30	8.68
PR3	1	FALLOW						
PR4	1	Wheat	05/26/2023	35.00	6.60	28.40	65.00	8.63
PR4	2	Corn	12/01/2023	24.00	3.68	16.64	68.90	4.48
PR5	1	Wheat	05/26/2023	34.60	6.94	39.60	67.70	10.30
PR5	2	Corn	12/01/2023	22.00	3.86	16.40	68.70	4.55
PR6	1	Wheat	05/26/2023	33.20	6.24	26.20	63.80	7.78
PR6	2	Corn	12/01/2023	25.20	4.20	14.82	65.00	4.49
PR7	1	Wheat	05/26/2023	34.40	6.34	27.60	64.80	8.98

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Plant Tissue
(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
PR7	2	Corn	12/01/2023	26.80	5.58	17.08	62.30	5.11
PR8	1	Wheat	05/01/2023	32.60	5.94	31.00	61.10	8.38
PR8	2	Corn	08/16/2023	24.00	5.42	24.00	68.40	5.88
PR9	1	Wheat	05/08/2023	31.60	6.00	32.20	65.10	8.89
PR10	1	Wheat	05/08/2023	33.00	6.50	29.60	55.60	7.46
PR11	1	Wheat	05/30/2023	30.00	5.62	32.00	58.70	8.07
PR12	1	Wheat	05/30/2023	30.40	5.82	30.80	58.70	7.44
PR13	1	Wheat	05/30/2023	31.80	6.06	28.20	60.10	8.58
PR13	2	Corn	12/01/2023	25.40	5.66	15.90	61.10	4.92
PR14	1	Almonds	09/12/2023	43.40	5.98	34.00	6.90	6.69
PR15	1	Almonds	09/12/2023	48.80	5.00	36.80	7.28	7.54
PR16	1	Almonds	09/12/2023	48.80	6.30	31.80	7.71	7.01
PR17	1	Almonds	09/12/2023	48.00	6.32	35.60	7.48	7.03
PR18	1	Almonds	09/12/2023	45.80	5.60	33.20	7.71	6.37
PR19	1	Almonds	09/12/2023	46.80	6.06	37.40	7.89	7.28
PR20	1	Almonds	09/12/2023	41.60	5.58	37.60	8.04	7.28
PR21	1	Almonds	09/12/2023	44.80	5.36	40.60	8.03	7.31
PR22	1	FALLOW						

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Plant Tissue
(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)	
PR23	1	Almonds		130.00	21.80	141.20		0.00	BV-W
PR24	1	Almonds	09/12/2023	52.60	5.54	31.60	7.41	8.93	
PR25	1	Pistachios		119.80	13.60	149.80			BV-H
SR-1	1	Almonds	09/12/2023	46.00	4.76	36.20	10.30	15.40	
SR-2	1	Almonds	09/12/2023	42.80	5.82	42.80	10.10	10.30	
SR-3	1	Almonds	09/12/2023	37.40	6.18	38.40	10.10	9.01	
VT-1	1	Corn	08/16/2023	23.20	4.96	22.40	71.50	6.02	
VT-2	1	Wheat	05/26/2023	30.80	5.70	33.40	56.90	7.51	
VT-2	2	Corn	08/16/2023	24.40	4.86	16.26	69.60	5.21	
VT-3	1	Corn	08/16/2023	25.40	5.10	19.94	71.00	5.65	
VT-4	1	Corn	08/16/2023	23.40	5.72	21.00	70.30	5.65	
VT-5	1	Wheat	05/26/2023	31.00	6.24	32.60	54.40	7.58	
VT-5	2	Corn	08/16/2023	27.80	5.48	20.40	66.60	5.44	
VT-6	1	Wheat	05/26/2023	32.00	6.10	35.60	53.50	8.94	
VT-6	2	Corn	08/16/2023	25.60	6.08	19.92	71.00	5.19	
W1	1	Wheat	05/20/2023	38.00	6.60	28.80	64.00	8.91	
W1	2	Corn		8.40	1.60	6.80			BV-W
W2	1	Corn	10/31/2023	25.40	5.62	19.00	70.10	5.23	

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Plant Tissue
(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
W3	1	Corn	10/31/2023	24.60	5.44	20.00	71.30	5.67
W4	1	Wheat	05/01/2023	39.60	6.22	33.80	59.80	8.48
W4	2	Corn	10/31/2023	24.20	5.18	16.50	69.40	5.00
W5	1	Almonds	09/12/2023	53.80	6.10	44.00	10.50	12.40
W6	1	Wheat	05/26/2023	31.60	5.96	30.80	54.00	7.86
W7	1	Wheat	05/26/2023	33.60	5.90	25.80	55.40	7.86
WB-1	1	Almonds	09/12/2023	54.80	6.52	36.00	10.20	8.20
WB-2	1	Almonds	09/12/2023	55.40	7.06	32.40	10.40	7.65

BV-H: Book Value from CCA Experience / Actual History (As Received basis)
BV-W: Book Value from Western Fertilizer Handbook, 9th Edition, Table 4-1 (As Received basis)

Well / Irrigation Water
(mgl/ppm unless noted otherwise)

							General Minerals						
	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL
Domestic														
IR4							Out of service							
IR5	12/18/2023	0.00		320										
IR6							Out of service							
IR18	08/31/2023	1.30		251		160.00	1.30							

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John Vander Poel Dairy 2023

Lab Results Summary (Attachment E)

Well / Irrigation Water

(mgl/ppm unless noted otherwise)

							General Minerals						
Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL
Domestic													
Averages:	0.65		286		160.00	1.30							

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Well / Irrigation Water
(mgl/ppm unless noted otherwise)

							General Minerals						
	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL
Irrigation														
IR1							Out of service							
IR2							Did not Run							
IR3	10/18/2023	4.70		331		220.00	4.70	16.00	0.00	48.00	70.00	0.00	13.50	28.00
IR7							Did not Run							
IR8							Out of service							
IR9							Out of service							
IR10							Out of service							
IR11							Did not Run							
IR12							Out of service							
IR13							Did not Run							
IR14	12/18/2023	1.70		223		150.00	1.70	3.00	0.00	46.00	50.00	20.00	5.10	11.00
IR15							Out of service							
IR16							Did not Run							
IR17							Out of service							
PR1							Did not Run							
PR2	Out of Service						Out of service							
PR5							Out of service							
PR7							Did not Run							
PR8							Did not Run.							

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John Vander Poel Dairy 2023
Lab Results Summary (Attachment E)

Well / Irrigation Water
(mgl/ppm unless noted otherwise)

								General Minerals						
	Sample Date:	**NO3N**	**TP**	**EC (umhos/cm)**	**NH4N ***	**TDS**	**TN**	**CA**	**MG**	**NA**	**HCO3**	**CO3**	**SO4**	**CL**
Irrigation														
PR11	09/12/2023	2.00		273		190.00	2.00							
PR12	Out of Service						Out of service							
PR15							Did not Run							
PR16	Out of Service						Out of service							
PR18							Did not Run							
PR20	11/21/2023	5.60		443		330.00	5.60							
PR23							Did not Run							
PR24							Did not Run							
PR25	Out of Service						Out of service							
SR-1							Did not Run							
VP2							Out of service							
VT3S	Out of Service													
W1							Out of service							
W2							Did not Run							
W4							Out of service							
W5							Did not Run							
W6	10/06/2023	3.40		295		190.00	3.40							
	Averages:	3.48		313		216.00	3.48	9.50	0.00	47.00	60.00	10.00	9.30	19.50

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John Vander Poel Dairy 2023

Lab Results Summary (Attachment E)

Well / Irrigation Water

(mgl/ppm unless noted otherwise)

								General Minerals						
	Sample Date:	**NO3N**	**TP**	**EC (umhos/cm)**	**NH4N ***	**TDS**	**TN**	**CA**	**MG**	**NA**	**HCO3**	**CO3**	**SO4**	**CL**
Surface Water														
Pixley (General)	06/28/2023	0.00		30		20.00	0.00							
	Averages:	0.00		30		20.00	0.00							

* NH4N was non-detectable unless a value is shown

Soils

Field	**Sample Date:**	**PO4P (ppm)**
2	11/30/2023	74.30
4	12/07/2023	80.30
W4	11/17/2023	26.10

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John Vander Poel Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: 1								
	1	Wheat	70	11/07/2022	05/01/2023	22.0	1519.0	21.7
	2	Corn	70	06/12/2023	09/13/2023	28.0	2002.0	28.6
Field: 2								
	1	Wheat	70	11/08/2022	05/01/2023	22.0	1484.0	21.2
	2	Corn	70	06/10/2023	09/13/2023	28.0	1904.0	27.2
Field: 3								
	1	Wheat	83	11/02/2022	05/01/2023	22.0	1568.7	18.9
	2	Corn	83	06/20/2023	09/30/2023	28.0	2274.2	27.4
Field: 4								
	1	Wheat	53	11/01/2022	05/01/2023	22.0	1113.0	21.0
	2	Corn	53	06/02/2023	09/14/2023	28.0	1446.9	27.3
Field: 5								
	1	Wheat	76	11/03/2022	05/01/2023	22.0	1512.4	19.9
	2	Corn	76	06/19/2023	09/16/2023	28.0	2036.8	26.8
Field: 6								
	1	Wheat	66	11/16/2022	05/01/2023	20.0	1168.2	17.7
	2	Corn	66	06/23/2023	09/20/2023	27.0	1716.0	26.0
Field: 9								
	1	Wheat	57	11/20/2022	05/01/2023	22.0	912.0	16.0
	2	Corn	57	06/15/2023	10/15/2023	28.0	1385.1	24.3
Field: 2-4								
	1	Wheat	54	11/20/2022	05/26/2023	22.0	1101.6	20.4
Field: 2-5								
	1	Wheat	57	11/21/2022	05/26/2023	22.0	1157.1	20.3
	2	Corn	57	06/15/2023	10/18/2023	28.0	1664.4	29.2

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John Vander Poel Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: 2-6								
	1	Wheat	59	11/21/2022	05/08/2023	22.0	1327.5	22.5
	2	Corn	59	06/25/2023	10/18/2023	28.0	1716.9	29.1
Field: 2-7								
	1	Wheat	59	11/18/2022	05/26/2023	22.0	1292.1	21.9
	2	Corn	59	06/22/2023	10/02/2023	28.0	1669.7	28.3
Field: 2-8								
	1	Wheat	38	11/19/2022	05/01/2023	22.0	729.6	19.2
	2	Corn	38	07/05/2023	10/18/2023	28.0	999.4	26.3
Field: 2-9								
	1	Corn	36	06/25/2023	10/18/2023	28.0	1069.2	29.7
Field: 2-10								
	1	Wheat	37	11/22/2022	05/30/2023	22.0	636.4	17.2
Field: 2-11								
	1	Wheat	38	11/22/2022	05/30/2023	22.0	691.6	18.2
Field: 2-12								
	1	Wheat	77	11/23/2022	05/30/2023	20.0	1316.7	17.1
Field: PR1								
	1	Wheat	39	11/17/2022	05/01/2023	20.0	678.6	17.4
	2	Corn	39	06/15/2023	08/16/2023	28.0	1072.5	27.5
Field: PR2								
	1	Wheat	35	11/18/2022	05/26/2023	22.0	689.5	19.7
Field: PR4								
	1	Wheat	38	11/27/2022	05/26/2023	16.0	596.6	15.7
	2	Corn	38	07/04/2023	10/15/2023	28.0	900.6	23.7

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John Vander Poel Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: PR5								
	1	Wheat	42	11/26/2022	05/26/2023	22.0	844.2	20.1
	2	Corn	42	06/19/2023	10/10/2023	28.0	1016.4	24.2
Field: PR6								
	1	Wheat	34	11/23/2022	05/26/2023	22.0	703.8	20.7
	2	Corn	34	06/18/2023	09/25/2023	28.0	907.8	26.7
Field: PR7								
	1	Wheat	38	11/20/2022	05/26/2023	22.0	851.2	22.4
	2	Corn	38	06/15/2023	09/20/2023	28.0	1083.0	28.5
Field: PR8								
	1	Wheat	40	11/24/2022	05/01/2023	20.0	716.0	17.9
	2	Corn	40	05/20/2023	08/16/2023	27.0	1056.0	26.4
Field: PR9								
	1	Wheat	39	11/27/2022	05/08/2023	20.0	674.7	17.3
Field: PR10								
	1	Wheat	38	11/28/2022	05/08/2023	20.0	611.8	16.1
Field: PR11								
	1	Wheat	37	11/27/2022	05/30/2023	22.0	625.3	16.9
Field: PR12								
	1	Wheat	40	11/20/2022	05/30/2023	21.2	832.0	20.8
Field: PR13								
	1	Wheat	82	11/26/2022	05/30/2023	22.0	1640.0	20.0
	2	Corn	82	06/15/2023	09/26/2023	28.0	2287.8	27.9
Field: PR14								
	1	Almonds	39	02/02/2018	09/12/2023	3.0	105.3	2.7

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John Vander Poel Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: PR15								
	1	Almonds	38	02/05/2018	09/12/2023	3.0	108.3	2.8
Field: PR16								
	1	Almonds	39	11/10/2017	09/12/2023	3.0	105.3	2.7
Field: PR17								
	1	Almonds	39	11/04/2017	09/12/2023	3.0	101.4	2.6
Field: PR18								
	1	Almonds	37	02/20/2016	09/12/2023	3.0	107.3	2.9
Field: PR19								
	1	Almonds	47	03/05/2016	09/12/2023	3.0	141.0	3.0
Field: PR20								
	1	Almonds	38	01/30/2019	09/12/2023	3.0	102.6	2.7
Field: PR21								
	1	Almonds	37	02/01/2015	09/12/2023	3.0	118.4	3.2
Field: PR23								
	1	Almonds	31	02/01/2015	09/12/2023	3.0	86.8	2.8
Field: PR24								
	1	Almonds	50	02/03/2015	09/12/2023	3.0	155.0	3.1
Field: SR-1								
	1	Almonds	36	01/30/2019	09/12/2023	3.0	108.0	3.0
Field: SR-2								
	1	Almonds	41	01/30/2019	09/12/2023	3.0	106.6	2.6
Field: SR-3								
	1	Almonds	19	01/30/2019	09/12/2023	3.0	55.1	2.9

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John Vander Poel Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: VT-1								
	1	Corn	79	04/02/2023	08/16/2023	28.0	2330.5	29.5
Field: VT-2								
	1	Wheat	78	11/10/2022	05/26/2023	22.0	1727.7	22.2
	2	Corn	78	06/11/2023	08/16/2023	28.0	2152.8	27.6
Field: VT-3								
	1	Corn	74	05/01/2023	08/16/2023	28.0	2190.4	29.6
Field: VT-4								
	1	Corn	77	05/02/2023	08/16/2023	28.0	2263.8	29.4
Field: VT-5								
	1	Wheat	80	11/20/2022	05/26/2023	22.0	1584.0	19.8
	2	Corn	80	06/11/2023	08/16/2023	28.0	2096.0	26.2
Field: VT-6								
	1	Wheat	75	11/23/2022	05/26/2023	22.0	1335.0	17.8
	2	Corn	75	06/11/2023	08/16/2023	28.0	1957.5	26.1
Field: W1								
	1	Wheat	77	11/02/2022	05/20/2023	22.0	1393.7	18.1
	2	Corn	77	06/22/2023	10/12/2023	28.0	2294.6	29.8
Field: W2								
	1	Corn	77	04/21/2023	08/25/2023	28.0	2217.6	28.8
Field: W3								
	1	Corn	76	05/25/2023	09/13/2023	28.0	2059.6	27.1
Field: W4								
	1	Wheat	75	11/06/2022	05/01/2023	22.0	1260.0	16.8
	2	Corn	75	06/16/2023	09/25/2023	28.0	2130.0	28.4

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John Vander Poel Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: W5								
	1	Almonds	92	02/05/2020	09/12/2023	3.0	165.6	1.8
Field: W6								
	1	Wheat	28	11/14/2022	05/26/2023	18.0	476.0	17.0
Field: W7								
	1	Wheat	27	11/14/2022	05/26/2023	18.0	383.4	14.2
Field: WB-1								
	1	Almonds	76	02/05/2016	09/12/2023	3.0	235.6	3.1
Field: WB-2								
	1	Almonds	76	02/08/2017	09/12/2023	3.0	235.6	3.1

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John Vander Poel Dairy 2023

Weather Data (Attachment G)

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	Light	None	Light	None	None	None	None	None	None	None	None	None
2	Light	None	None	None	None	None	None	None	None	None	None	None
3	None	None	None	None	None	None	None	None	None	None	None	None
4	Light	None	None	None	Light	None	None	None	None	None	None	None
5	Heavy	Light	Light	None	None	None	None	None	None	None	None	None
6	None	None	None	None	None	None	None	None	None	None	None	None
7	None	None	None	None	None	SWP	None	None	None	None	None	None
8	None	None	None	None	None	None	None	None	None	None	None	None
9	SWP	None	Light	None	None	None	None	None	None	None	None	None
10	Light	None	SWP	None	None	None	None	None	None	None	None	None
11	None	None	None	None	None	None	None	None	None	None	None	None
12	None	None	None	None	None	None	None	None	None	None	None	None
13	None	None	None	None	None	None	None	None	None	None	None	None
14	Heavy	None	SWP	None	None	None	None	None	None	None	None	None
15	Light	None	Heavy	None	None	None	None	None	None	None	None	None
16	Heavy	None	None	None	None	None	None	None	None	None	None	None
17	None	None	None	None	None	None	None	None	None	None	None	None
18	None	None	None	None	None	None	None	None	None	None	None	None
19	None	None	Light	None	None	None	None	Light	None	None	None	None
20	None	None	None	None	None	None	None	SWP	None	None	None	None
21	None	None	SWP	None	None	None	None	None	None	None	None	None
22	None	Light	Light	None	None	None	None	None	None	None	None	None
23	None	None	None	None	None	None	None	None	None	Heavy	None	None
24	None	SWP	None	None	None	None	None	None	None	None	None	None
25	None	SWP	None	None	None	None	None	None	None	None	None	None
26	None	None	None	None	None	None	None	None	None	None	None	None
27	None	Light	None	None	None	None	None	None	None	None	None	None
28	None	Heavy	Light	None	None	None	None	None	None	None	None	None
29	Light		Heavy	None	None	None	None	None	None	None	None	None
30	None		Light	None	None	None	None	None	None	None	None	Light
31	None		None		None		None	None		None		None

*Note: SWP = Standing Water Present

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

September 19, 2023

Lab No. : **VI 2345859**
Customer No. : **4018573**
Reference : **41309**

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Laboratory Report

Introduction: This report package contains a total of 3 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(1 page)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
IR 18	08/31/2023	08/31/2023	VI 2345859-001	AGW

Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary	
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2510 B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Discussion of Analytical Results:

VI 2345859-1 The nitrite-N result used to calculate nitrate-N was performed past holding time.

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: EHB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-09-21

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

September 19, 2023

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Description : IR 18
Project : 0500 John Vander Poel Dairy

Lab No. : VI 2345859-001
Customer No. : 4018573
Reference : 41309
Sampled On : August 31, 2023 at 11:20
Sampled By : Frank
Received On : August 31, 2023 at 16:08
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	17:45	lcr
Nitrate Nitrogen	1.3	0.4	mg/L		1		09/13/2023	12:15	lfs	SM 4500-NO3 F	09/13/2023	12:59	lfs
Nitrogen, Total as Nitrogen	1.3	0.5	mg/L		1	l	09/12/2023	09:41	sta	Calc.	09/13/2023	17:45	lcr
Nitrate + Nitrite as N	1.3	0.4	mg/L		1		09/13/2023	12:15	lfs	SM 4500-NO3 F	09/13/2023	12:59	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	17:45	lcr
Conductivity	251	1	umhos/cm		1		09/15/2023	13:21	krh	SM 2510 B	09/15/2023	13:45	krh
Solids, Total Dissolved (TDS)	160	20	mg/L		1		09/05/2023	12:45	ctl	SM 2540 C	09/06/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

September 19, 2023
Innovative Ag Services, LLC

Lab No. : VI 2345859
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2510B	09/15/2023:210398KRH	Blank	umhos/cm		ND	<1	
		(VI 2345861-001)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	09/05/2023:209936CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	97.1%	90-110	
		(CH 2377291-007)	Dup	mg/L		0.6%	5	
		(CH 2377291-007)	Dup	mg/L		0.2%	5	
Nitrogen, Total Kjeldahl	351.2	09/12/2023:210201STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	93.2%	73-124	
			MS	mg/L	12.00	88.4%	90-110	435
		(CH 2377291-007)	MSD	mg/L	12.00	88.0%	90-110	435
			MSRPD	mg/L		0.4%	≤20	
			MS	mg/L	12.00	91.8%	90-110	
		(CH 2377291-009)	MSD	mg/L	12.00	85.4%	90-110	435
			MSRPD	mg/L		6.3%	≤20	
Nitrate + Nitrite as N	4500NO3F	09/13/2023:210275LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.3%	80-120	
			MS	mg/L	5.609	94.1%	66-125	
		(SP 2315466-001)	MSD	mg/L	5.609	96.5%	66-125	
			MSRPD	mg/L		2.1%	≤30.4	
Nitrate Nitrogen	4500NO3F	09/13/2023:210275LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.3%	80-120	
			MS	mg/L	5.609	94.1%	66-125	
		(SP 2315466-001)	MSD	mg/L	5.609	96.5%	66-125	
			MSRPD	mg/L		2.1%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.
Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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Laboratory Analysis Work Order

Nº 41309

2345859

ID: # 0500

LABORATORY: FGL

SITE NAME: John Vander Poel Dairy

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, Cl (Biennially)
L4 Other: _____

Manure

M1 TN, TP, TK, %M (2/year)
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)
M3 Other: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, K (Mid Season - Wheat)
P2 TN, P, K (Mid-season - Corn)
P3 TN, TP, TK, Ash, %M (At Harvest)
P4 TN, %M
P5 % Moisture
P6 NIR
P7 Other: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N*	pH	Temp
1	IR 18	Irr	W2	8/31 11:24	Frank	—		
2								
3								
4								
5								
6								
7								
8								

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of sampes, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[signature]	IAS		8/31/23 3:00
2nd	AJB	FGL	8/31/23 1540	
3rd	AJB	FGL		8/31/23 1608
4th	SRO	FGL	8.31.23 1608	
	SRO	~~FGL~~	~~8.31.23 1730~~	
		GLS	8.31.23 1730	

LABORATORY USE ONLY

Logged In By: _____ Total Samples: _____ Laboratory #: _____

GLS 9/1/23

Rot 7.8°C ID#TH409 CDIT 1235

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

October 3, 2023

Lab No. : **VI 2346185**
Customer No. : **4018573**
Reference : **41329**

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Laboratory Report

Introduction: This report package contains a total of 3 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(1 page)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
PR 11	09/12/2023	09/12/2023	VI 2346185-001	AGW

Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary	
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: EHB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-10-03

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

October 3, 2023

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Description : PR 11
Project : 0500 John Vander Poel Dairy

Lab No. : VI 2346185-001
Customer No. : 4018573
Reference : 41329
Sampled On : September 12, 2023 at 11:21
Sampled By : Frank
Received On : September 12, 2023 at 16:19
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	09/26/2023	09:55	sta	EPA 351.2	09/29/2023	17:43	lcr
Nitrate Nitrogen	2.0	0.4	mg/L		1		09/13/2023	12:15	lfs	SM 4500-NO3 F	09/13/2023	13:39	lfs
Nitrogen, Total as Nitrogen	2.0	0.5	mg/L		1	l	09/26/2023	09:55	sta	Calc.	09/29/2023	17:43	lcr
Nitrate + Nitrite as N	2.0	0.4	mg/L		1		09/13/2023	12:15	lfs	SM 4500-NO3 F	09/13/2023	13:39	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	09/26/2023	09:55	sta	EPA 351.2	09/29/2023	17:43	lcr
Conductivity	273	1	umhos/cm		1		09/15/2023	09:09	krh	SM 4500-H+B	09/15/2023	10:15	krh
Solids, Total Dissolved (TDS)	190	20	mg/L		1		09/14/2023	10:30	ctl	SM 2540 C	09/15/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

October 3, 2023
Innovative Ag Services, LLC

Lab No. : VI 2346185
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2346608-002)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	09/14/2023:210327CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	101%	90-110	
		(STK2352324-006)	Dup	mg/L		1.83%	5	
		(STK2352324-006)	Dup	mg/L		2.52%	5	
Nitrogen, Total Kjeldahl	351.2	09/26/2023:210792STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	92.1%	73-124	
			MS	mg/L	12.00	91.7%	90-110	
		(STK2352326-001)	MSD	mg/L	12.00	94.2%	90-110	
			MSRPD	mg/L		2.5%	≤20	
			MS	mg/L	12.00	89.4%	90-110	435
		(STK2352326-002)	MSD	mg/L	12.00	90.7%	90-110	
			MSRPD	mg/L		1.4%	≤20	
Nitrate + Nitrite as N	4500NO3F	09/13/2023:210275LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.3%	80-120	
			MS	mg/L	5.609	94.1%	66-125	
		(SP 2315466-001)	MSD	mg/L	5.609	96.5%	66-125	
			MSRPD	mg/L		2.1%	≤30.4	
Nitrate Nitrogen	4500NO3F	09/13/2023:210275LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.3%	80-120	
			MS	mg/L	5.609	94.1%	66-125	
		(SP 2315466-001)	MSD	mg/L	5.609	96.5%	66-125	
			MSRPD	mg/L		2.1%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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Laboratory Analysis Work Order

Nº 41329

ID: # 0500 2346185

LABORATORY: FGL

SITE NAME: John Vander Poel Dairy

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Pel 34 IP# 1/1407

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, Cl (Biennially)
L4 Other: _____

Manure

M1 TN, TP, TK, %M (2/year)
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)
M3 Other: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, K (Mid Season - Wheat)
P2 TN, P, K (Mid-season - Corn)
P3 TN, TP, TK, Ash, %M (At Harvest)
P4 TN, %M
P5 % Moisture
P6 NIR
P7 Other: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	PR 11	Irr	W2	9/12 11:21	Frank			
2								
3								
4								
5								
6								
7								
8								

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of sampes, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[signature]	IAS		9/12/23 3:00
2nd	AJB	FGL	9/12/23 1600	
3rd	AJB	FGL		9/12/23 1619
4th	[signature]		9/12/23 1619	

LABORATORY USE ONLY

Logged In By: [signature] Total Samples: 9/12/23 Laboratory #: 9/13/23

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

October 25, 2023

Lab No. : **VI 2346787**
Customer No. : **4018573**
Reference : **41454**

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Laboratory Report

Introduction: This report package contains a total of 3 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(1 page)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
W6	10/06/2023	10/06/2023	VI 2346787-001	AGW

Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary	
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-10-25

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

October 25, 2023

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Description : W6
Project : 0500 John Vander Poel Dairy

Lab No. : VI 2346787-001
Customer No. : 4018573
Reference : 41454
Sampled On : October 6, 2023 at 09:30
Sampled By : Zeke
Received On : October 6, 2023 at 16:10
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	10/18/2023	13:45	sta	EPA 351.2	10/24/2023	19:36	lcr
Nitrate Nitrogen	3.4	0.4	mg/L		1		10/10/2023	11:00	lfs	SM 4500-NO3 F	10/10/2023	12:56	lfs
Nitrogen, Total as Nitrogen	3.4	0.5	mg/L		1	l	10/18/2023	13:45	sta	Calc.	10/24/2023	19:36	lcr
Nitrate + Nitrite as N	3.4	0.4	mg/L		1		10/10/2023	11:00	lfs	SM 4500-NO3 F	10/10/2023	12:56	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	10/18/2023	13:45	sta	EPA 351.2	10/24/2023	19:36	lcr
Conductivity	295	1	umhos/cm		1		10/19/2023	09:41	krh	SM 4500-H+B	10/19/2023	14:33	krh
Solids, Total Dissolved (TDS)	190	20	mg/L		1		10/11/2023	09:45	ctl	SM 2540 C	10/12/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

October 25, 2023
Innovative Ag Services, LLC

Lab No. : VI 2346787
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2346815-001)	Dup	umhos/cm		0.1%	5	
Solids, Total Dissolved	2540CE	10/11/2023:211446CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	100%	90-110	
		(VI 2346779-001)	Dup	mg/L		0.5%	5	
		(VI 2346779-001)	Dup	mg/L		0.2%	5	
Nitrogen, Total Kjeldahl	351.2	10/18/2023:211794STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	90.6%	73-124	
			MS	mg/L	12.00	89.4%	90-110	435
		(SP 2316875-004)	MSD	mg/L	12.00	86.9%	90-110	435
			MSRPD	mg/L		2.4%	≤20	
			MS	mg/L	12.00	79.1%	90-110	435
		(STK2353712-001)	MSD	mg/L	12.00	85.0%	90-110	435
			MSRPD	mg/L		4.3%	≤20	
Nitrate + Nitrite as N	4500NO3F	10/10/2023:211413LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	95.3%	80-120	
			MS	mg/L	5.609	83.6%	66-125	
		(STK2353989-001)	MSD	mg/L	5.609	84.3%	66-125	
			MSRPD	mg/L		0.3%	≤30.4	
Nitrate Nitrogen	4500NO3F	10/10/2023:211413LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	95.3%	80-120	
			MS	mg/L	5.609	83.6%	66-125	
		(STK2353989-001)	MSD	mg/L	5.609	84.3%	66-125	
			MSRPD	mg/L		0.3%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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Laboratory Analysis Work Order

N° 41454

8.3°C ROI 2346787

ID: # 0500 ID #TH467

LABORATORY: FGL

SITE NAME: JOHN VANDER POEL

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, K (Mid Season - Wheat)
P2 TN, P, K (Mid-season - Corn)
P3 TN, TP, TK, Ash, %M (At Harvest)
P4 TN, %M
P5 % Moisture
P6 NIR
P7 Other: _____

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, Cl (Biennially)
L4 Other: _____

Manure

M1 TN, TP, TK, %M (2/year)
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)
M3 Other: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	W6	IRR	W2	10/6 | 9:30	Zeke			
2								
3								
4								
5								
6								
7								
8								

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of sampes, please note below.

NOTES: 10/7/23

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		10-6-23 / 2:35
2nd		FGL	10-6-23 16:00	
3rd		FGL		10-6-23 16:10
4th		FGL	10-6-2023 1610	

LABORATORY USE ONLY

Logged In By: 10-6-2023 1730 Total Samples: _____ Laboratory #: _____

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

November 16, 2023

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Lab No. : **VI 2347068**
Customer No. : **4018573**
Reference : **41615**

Laboratory Report

Introduction: This report package contains a total of 5 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(1 page)	: Results for each sample submitted.
Quality Control	(3 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
IR3	10/18/2023	10/18/2023	VI 2347068-001	AGW

Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary	
EPA 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-11-16

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

November 16, 2023

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Description : IR3
Project : 0500 John Vander Poel Dairy

Lab No. : VI 2347068-001
Customer No. : 4018573
Reference : 41615
Sampled On : October 18, 2023 at 11:20
Sampled By : Cris
Received On : October 18, 2023 at 16:15
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	60	10	mg/L		1		10/23/2023	18:31	amm	SM 4500-H+B	10/23/2023	23:47	amm
Bicarbonate	70	10	mg/L		1		10/23/2023	18:31	amm	SM 4500-H+B	10/23/2023	23:47	amm
Carbonate	ND	10	mg/L		1	U	10/23/2023	18:31	amm	SM 4500-H+B	10/23/2023	23:47	amm
Hydroxide	ND	10	mg/L		1	U	10/23/2023	18:31	amm	SM 4500-H+B	10/23/2023	23:47	amm
Chloride	28	1	mg/L		1		11/13/2023	12:25	ldm	EPA 300.0	11/13/2023	17:03	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	11/01/2023	13:01	sta	EPA 351.2	11/03/2023	18:04	lcr
Nitrate Nitrogen	4.7	0.4	mg/L		1		11/15/2023	12:30	lfs	SM 4500-NO3 F	11/15/2023	14:07	lfs
Nitrogen, Total as Nitrogen	4.7	0.5	mg/L		1	l	11/01/2023	13:01	sta	Calc.	11/03/2023	18:04	lcr
Nitrate + Nitrite as N	4.7	0.4	mg/L		1		11/15/2023	12:30	lfs	SM 4500-NO3 F	11/15/2023	14:07	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	11/01/2023	13:01	sta	EPA 351.2	11/03/2023	18:04	lcr
Conductivity	331	1	umhos/cm		1		10/23/2023	18:31	amm	SM 4500-H+B	10/23/2023	23:47	amm
Sulfate Sulfur	13.5	0.17	mg/L		1		11/13/2023	12:25	ldm	EPA 300.0	11/13/2023	17:03	ldm
Solids, Total Dissolved (TDS)	220	20	mg/L		1		10/20/2023	11:30	ctl	SM 2540 C	10/23/2023	10:50	ctl
Calcium	16	1	mg/L		1	h	10/20/2023	07:06	ejc	EPA 200.7	10/23/2023	14:41	ac
Magnesium	ND	1	mg/L		1	Uh	10/20/2023	07:06	ejc	EPA 200.7	10/23/2023	14:41	ac
Sodium	48	1	mg/L		1		10/20/2023	07:06	ejc	EPA 200.7	10/23/2023	14:41	ac

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.
h The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

November 16, 2023
Innovative Ag Services, LLC

Lab No. : VI 2347068
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	10/20/2023:211861EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	111%	85-115	
			MS	mg/L	12.00	128%	75-125	435
		(SP 2317592-001)	MSD	mg/L	12.00	142%	75-125	435
			MSRPD	mg/L		3.3%	≤20.0	
			MS	mg/L	12.00	-227%	<¼	
		(SP 2317580-001)	MSD	mg/L	12.00	68.1%	<¼	
			MSRPD	mg/L		15.5%	≤20.0	
Magnesium	200.7	10/20/2023:211861EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	111%	85-115	
			MS	mg/L	12.00	118%	75-125	
		(SP 2317592-001)	MSD	mg/L	12.00	129%	75-125	435
			MSRPD	mg/L		3.9%	≤20	
			MS	mg/L	12.00	6.09%	<¼	
		(SP 2317580-001)	MSD	mg/L	12.00	86.6%	75-125	
			MSRPD	mg/L		14.7%	≤20	
Sodium	200.7	10/20/2023:211861EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	107%	85-115	
			MS	mg/L	12.00	203%	<¼	
		(SP 2317592-001)	MSD	mg/L	12.00	226%	<¼	
			MSRPD	mg/L		2.0%	≤20.0	

Definition

<¼ : High Sample Background - Spike concentration was less than one forth of the sample concentration.
Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.
LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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November 16, 2023
Innovative Ag Services, LLC

Lab No. : VI 2347068
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	10/23/2023:211974AMM	ND	mg/L		0.01%	10	435
Bicarbonate	2320B	(VI 2346975-001)	Dup	mg/L		0%	10	
E. C.	2320B	(VI 2346975-001)	Dup	umhos/cm		0%	5	
Solids, Total Dissolved	2540CE	10/20/2023:211876CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	103%	90-110	
		(CH 2379072-003)	Dup	mg/L		3.77%	5	
		(CH 2379072-003)	Dup	mg/L		0.8%	5	
Chloride	300.0	11/13/2023:212927LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	98.5%	90-110	
			MS	mg/L	50.00	98.5%	67-117	
		(CH 2379449-003)	MSD	mg/L	50.00	98.6%	67-117	
			MSRPD	mg/L		0.1%	≤7	
			MS	mg/L	50.00	101%	67-117	
		(CH 2379449-009)	MSD	mg/L	50.00	102%	67-117	
			MSRPD	mg/L		0.2%	≤7	
Sulfate Sulfur	300.0	11/13/2023:212927LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	99.8%	90-110	
			MS	mg/L	100.0	98.7%	18-165	
		(CH 2379449-003)	MSD	mg/L	100.0	99.2%	18-165	
			MSRPD	mg/L		0.4%	≤7	
			MS	mg/L	100.0	103%	18-165	
		(CH 2379449-009)	MSD	mg/L	100.0	103%	18-165	
			MSRPD	mg/L		0.4%	≤7	
Nitrogen, Total Kjeldahl	351.2	11/01/2023:212413STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	92.7%	73-124	
			MS	mg/L	12.00	89.4%	90-110	435
		(VI 2347084-006)	MSD	mg/L	12.00	90.9%	90-110	
			MSRPD	mg/L		1.6%	≤20	
			MS	mg/L	12.00	81.1%	90-110	435
		(VI 2347084-007)	MSD	mg/L	12.00	79.4%	90-110	435
			MSRPD	mg/L		2.0%	≤20	
Nitrate + Nitrite as N	4500NO3F	11/15/2023:213023LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	98.2%	80-120	
			MS	mg/L	5.609	94.4%	66-125	
		(SP 2319066-001)	MSD	mg/L	5.609	95.5%	66-125	
			MSRPD	mg/L		0.9%	≤30.4	
Nitrate Nitrogen	4500NO3F	11/15/2023:213023LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	98.2%	80-120	
			MS	mg/L	5.609	94.4%	66-125	
		(SP 2319066-001)	MSD	mg/L	5.609	95.5%	66-125	
			MSRPD	mg/L		0.9%	≤30.4	

Page 4 of 5

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Definition

Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.

Explanation

435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

Page 5 of 5

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Laboratory Analysis Work Order

Nº 41615

ID: # 0500 2347068 LABORATORY: FGL

SITE NAME: John Vander Poel Dairy

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, Cl (Biennially)
L4 Other: _____

Manure

M1 TN, TP, TK, %M (2/year)
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)
M3 Other: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, K (Mid Season - Wheat)
P2 TN, P, K (Mid-season - Corn)
P3 TN, TP, TK, Ash, %M (At Harvest)
P4 TN, %M
P5 % Moisture
P6 NIR
P7 Other: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N*	pH	Temp
1	IR3	Irr	W5	10-18/11:20	Cris			
2								
3								
4								
5								
6								
7								
8								

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of sampes, please note below.

NOTES: GLS 10/19/23
CDA 12:2

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		10-18-23 2:30
2nd		FGL	10-18-23 16:00	
3rd		FGL		10-18-23 16:45
4th	CDA		10/18/23 1615	

LABORATORY USE ONLY

Logged In By: GLS Total Samples: 10/18/23 Laboratory #: _____

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

December 5, 2023

Lab No. : **VI 2347918**
Customer No. : **4018573**
Reference : **42087**

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Laboratory Report

Introduction: This report package contains a total of 3 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(1 page)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
PR20	11/21/2023	11/21/2023	VI 2347918-001	AGW

Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary	
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-12-06

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

December 5, 2023

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Description : PR20
Project : 0500 John Vander Poel

Lab No. : VI 2347918-001
Customer No. : 4018573
Reference : 42087
Sampled On : November 21, 2023 at 09:30
Sampled By : Zeke
Received On : November 21, 2023 at 16:00
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	11/26/2023	13:50	sta	EPA 351.2	12/01/2023	14:33	lfs
Nitrate Nitrogen	5.6	0.4	mg/L		1		11/22/2023	13:00	lfs	SM 4500-NO3 F	11/22/2023	14:30	lfs
Nitrogen, Total as Nitrogen	5.6	0.5	mg/L		1	l	11/26/2023	13:50	sta	Calc.	12/01/2023	14:33	lfs
Nitrate + Nitrite as N	5.6	0.4	mg/L		1		11/22/2023	13:00	lfs	SM 4500-NO3 F	11/22/2023	14:30	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	11/26/2023	13:50	sta	EPA 351.2	12/01/2023	14:33	lfs
Conductivity	443	1	umhos/cm		1		11/27/2023	09:13	krh	SM 4500-H+B	11/27/2023	11:54	krh
Solids, Total Dissolved (TDS)	330	20	mg/L		1		11/22/2023	17:00	ctl	SM 2540 C	11/27/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

December 5, 2023
Innovative Ag Services, LLC

Lab No. : VI 2347918
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2347877-002)	Dup	umhos/cm		0.3%	5	
Solids, Total Dissolved	2540CE	11/22/2023:213308CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	105%	90-110	
		(STK2356079-001)	Dup	mg/L		3.33%	5	
		(STK2356079-001)	Dup	mg/L		2.08%	5	
Nitrogen, Total Kjeldahl	351.2	11/26/2023:213368STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	94.1%	73-124	
			MS	mg/L	12.00	88.9%	90-110	435
		(SP 2319454-001)	MSD	mg/L	12.00	88.4%	90-110	435
			MSRPD	mg/L		0.5%	≤20	
			MS	mg/L	12.00	89.1%	90-110	435
		(VI 2348003-001)	MSD	mg/L	12.00	91.2%	90-110	
			MSRPD	mg/L		2.3%	≤20	
Nitrate + Nitrite as N	4500NO3F	11/22/2023:213299LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	96.8%	80-120	
			MS	mg/L	5.609	91.8%	66-125	
		(SP 2319436-001)	MSD	mg/L	5.609	93.6%	66-125	
			MSRPD	mg/L		1.7%	≤30.4	
Nitrate Nitrogen	4500NO3F	11/22/2023:213299LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	96.8%	80-120	
			MS	mg/L	5.609	91.8%	66-125	
		(SP 2319436-001)	MSD	mg/L	5.609	93.6%	66-125	
			MSRPD	mg/L		1.7%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

Page 3 of 3

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Laboratory Analysis Work Order

Nº 42087

2347918

ID: # 6500

SITE NAME: John Vander Poel

Billing: IAS

LABORATORY: FGL

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, Cl (Biennially)
L4 Other: _____

Manure

M1 TN, TP, TK, %M (2/year)
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)
M3 Other: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, K (Mid Season - Wheat)
P2 TN, P, K (Mid-season - Corn)
P3 TN, TP, TK, Ash, %M (At Harvest)
P4 TN, %M
P5 % Moisture
P6 NIR
P7 Other: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N*	pH	Temp
1	PR20	IRR	W2	11-21/9:30	Zeke			
2								
3								
4								
5								
6								
7								
8								

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of sampes, please note below.

NOTES:

GLS 11/22/23
CDA 12-13

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		11-21-23 / 2:15
2nd		FGL	11-21-23 15:45	
3rd		FGL		11-21-23 16:00
4th		FGL	11-21-2023 1600	

Rcd: 1000

LABORATORY USE ONLY

Rcd: GLS 11-21-2023 1730

Logged In By: _____ Total Samples: _____ Laboratory #: _____

Roi 8.4°C

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

January 5, 2024

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Lab No. : **VI 2348633**
Customer No. : **4018573**
Reference : **42200**

Laboratory Report

Introduction: This report package contains a total of 6 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(2 pages)	: Results for each sample submitted.
Quality Control	(3 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
IR5	12/18/2023	12/18/2023	VI 2348633-001	DW
IR14	12/18/2023	12/18/2023	VI 2348633-002	AGW

Sampling and Receipt Information:

All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary	
EPA 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: EHB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2024-01-08

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

January 5, 2024

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Description : IR5
Project : 0500 John Vander Poel Dairy

Lab No. : VI 2348633-001
Customer No. : 4018573
Reference : 42200
Sampled On : December 18, 2023 at 09:00
Sampled By : Zeke
Received On : December 18, 2023 at 15:55
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	ND	0.4	mg/L	10	1	U	12/19/2023	14:30	lfs	SM 4500-NO3 F	12/19/2023	17:01	lfs
Conductivity	320	1	umhos/cm	1600[2]	1		12/22/2023	09:20	krh	SM 4500-H+B	12/22/2023	12:54	krh

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution
MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

January 5, 2024

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Description : IR14
Project : 0500 John Vander Poel Dairy

Lab No. : VI 2348633-002
Customer No. : 4018573
Reference : 42200
Sampled On : December 18, 2023 at 09:25
Sampled By : Zeke
Received On : December 18, 2023 at 15:55
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	70	10	mg/L		1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	05:20	amm
Bicarbonate	50	10	mg/L		1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	05:20	amm
Carbonate	20	10	mg/L		1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	05:20	amm
Hydroxide	20	10	mg/L		1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	05:20	amm
Chloride	11	1	mg/L		1	h	12/19/2023	15:32	ldm	EPA 300.0	12/20/2023	05:42	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	12/31/2023	07:20	lcr	EPA 351.2	01/03/2024	22:25	lcr
Nitrate Nitrogen	1.7	0.1	mg/L		1	h	12/19/2023	15:32	ldm	EPA 300.0	12/20/2023	05:42	ldm
Nitrogen, Total as Nitrogen	1.7	0.5	mg/L		1	h	12/31/2023	07:20	lcr	Calc.	01/03/2024	22:25	lcr
Nitrate + Nitrite as N	1.7	0.1	mg/L		1	h	12/19/2023	15:32	ldm	EPA 300.0	12/20/2023	05:42	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	12/31/2023	07:20	lcr	EPA 351.2	01/03/2024	22:25	lcr
Conductivity	223	1	umhos/cm		1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	05:20	amm
Sulfate Sulfur	5.10	0.17	mg/L		1		12/19/2023	15:32	ldm	EPA 300.0	12/20/2023	05:42	ldm
Solids, Total Dissolved (TDS)	150	20	mg/L		1		12/20/2023	12:00	ctl	SM 2540 C	12/21/2023	12:00	ctl
Calcium	3	1	mg/L		1	h	12/20/2023	07:00	ac	EPA 200.7	12/20/2023	20:57	ac
Magnesium	ND	1	mg/L		1	U	12/20/2023	07:00	ac	EPA 200.7	12/20/2023	20:57	ac
Sodium	46	1	mg/L		1	hl	12/20/2023	07:00	ac	EPA 200.7	12/20/2023	20:57	ac

DQF Flags Definition:
h The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

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January 5, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348633
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	12/20/2023:214322AC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	102%	85-115	
			MS	mg/L	12.00	135%	<¼	406
		(VI 2348243-001)	MSD	mg/L	12.00	108%	75-125	
			MSRPD	mg/L		4.0%	≤20.0	
			MS	mg/L	12.00	153%	75-125	435
		(VI 2348281-001)	MSD	mg/L	12.00	88.7%	75-125	
			MSRPD	mg/L		15.2%	≤20.0	
Magnesium	200.7	12/20/2023:214322AC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	98.7%	85-115	
			MS	mg/L	12.00	102%	75-125	
		(VI 2348243-001)	MSD	mg/L	12.00	95.7%	75-125	
			MSRPD	mg/L		5.1%	≤20	
			MS	mg/L	12.00	114%	75-125	
		(VI 2348281-001)	MSD	mg/L	12.00	104%	75-125	
			MSRPD	mg/L		6.0%	≤20	
Sodium	200.7	12/20/2023:214322AC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	95.8%	85-115	
			MS	mg/L	12.00	130%	<¼	406
		(VI 2348243-001)	MSD	mg/L	12.00	91.8%	75-125	
			MSRPD	mg/L		4.4%	≤20.0	
			MS	mg/L	12.00	154%	75-125	435
		(VI 2348281-001)	MSD	mg/L	12.00	69.1%	75-125	435
			MSRPD	mg/L		18.5%	≤20.0	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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January 5, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348633
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	(STK2357472-005)	Dup	mg/L		0.8%	10	
Bicarbonate	2320B	(STK2357472-005)	Dup	mg/L		0.8%	10	
E. C.	2320B	(VI 2348744-001)	Dup	umhos/cm		0.2%	5	
	2320B	(STK2357472-005)	Dup	umhos/cm		0.5%	5	
Solids, Total Dissolved	2540CE	12/20/2023:214352CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	101%	90-110	
		(VI 2348628-001)	Dup	mg/L		0.9%	5	
		(VI 2348628-001)	Dup	mg/L		0.2%	5	
Chloride	300.0	12/19/2023:214318LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	99.6%	90-110	
			MS	mg/L	50.00	163%	67-117	435
		(VI 2348298-001)	MSD	mg/L	50.00	163%	67-117	435
			MSRPD	mg/L		0.2%	≤7	
			MS	mg/L	50.00	95.6%	67-117	
		(CH 2390221-002)	MSD	mg/L	50.00	95.6%	67-117	
			MSRPD	mg/L		0.0%	≤7	
Nitrate + Nitrite as N	300.0	12/19/2023:214318LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	100%	90-110	
			MS	mg/L	40.00	155%	86-112	435
		(VI 2348298-001)	MSD	mg/L	40.00	156%	86-112	435
			MSRPD	mg/L		0.2%	≤7	
			MS	mg/L	40.00	93.7%	86-112	
		(CH 2390221-002)	MSD	mg/L	40.00	93.7%	86-112	
			MSRPD	mg/L		0.0%	≤7	
Nitrate Nitrogen	300.0	12/19/2023:214318LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	100%	90-110	
			MS	mg/L	40.00	155%	86-112	435
		(VI 2348298-001)	MSD	mg/L	40.00	156%	86-112	435
			MSRPD	mg/L		0.2%	≤7	
			MS	mg/L	40.00	93.7%	86-112	
		(CH 2390221-002)	MSD	mg/L	40.00	93.7%	86-112	
			MSRPD	mg/L		0.0%	≤7	
Sulfate Sulfur	300.0	12/19/2023:214318LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	101%	90-110	
			MS	mg/L	100.0	140%	18-165	
		(VI 2348298-001)	MSD	mg/L	100.0	141%	18-165	
			MSRPD	mg/L		0.3%	≤7	
			MS	mg/L	100.0	101%	18-165	
		(CH 2390221-002)	MSD	mg/L	100.0	101%	18-165	
			MSRPD	mg/L		0.0%	≤7	
Nitrogen, Total Kjeldahl	351.2	12/31/2023:214687LCR	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	101%	73-124	
			MS	mg/L	12.00	96.9%	90-110	
		(STK2357138-001)	MSD	mg/L	12.00	90.2%	90-110	
			MSRPD	mg/L		4.7%	≤20	
			MS	mg/L	12.00	95.0%	90-110	
		(SP 2320756-001)	MSD	mg/L	12.00	90.5%	90-110	
			MSRPD	mg/L		3.7%	≤20	
Nitrate Nitrogen	4500NO3F	12/19/2023:214315LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	95.2%	80-120	

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January 5, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348633
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
		(STK2357261-001)	MS	mg/L	5.609	95.4%	66-125	
			MSD	mg/L	5.609	92.6%	66-125	
			MSRPD	mg/L		1.4%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

Explanation

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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Laboratory Analysis Work Order 23486633 Nº 42200

ID: # 0500

SITE NAME: John Vander Poel

Billing: IAS

LABORATORY: FGL

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

RCL 6.3C 1# THH67

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, Cl (Biennially)
L4 Other: _____

Manure

M1 TN, TP, TK, %M (2/year)
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)
M3 Other: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, K (Mid Season - Wheat)
P2 TN, P, K (Mid-season - Corn)
P3 TN, TP, TK, Ash, %M (At Harvest)
P4 TN, %M
P5 % Moisture
P6 NIR
P7 Other: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	IR5	Dom	W1	12-18 / 9:00	Zolc			
2	IR 14	IRR	W5	12-18 / 9:25	Zolc			
3								
4								
5								
6								
7								
8								

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of sampes, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[illegible]	IAS		12-17-23 / 11:45
2nd	[illegible]	FGL	12-18-23 15:50	
3rd	[illegible]	FGL		12-18-23 15:55
4th	[illegible]		12/18/23 1555	

LABORATORY USE ONLY

Logged In By: [illegible] Total Samples: 8/18/23 1 Laboratory #: _____

GLS JAW 12/19/23 14:24

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