

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: HANSEN & SONS INC.

Physical address of dairy:

13348 AVENUE 20

Number and Street

CHOWCHILLA

City

Madera

County

93610

Zip Code

Street and nearest cross street (if no address): _____

Date facility was originally placed in operation: 06/01/1930

Regional Water Quality Control Board Basin Plan designation: San Joaquin River Basin

County Assessor Parcel Number(s) for dairy facility:

0023-0040-0001-0000

B. OPERATORS

Hansen, Dennis

Operator name: Hansen, Dennis

Telephone no.: (559) 665-3885 (559) 977-0665

Landline Cellular

13431 Avenue 19 1/2

Chowchilla

CA 93610

Mailing Address Number and Street

City

State Zip Code

This operator is responsible for paying permit fees.

C. OWNERS

Hansen, Dennis

Legal owner name: Hansen, Dennis

Telephone no.: (559) 665-3885 (559) 977-0665

Landline Cellular

13431 Avenue 19 1/2

Chowchilla

CA 93610

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AVAILABLE NUTRIENTS

A. HERD INFORMATION

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo. to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number open confinement	47	42	12	13	135	0
Number under roof	265	0	0	0	0	40
Maximum number	390	58	70	80	150	48
Average number	312	42	12	13	135	40
Avg live weight (lbs)	1,400	1,450	1,000	750		

Predominant milk cow breed: Holstein

Average milk production: 68 pounds per cow per day

B. MANURE GENERATED

Total manure excreted by the herd: 9,400.70 tons per reporting period

Total nitrogen from manure: 122,661.09 lbs per reporting period

After ammonia losses (30% loss applied): 85,862.76 lbs per reporting period

Total phosphorus from manure: 19,584.27 lbs per reporting period

Total potassium from manure: 59,340.91 lbs per reporting period

Total salt from manure: 156,563.10 lbs per reporting period

C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 11,232,000 gallons

Total nitrogen generated: 26,064.44 lbs

$$\begin{aligned}
 & 11,232,000 \text{ gallons applied} \\
 & + 0 \text{ gallons exported} \\
 & - 0 \text{ gallons imported} \\
 & = 11,232,000 \text{ gallons generated}
 \end{aligned}$$

Total phosphorus generated: 5,247.98 lbs

Total potassium generated: 44,736.94 lbs

Total salt generated: 122,827.72 lbs

D. FRESH WATER SOURCES

Source Description	Type
Bowen-Dom	Ground water
CWD Canal	Surface water
Dairy Dom.	Ground water
DW-1	Ground water
DW-2	Ground water

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Source Description	Type
DW-Bowen	Ground water
DW-Haynes	Ground water
DW-RBLVD	Ground water
Laws Dom	Ground water
RBVD-dom	Ground water

E. SUBSURFACE (TILE) DRAINAGE SOURCES*No subsurface (tile) drainage sources entered.***F. NUTRIENT IMPORTS***No dry manure nutrient imports entered.**No process wastewater nutrient imports entered.**No commercial or other nutrient imports entered.***G. NUTRIENT EXPORTS***No solid nutrient exports entered.**No liquid nutrient exports entered.*

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APPLICATION AREA

A. LIST OF LAND APPLICATION AREAS

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
Field BN	40	40	1	none	0024-0141-0011-0000 0024-0141-0012-0000
Field BS	39	39	2	both	0024-0141-0017-0000
Field D	58	58	2	both	0023-0040-0001-0000
Field H E&W	49	49	2	both	0023-0040-0004-0000 0023-0040-0019-0000
Field L	40	40	2	both	0023-0040-0007-0000
Field MN	20	19	1	none	0024-0141-0013-0000
Field MS	20	20	1	none	0024-0141-0013-0000
Field RBN	38	38	2	manure	0023-0020-0003-0000
Field RBS	39	39	2	none	0023-0020-0003-0000
Totals for areas that were used for application	224	224	10		
Totals for areas that were not used for application	119	118	5		
Land application area totals	343	342	15		

B. CROPS AND HARVESTS

Field BN

Field name: Field BN

01/05/2014: Almond, in shell

Crop: Almond, in shell Acres planted: 40 Plant date: 01/05/2014

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/29/2023	36.00 ton	Dry-weight		5.0	68,419.00	10,526.00	52,628.00		4.50

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	1.00	130.00	20.00	100.00	44.00
Total actual harvest content	0.90	117.00	18.00	89.99	76.95

Field BS

Field name: Field BS

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Field BS

12/16/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 39 Plant date: 12/16/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/28/2023	312.00 ton	Dry-weight		8.8	18,500.00	2,030.00	19,200.00		10.90

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,080.00
Total actual harvest content	8.00	269.95	29.62	280.17	1,590.53

06/28/2023: Corn, silage

Crop: Corn, silage Acres planted: 39 Plant date: 06/28/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	1,140.00 ton	Dry-weight		61.4	10,200.00	1,540.00	11,500.00		5.50

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	29.23	230.17	34.75	259.51	1,241.14

Field D

Field name: Field D

12/09/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 58 Plant date: 12/09/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/23/2023	1,084.00 ton	Dry-weight		66.0	14,300.00	2,640.00	20,700.00		10.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,080.00
Total actual harvest content	18.69	181.74	33.55	263.08	1,270.90

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Field D

06/27/2023: Corn, silage

Crop: Corn, silage Acres planted: 58 Plant date: 06/27/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/15/2023	1,580.00 <i>ton</i>	Dry-weight		72.2	15,900.00	2,530.00	19,900.00		7.90

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	27.24	240.82	38.32	301.41	1,196.55

Field H E&W

Field name: Field H E&W

01/10/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 49 Plant date: 01/10/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/20/2023	92.00 <i>ton</i>	Dry-weight		59.9	38,400.00	3,800.00	13,100.00		0.00
05/25/2023	340.00 <i>ton</i>	Dry-weight		18.6	41,920.00	4,300.00	20,400.00		9.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	8.00	480.00	43.20	336.00	1,480.00
Total actual harvest content	8.82	531.36	54.30	250.17	1,084.45

Field L

Field name: Field L

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Field L

12/09/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 40 Plant date: 12/09/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/23/2023	668.00 ton	Dry-weight		64.4	19,600.00	3,000.00	21,400.00		10.20

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,080.00
Total actual harvest content	16.70	233.05	35.67	254.45	1,212.82

06/29/2023: Corn, silage

Crop: Corn, silage Acres planted: 40 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/15/2023	1,148.00 ton	Dry-weight		66.0	11,200.00	1,760.00	11,700.00		5.30

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	28.70	218.58	34.35	228.34	1,034.35

Field MN

Field name: Field MN

01/03/2012: Almond, in shell

Crop: Almond, in shell Acres planted: 19 Plant date: 01/03/2012

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/29/2023	17.00 ton	Dry-weight		5.0	68,419.00	10,526.00	52,628.00		4.50

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	1.00	130.00	20.00	100.00	44.00
Total actual harvest content	0.89	116.31	17.89	89.47	76.50

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Field MS

Field name: Field MS

01/02/2020: Almond, in shell

Crop: Almond, in shell Acres planted: 20 Plant date: 01/02/2020

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/29/2023	11.00 ton	Dry-weight		5.0	68,419.00	10,526.00	52,628.00		4.50

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	1.00	130.00	20.00	100.00	44.00
Total actual harvest content	0.55	71.50	11.00	55.00	47.03

Field RBN

Field name: Field RBN

12/08/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 38 Plant date: 12/08/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/22/2023	686.00 ton	Dry-weight		60.8	17,500.00	2,600.00	17,600.00		11.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,080.00
Total actual harvest content	18.05	247.68	36.80	249.10	1,641.78

07/18/2023: Corn, silage

Crop: Corn, silage Acres planted: 38 Plant date: 07/18/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
11/11/2023	1,080.00 ton	Dry-weight		70.6	14,100.00	2,140.00	15,000.00		6.90

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	28.42	235.63	35.76	250.67	1,153.10

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Field RBS

Field name: Field RBS

11/17/2019: Alfalfa, hay

Crop: Alfalfa, hay

Acres planted: 39 Plant date: 11/17/2019

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
02/24/2023	69.00 ton	Dry-weight		58.9	42,240.00	4,200.00	15,000.00		0.00
05/25/2023	285.00 ton	Dry-weight		18.6	41,920.00	4,300.00	20,400.00		9.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	8.00	480.00	43.20	336.00	1,480.00
Total actual harvest content	9.08	560.15	57.26	264.51	1,142.10

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NUTRIENT BUDGET**A. LAND APPLICATIONS**

Field BN - 01/05/2014: Almond, in shell

Field name: Field BN

Crop: Almond, in shell

Plant date: 01/05/2014

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
09/18/2023	Total Irrigation Water this Season	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Uan-32 Fertilizer in Irrigations	Liquid commercial fertilizer	100.00	0.00	0.00	0.00	
DW-Bowen	Ground water	26.97	0.00	0.00	1,413.66	19,584,000.00 gal
CWD Canal	Surface water	0.00	0.00	0.00	69.46	19,584,000.00 gal
Application event totals		126.97	0.00	0.00	1,483.11	

Field BS - 12/16/2022: Wheat, silage, soft dough

Field name: Field BS

Crop: Wheat, silage, soft dough

Plant date: 12/16/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/20/2022	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	160.22	49.06	314.23	7,203.60	390.00 ton
Application event totals		160.22	49.06	314.23	7,203.60	
12/20/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	22.92	5.71	38.70	216.92	576,000.00 gal
Application event totals		22.92	5.71	38.70	216.92	

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Field BS - 12/16/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/26/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	47.94	9.71	93.67	177.48	576,000.00 gal
Application event totals		47.94	9.71	93.67	177.48	
04/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-Bowen	Ground water	6.52	0.00	0.00	342.04	4,620,000.00 gal
Application event totals		6.52	0.00	0.00	342.04	
05/14/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.59	4,560,000.00 gal
Application event totals		0.00	0.00	0.00	16.59	

Field BS - 06/28/2023: Corn, silage

Field name:	Field BS	Plant date:	06/28/2023			
Crop:	Corn, silage					
Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
06/09/2023	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	164.10	56.09	213.56	0.00	390.00 ton
Application event totals		164.10	56.09	213.56	0.00	
06/16/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Application	Process wastewater	42.52	7.72	54.85	205.42	960,000.00 gal
DW-Bowen	Ground water	6.19	0.00	0.00	324.27	4,380,000.00 gal
Application event totals		48.71	7.72	54.85	529.69	

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Field BS - 06/28/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
07/22/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.37	4,500,000.00 gal
Application event totals		0.00	0.00	0.00	16.37	
08/07/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-Bowen	Ground water	6.19	0.00	0.00	324.27	4,380,000.00 gal
Application event totals		6.19	0.00	0.00	324.27	
08/19/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.71	4,320,000.00 gal
Application event totals		0.00	0.00	0.00	15.71	
08/31/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.65	4,302,000.00 gal
Application event totals		0.00	0.00	0.00	15.65	
09/12/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-Bowen	Ground water	6.08	0.00	0.00	318.50	4,302,000.00 gal
Application event totals		6.08	0.00	0.00	318.50	
09/24/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.50	4,260,000.00 gal
Application event totals		0.00	0.00	0.00	15.50	

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Field BS - 06/28/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/06/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.71	4,320,000.00 gal
Application event totals		0.00	0.00	0.00	15.71	

Field D - 12/09/2022: Wheat, silage, soft dough

Field name: Field D

Crop: Wheat, silage, soft dough

Plant date: 12/09/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/20/2022	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	128.17	39.25	251.38	5,762.88	464.00 ton
Application event totals		128.17	39.25	251.38	5,762.88	
12/26/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	20.55	5.12	34.70	194.48	768,000.00 gal
Application event totals		20.55	5.12	34.70	194.48	
01/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	64.48	13.06	125.97	238.68	1,152,000.00 gal
Application event totals		64.48	13.06	125.97	238.68	
04/13/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Application	Process wastewater	22.87	4.15	29.50	110.50	768,000.00 gal
DW-1	Ground water	1.85	0.00	0.00	244.83	6,570,000.00 gal
Application event totals		24.73	4.15	29.50	355.33	

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Field D - 12/09/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/11/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.73	6,840,000.00 gal
Application event totals		0.00	0.00	0.00	16.73	

Field D - 06/27/2023: Corn, silage

Field name: Field D

Crop: Corn, silage

Plant date: 06/27/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
06/08/2023	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	164.10	56.09	213.56	0.00	580.00 ton
Application event totals		164.10	56.09	213.56	0.00	
06/15/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-1	Ground water	1.88	0.00	0.00	248.18	6,660,000.00 gal
Application event totals		1.88	0.00	0.00	248.18	
07/21/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.07	6,570,000.00 gal
Application event totals		0.00	0.00	0.00	16.07	
08/06/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Application	Process wastewater	42.89	7.79	55.32	207.19	1,440,000.00 gal
CWD Canal	Surface water	0.00	0.00	0.00	15.85	6,480,000.00 gal
Application event totals		42.89	7.79	55.32	223.04	

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Field D - 06/27/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
08/18/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-2	Ground water	5.66	0.00	0.00	285.93	6,390,000.00 gal
Application event totals		5.66	0.00	0.00	285.93	
08/30/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.63	6,390,000.00 gal
Application event totals		0.00	0.00	0.00	15.63	
09/11/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-2	Ground water	5.74	0.00	0.00	289.96	6,480,000.00 gal
Application event totals		5.74	0.00	0.00	289.96	
09/23/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-2	Ground water	5.74	0.00	0.00	289.96	6,480,000.00 gal
Application event totals		5.74	0.00	0.00	289.96	
10/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-2	Ground water	5.69	0.00	0.00	287.14	6,417,000.00 gal
Application event totals		5.69	0.00	0.00	287.14	

Field H E&W - 01/10/2023: Alfalfa, hay

Field name: Field H E&W

Crop: Alfalfa, hay

Plant date: 01/10/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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Field H E&W - 01/10/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/22/2022	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	160.22	49.06	314.23	7,203.60	490.00 ton
Application event totals		160.22	49.06	314.23	7,203.60	
03/24/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	76.32	15.46	149.11	282.52	1,152,000.00 gal
Application event totals		76.32	15.46	149.11	282.52	
04/15/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-Haynes	Ground water	9.95	0.00	0.00	386.40	5,616,000.00 gal
Application event totals		9.95	0.00	0.00	386.40	
05/13/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.26	5,616,000.00 gal
Application event totals		0.00	0.00	0.00	16.26	
06/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.26	5,616,000.00 gal
Application event totals		0.00	0.00	0.00	16.26	
07/08/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.68	5,760,000.00 gal
Application event totals		0.00	0.00	0.00	16.68	

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Field H E&W - 01/10/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
07/22/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-Haynes	Ground water	10.07	0.00	0.00	391.36	5,688,000.00 gal
Application event totals		10.07	0.00	0.00	391.36	
08/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.47	5,688,000.00 gal
Application event totals		0.00	0.00	0.00	16.47	
09/02/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.68	5,760,000.00 gal
Application event totals		0.00	0.00	0.00	16.68	

Field L - 12/09/2022: Wheat, silage, soft dough

Field name:	Field L	Plant date:	12/09/2022			
Crop:	Wheat, silage, soft dough					
Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/21/2022	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	96.13	29.44	188.54	4,322.16	240.00 ton
Application event totals		96.13	29.44	188.54	4,322.16	
01/16/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	22.35	5.56	37.73	211.50	576,000.00 gal
Application event totals		22.35	5.56	37.73	211.50	

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Field L - 12/09/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
03/12/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	140.24	28.41	273.98	519.13	1,728,000.00 gal
Application event totals		140.24	28.41	273.98	519.13	
04/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-1	Ground water	1.89	0.00	0.00	249.64	4,620,000.00 gal
Application event totals		1.89	0.00	0.00	249.64	
05/08/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Application	Process wastewater	24.87	4.52	32.08	120.17	576,000.00 gal
CWD Canal	Surface water	0.00	0.00	0.00	15.75	4,440,000.00 gal
Application event totals		24.87	4.52	32.08	135.92	

Field L - 06/29/2023: Corn, silage

Field name:	Field L	Plant date:	06/29/2023			
Crop:	Corn, silage					
Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/08/2023	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	164.10	56.09	213.56	0.00	400.00 ton
Application event totals		164.10	56.09	213.56	0.00	

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Field L - 06/29/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
06/17/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Application	Process wastewater	41.46	7.53	53.47	200.28	960,000.00 gal
CWD Canal	Surface water	0.00	0.00	0.00	16.32	4,602,000.00 gal
Application event totals		41.46	7.53	53.47	216.60	
07/23/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.17	4,560,000.00 gal
Application event totals		0.00	0.00	0.00	16.17	
08/08/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-2	Ground water	5.86	0.00	0.00	295.86	4,560,000.00 gal
Application event totals		5.86	0.00	0.00	295.86	
08/20/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.39	4,620,000.00 gal
Application event totals		0.00	0.00	0.00	16.39	
09/01/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-2	Ground water	6.07	0.00	0.00	306.37	4,722,000.00 gal
Application event totals		6.07	0.00	0.00	306.37	
09/13/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-1	Ground water	1.90	0.00	0.00	250.61	4,638,000.00 gal
Application event totals		1.90	0.00	0.00	250.61	

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Field L - 06/29/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
09/25/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.39	4,620,000.00 gal
Application event totals		0.00	0.00	0.00	16.39	
10/07/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.39	4,620,000.00 gal
Application event totals		0.00	0.00	0.00	16.39	

Field MN - 01/03/2012: Almond, in shell

Field name: Field MN

Crop: Almond, in shell

Plant date: 01/03/2012

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
09/18/2023	Total Irrigation Water this Season	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Uan-32 Fertilizer in Irrigations	Liquid commercial fertilizer	100.00	0.00	0.00	0.00	
DW-Bowen	Ground water	26.72	0.00	0.00	1,400.53	9,216,000.00 gal
CWD Canal	Surface water	0.00	0.00	0.00	68.81	9,216,000.00 gal
Application event totals		126.72	0.00	0.00	1,469.34	

Field MS - 01/02/2020: Almond, in shell

Field name: Field MS

Crop: Almond, in shell

Plant date: 01/02/2020

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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Field MS - 01/02/2020: Almond, in shell

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
09/18/2023	Total Irrigation Water this Season	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Uan-32 Fertilizer in Irrigations	Liquid commercial fertilizer	80.00	0.00	0.00	0.00	
DW-1	Ground water	7.07	0.00	0.00	933.71	8,640,000.00 gal
CWD Canal	Surface water	0.00	0.00	0.00	61.29	8,640,000.00 gal
Application event totals		87.07	0.00	0.00	994.99	

Field RBN - 12/08/2022: Wheat, silage, soft dough

Field name:	Field RBN	Plant date:	12/08/2022			
Crop:	Wheat, silage, soft dough					
Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/21/2022	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	240.33	73.59	471.34	10,805.40	570.00 ton
Application event totals		240.33	73.59	471.34	10,805.40	
04/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-RBLVD	Ground water	9.98	0.00	0.00	439.88	4,680,000.00 gal
Application event totals		9.98	0.00	0.00	439.88	
05/02/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-RBLVD	Ground water	9.60	0.00	0.00	422.96	4,500,000.00 gal
Application event totals		9.60	0.00	0.00	422.96	

Field RBN - 07/18/2023: Corn, silage

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Field RBN - 07/18/2023: Corn, silage

Field name: Field RBN

Crop: Corn, silage

Plant date: 07/18/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
06/09/2023	Broadcast/incorporate	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	314.34	105.42	425.57	0.00	380.00 ton
Application event totals		314.34	105.42	425.57	0.00	
07/06/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.46	4,410,000.00 gal
Application event totals		0.00	0.00	0.00	16.46	
08/11/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.80	4,500,000.00 gal
Application event totals		0.00	0.00	0.00	16.80	
08/27/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.80	4,500,000.00 gal
Application event totals		0.00	0.00	0.00	16.80	
09/08/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	5.70	1,527,000.00 gal
Application event totals		0.00	0.00	0.00	5.70	
09/20/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	17.14	4,590,000.00 gal
Application event totals		0.00	0.00	0.00	17.14	

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Field RBN - 07/18/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/02/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.46	4,410,000.00 gal
Application event totals		0.00	0.00	0.00	16.46	
10/17/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-RBLVD	Ground water	9.21	0.00	0.00	406.04	4,320,000.00 gal
Application event totals		9.21	0.00	0.00	406.04	

Field RBS - 11/17/2019: Alfalfa, hay

Field name: Field RBS

Crop: Alfalfa, hay

Plant date: 11/17/2019

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
04/15/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.37	4,500,000.00 gal
Application event totals		0.00	0.00	0.00	16.37	
05/13/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	16.04	4,410,000.00 gal
Application event totals		0.00	0.00	0.00	16.04	
06/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-RBLVD	Ground water	8.98	0.00	0.00	395.63	4,320,000.00 gal
Application event totals		8.98	0.00	0.00	395.63	

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Field RBS - 11/17/2019: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
07/08/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-RBLVD	Ground water	8.84	0.00	0.00	389.86	4,257,000.00 gal
Application event totals		8.84	0.00	0.00	389.86	
07/22/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.39	4,230,000.00 gal
Application event totals		0.00	0.00	0.00	15.39	
08/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.71	4,320,000.00 gal
Application event totals		0.00	0.00	0.00	15.71	
09/02/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CWD Canal	Surface water	0.00	0.00	0.00	15.71	4,320,000.00 gal
Application event totals		0.00	0.00	0.00	15.71	
09/30/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
DW-RBLVD	Ground water	8.84	0.00	0.00	389.86	4,257,000.00 gal
Application event totals		8.84	0.00	0.00	389.86	

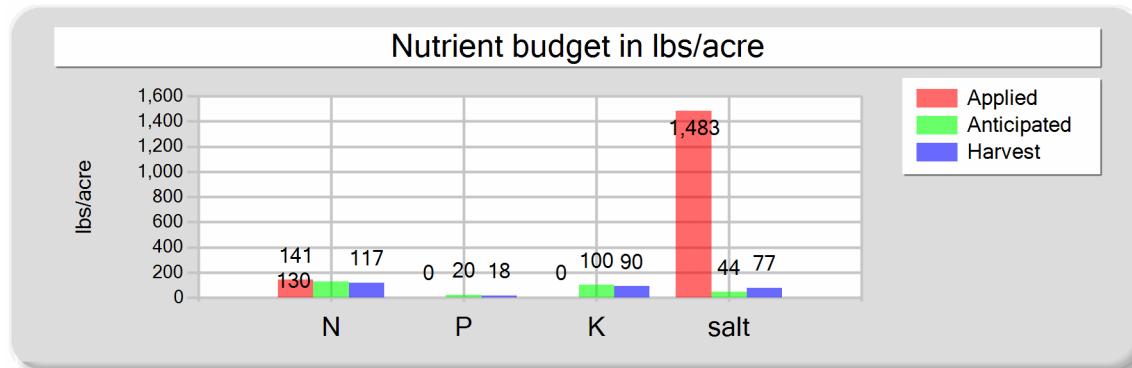
Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

B. NUTRIENT BUDGET

Field BN - 01/05/2014: Almond, in shell

Field name: Field BN Crop: Almond, in shell Plant date: 01/05/2014



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	100.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	26.97	0.00	0.00	1,483.11
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	140.97	0.00	0.00	1,483.11
Anticipated crop nutrient removal	130.00	20.00	100.00	44.00
Actual crop nutrient removal	117.00	18.00	89.99	76.95
Nutrient balance	23.97	-18.00	-89.99	1,406.16
Applied to removed ratio	1.20	0.00	0.00	19.27

Fresh water applied
39,168,000.00 <i>gallons</i>
1,442.42 <i>acre-inches</i>
36.06 <i>inches/acre</i>
Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>
Total harvests for the crop
1 <i>harvests</i>

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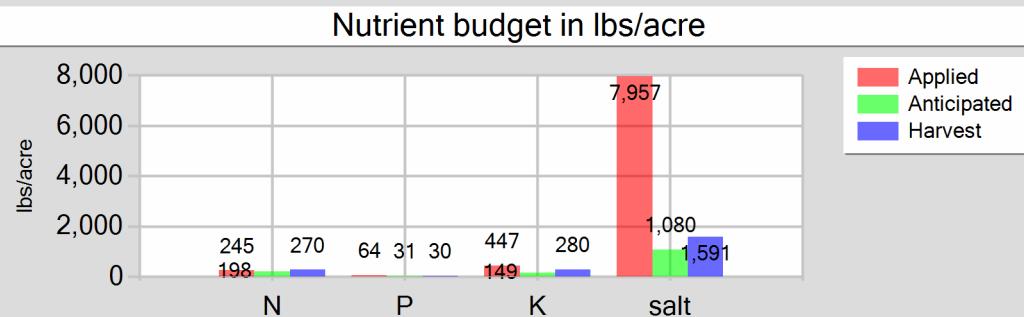
Reporting period 01/01/2023 to 12/31/2023.

Field BS - 12/16/2022: Wheat, silage, soft dough

Field name: Field BS

Crop: Wheat, silage, soft dough

Plant date: 12/16/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	160.22	49.06	314.23	7,203.60
Process wastewater	70.87	15.42	132.37	394.40
Fresh water	6.52	0.00	0.00	358.63
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	244.61	64.48	446.60	7,956.63
Anticipated crop nutrient removal	198.00	30.60	149.40	1,080.00
Actual crop nutrient removal	269.95	29.62	280.17	1,590.53
Nutrient balance	-25.34	34.86	166.43	6,366.10
Applied to removed ratio	0.91	2.18	1.59	5.00

Fresh water applied
9,180,000.00 gallons
338.07 acre-inches
8.67 inches/acre

Process wastewater applied
1,152,000.00 gallons
42.42 acre-inches
1.09 inches/acre

Total harvests for the crop
1 harvests

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Reporting period 01/01/2023 to 12/31/2023.

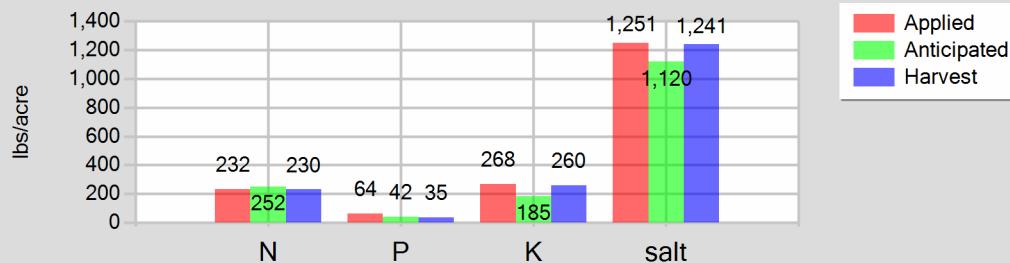
Field BS - 06/28/2023: Corn, silage

Field name: Field BS

Crop: Corn, silage

Plant date: 06/28/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	164.10	56.09	213.56	0.00
Process wastewater	42.52	7.72	54.85	205.42
Fresh water	18.45	0.00	0.00	1,045.99
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	232.07	63.81	268.41	1,251.40
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	230.17	34.75	259.51	1,241.14
Nutrient balance	1.90	29.06	8.90	10.27
Applied to removed ratio	1.01	1.84	1.03	1.01

Fresh water applied

34,764,000.00 gallons
1,280.24 acre-inches
32.83 inches/acre

Process wastewater applied

960,000.00 gallons
35.35 acre-inches
0.91 inches/acre

Total harvests for the crop

1 harvests

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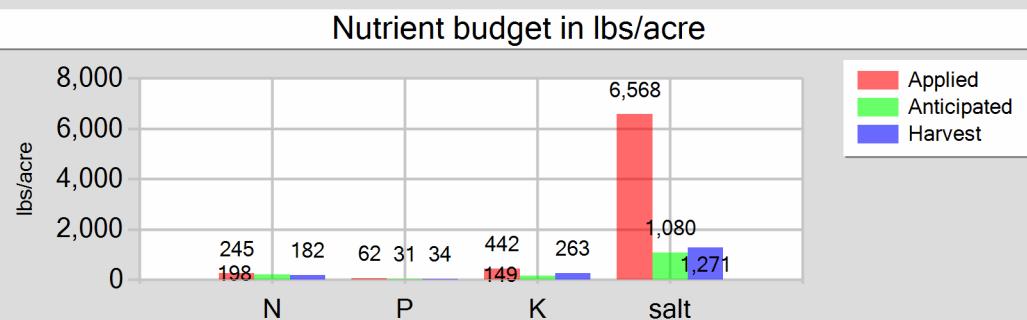
Reporting period 01/01/2023 to 12/31/2023.

Field D - 12/09/2022: Wheat, silage, soft dough

Field name: Field D

Crop: Wheat, silage, soft dough

Plant date: 12/09/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	128.17	39.25	251.38	5,762.88
Process wastewater	107.90	22.33	190.17	543.66
Fresh water	1.85	0.00	0.00	261.56
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	244.93	61.58	441.55	6,568.10
Anticipated crop nutrient removal	198.00	30.60	149.40	1,080.00
Actual crop nutrient removal	181.74	33.55	263.08	1,270.90
Nutrient balance	63.19	28.03	178.47	5,297.20
Applied to removed ratio	1.35	1.84	1.68	5.17

Fresh water applied

13,410,000.00 gallons
493.84 acre-inches
8.51 inches/acre

Process wastewater applied

2,688,000.00 gallons
98.99 acre-inches
1.71 inches/acre

Total harvests for the crop

1 harvests

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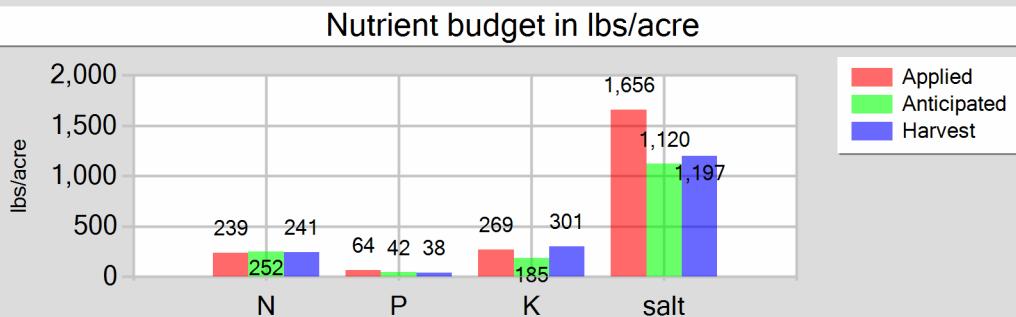
Reporting period 01/01/2023 to 12/31/2023.

Field D - 06/27/2023: Corn, silage

Field name: Field D

Crop: Corn, silage

Plant date: 06/27/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	164.10	56.09	213.56	0.00
Process wastewater	42.89	7.79	55.32	207.19
Fresh water	24.72	0.00	0.00	1,448.71
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	238.71	63.88	268.88	1,655.90
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	240.82	38.32	301.41	1,196.55
Nutrient balance	-2.12	25.56	-32.53	459.35
Applied to removed ratio	0.99	1.67	0.89	1.38

Fresh water applied

51,867,000.00 gallons
1,910.09 acre-inches
32.93 inches/acre

Process wastewater applied

1,440,000.00 gallons
53.03 acre-inches
0.91 inches/acre

Total harvests for the crop

1 harvests

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Reporting period 01/01/2023 to 12/31/2023.

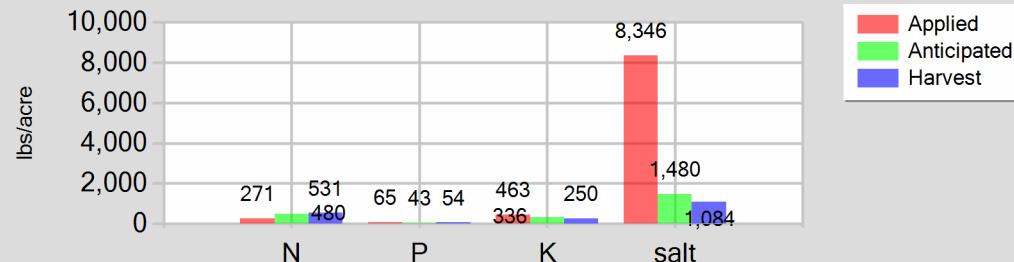
Field H E&W - 01/10/2023: Alfalfa, hay

Field name: Field H E&W

Crop: Alfalfa, hay

Plant date: 01/10/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	160.22	49.06	314.23	7,203.60
Process wastewater	76.32	15.46	149.11	282.52
Fresh water	20.02	0.00	0.00	860.10
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	270.56	64.52	463.33	8,346.21
Anticipated crop nutrient removal	480.00	43.20	336.00	1,480.00
Actual crop nutrient removal	531.36	54.30	250.17	1,084.45
Nutrient balance	-260.81	10.22	213.16	7,261.77
Applied to removed ratio	0.51	1.19	1.85	7.70

Fresh water applied

39,744,000.00 gallons
1,463.64 acre-inches
29.87 inches/acre

Process wastewater applied

1,152,000.00 gallons
42.42 acre-inches
0.87 inches/acre

Total harvests for the crop

2 harvests

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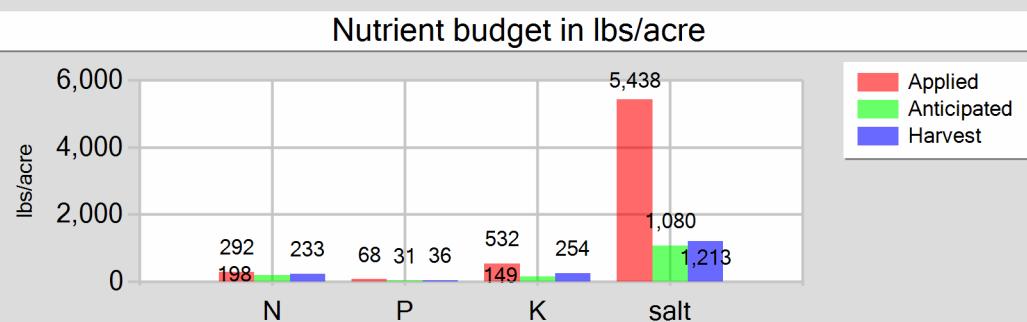
Reporting period 01/01/2023 to 12/31/2023.

Field L - 12/09/2022: Wheat, silage, soft dough

Field name: Field L

Crop: Wheat, silage, soft dough

Plant date: 12/09/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	96.13	29.44	188.54	4,322.16
Process wastewater	187.46	38.49	343.80	850.79
Fresh water	1.89	0.00	0.00	265.38
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	292.48	67.93	532.34	5,438.33
Anticipated crop nutrient removal	198.00	30.60	149.40	1,080.00
Actual crop nutrient removal	233.05	35.67	254.45	1,212.82
Nutrient balance	59.43	32.25	277.88	4,225.51
Applied to removed ratio	1.26	1.90	2.09	4.48

Fresh water applied
9,060,000.00 gallons
333.65 acre-inches
8.34 inches/acre

Process wastewater applied
2,880,000.00 gallons
106.06 acre-inches
2.65 inches/acre

Total harvests for the crop
1 harvests

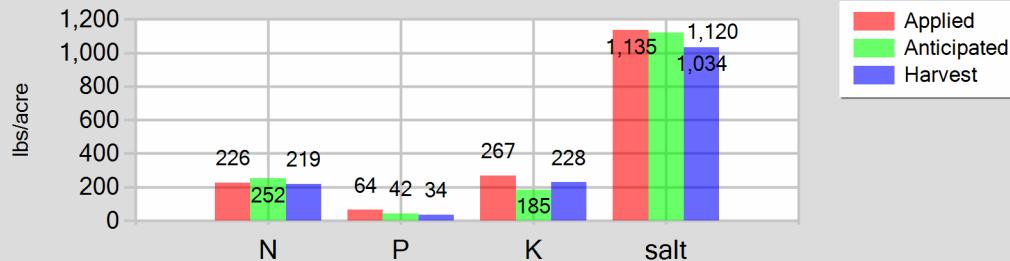
Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

Field L - 06/29/2023: Corn, silage

Field name: Field L Crop: Corn, silage Plant date: 06/29/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	164.10	56.09	213.56	0.00
Process wastewater	41.46	7.53	53.47	200.28
Fresh water	13.83	0.00	0.00	934.50
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	226.39	63.62	267.03	1,134.78
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	218.58	34.35	228.34	1,034.35
Nutrient balance	7.81	29.27	38.70	100.43
Applied to removed ratio	1.04	1.85	1.17	1.10

Fresh water applied

36,942,000.00 gallons
1,360.45 acre-inches
34.01 inches/acre

Process wastewater applied

960,000.00 gallons
35.35 acre-inches
0.88 inches/acre

Total harvests for the crop

1 harvests

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Reporting period 01/01/2023 to 12/31/2023.

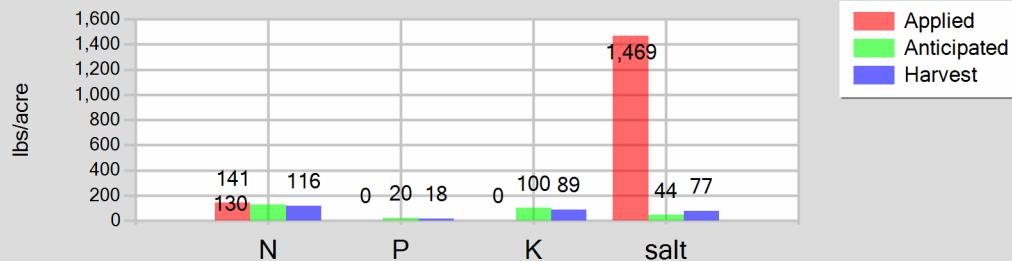
Field MN - 01/03/2012: Almond, in shell

Field name: Field MN

Crop: Almond, in shell

Plant date: 01/03/2012

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	100.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	26.72	0.00	0.00	1,469.34
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	140.72	0.00	0.00	1,469.34
Anticipated crop nutrient removal	130.00	20.00	100.00	44.00
Actual crop nutrient removal	116.31	17.89	89.47	76.50
Nutrient balance	24.40	-17.89	-89.47	1,392.84
Applied to removed ratio	1.21	0.00	0.00	19.21

Fresh water applied

18,432,000.00 gallons
678.79 acre-inches
35.73 inches/acre

Process wastewater applied

0.00 gallons
0.00 acre-inches
0.00 inches/acre

Total harvests for the crop

1 harvests

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Reporting period 01/01/2023 to 12/31/2023.

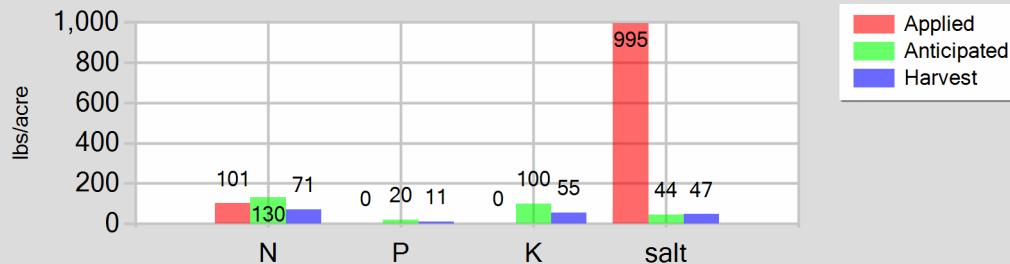
Field MS - 01/02/2020: Almond, in shell

Field name: Field MS

Crop: Almond, in shell

Plant date: 01/02/2020

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	80.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	7.07	0.00	0.00	994.99
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	101.07	0.00	0.00	994.99
Anticipated crop nutrient removal	130.00	20.00	100.00	44.00
Actual crop nutrient removal	71.50	11.00	55.00	47.03
Nutrient balance	29.57	-11.00	-55.00	947.97
Applied to removed ratio	1.41	0.00	0.00	21.16

Fresh water applied

17,280,000.00 *gallons*
636.36 *acre-inches*
31.82 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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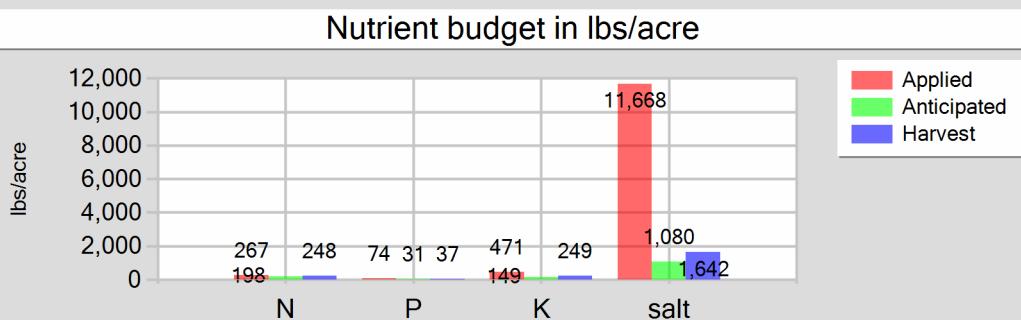
Reporting period 01/01/2023 to 12/31/2023.

Field RBN - 12/08/2022: Wheat, silage, soft dough

Field name: Field RBN

Crop: Wheat, silage, soft dough

Plant date: 12/08/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	240.33	73.59	471.34	10,805.40
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	19.58	0.00	0.00	862.84
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	266.90	73.59	471.34	11,668.24
Anticipated crop nutrient removal	198.00	30.60	149.40	1,080.00
Actual crop nutrient removal	247.68	36.80	249.10	1,641.78
Nutrient balance	19.22	36.79	222.24	10,026.46
Applied to removed ratio	1.08	2.00	1.89	7.11

Fresh water applied

9,180,000.00 gallons
338.07 acre-inches
8.90 inches/acre

Process wastewater applied

0.00 gallons
0.00 acre-inches
0.00 inches/acre

Total harvests for the crop

1 harvests

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Reporting period 01/01/2023 to 12/31/2023.

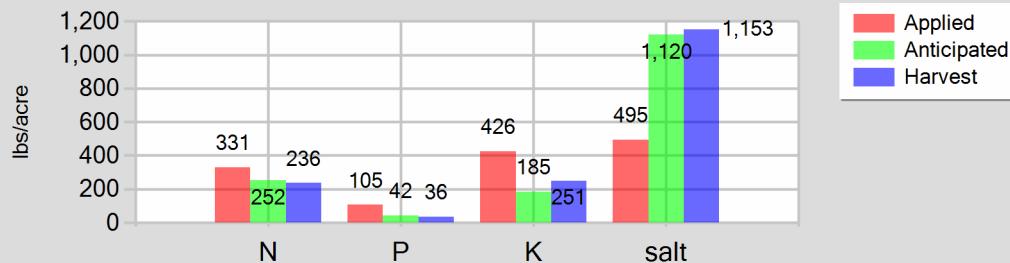
Field RBN - 07/18/2023: Corn, silage

Field name: Field RBN

Crop: Corn, silage

Plant date: 07/18/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	314.34	105.42	425.57	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	9.21	0.00	0.00	495.41
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	330.55	105.42	425.57	495.41
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	235.63	35.76	250.67	1,153.10
Nutrient balance	94.92	69.66	174.89	-657.69
Applied to removed ratio	1.40	2.95	1.70	0.43

Fresh water applied

28,257,000.00 gallons
1,040.61 acre-inches
27.38 inches/acre

Process wastewater applied

0.00 gallons
0.00 acre-inches
0.00 inches/acre

Total harvests for the crop

1 harvests

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Reporting period 01/01/2023 to 12/31/2023.

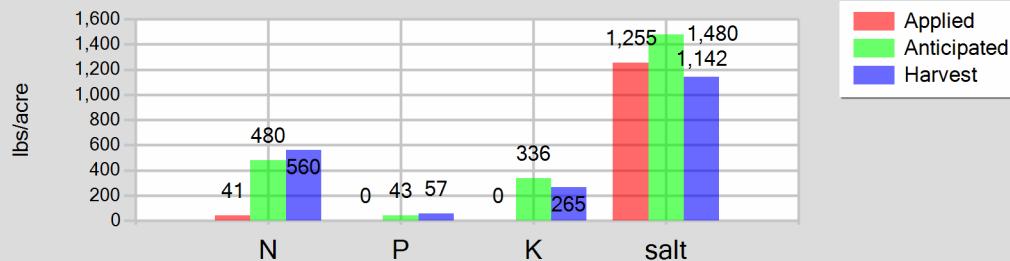
Field RBS - 11/17/2019: Alfalfa, hay

Field name: Field RBS

Crop: Alfalfa, hay

Plant date: 11/17/2019

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	26.67	0.00	0.00	1,254.58
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	40.67	0.00	0.00	1,254.58
Anticipated crop nutrient removal	480.00	43.20	336.00	1,480.00
Actual crop nutrient removal	560.15	57.26	264.51	1,142.10
Nutrient balance	-519.48	-57.26	-264.51	112.47
Applied to removed ratio	0.07	0.00	0.00	1.10

Fresh water applied

34,614,000.00 gallons
1,274.72 acre-inches
32.69 inches/acre

Process wastewater applied

0.00 gallons
0.00 acre-inches
0.00 inches/acre

Total harvests for the crop

2 harvests

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

NUTRIENT ANALYSES**A. MANURE ANALYSES****Corral solids - 2022**

Sample and source description: Corral solids - 2022

Sample date: 09/21/2022 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 37.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,900.00	3,950.00	25,300.00							58.00
DL	1,000.00	1,000.00	1,000.00							0.10

Corral Solids

Sample and source description: Corral Solids

Sample date: 06/01/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 43.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,600.00	4,990.00	19,000.00							0.00
DL	1,000.00	1,000.00	1,000.00							0.10

Sinks Heifer Manure

Sample and source description: Sinks Heifer Manure

Sample date: 06/08/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 19.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	19,500.00	6,540.00	26,400.00							0.00
DL	1,000.00	1,000.00	1,000.00							0.10

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Corral SolidsSample and source description: Corral SolidsSample date: 11/07/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight
Moisture: 35.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	11,300.00	6,130.00	38,400.00							0.00
DL	1,000.00	1,000.00	1,000.00							0.10

B. PROCESS WASTEWATER ANALYSES**LG-2-4, 2022**Sample and source description: LG-2-4, 2022Sample date: 11/17/2022 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	186.00	135.00	0.00	0.00	46.30	314.00								2,750.00	1,760
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

LG-2-1Sample and source description: LG-2-1Sample date: 03/16/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	389.00	126.00	0.00	0.00	78.80	760.00								2,850.00	1,440
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

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LG-2-2

Sample and source description: LG-2-2

Sample date: 06/08/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	207.00	106.50	0.00	0.00	37.60	267.00								2,620.00	1,000
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

LG-2-3

Sample and source description: LG-2-3

Sample date: 08/23/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	137.00	67.20	0.00	0.00	21.50	215.00								2,010.00	920
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

LG-2-4

Sample and source description: LG-2-4

Sample date: 11/07/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	230.00	160.00	0.00	0.00	18.60	312.00								3,040.00	1,500
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

Export Slurry

Sample and source description: Export Slurry

Sample date: 12/05/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	924.00	168.00	0.00	0.00	12.50	51.60								2,570.00	1,320
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

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C. FRESH WATER ANALYSES

Bowen-Dom

Bowen-Dom

Sample description: Bowen-Dom

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	6.51	0.00	6.51								458.00	293
DL	0.50	0.50	0.50								1.00	10

CWD Canal

CWD Canal

Sample description: CWD Canal

Sample date: 08/23/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.00	0.00	0.00								100.00	17
DL	0.50	0.50	0.50								1.00	10

Dairy Dom.

Dairy-Dom

Sample description: Dairy-Dom

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	1.99	0.00	1.99								693.00	444
DL	0.50	0.50	0.50								1.00	10

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DW-1**DW-1**

Sample description: DW-1

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	1.96	0.00	1.96								404.00	259
DL	0.50	0.50	0.50								1.00	10

DW-2**DW-2**

Sample description: DW-2

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	6.16	0.00	6.16								486.00	311
DL	0.50	0.50	0.50								1.00	10

DW-Bowen**DW-Bowen**

Sample description: DW-Bowen

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	6.60	0.00	6.60								540.00	346
DL	0.50	0.50	0.50								1.00	10

DW-Haynes

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DW-Haynes

DW-Haynes

Sample description: DW-Haynes

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	10.40	0.00	10.40								631.00	404
DL	0.50	0.50	0.50								1.00	10

DW-RBLVD

DW-RBLVD

Sample description: DW-RBLVD

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	9.71	0.00	9.71								669.00	428
DL	0.50	0.50	0.50								1.00	10

Laws Dom

Laws-Dom

Sample description: Laws-Dom

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	10.80	0.00	10.80								620.00	397
DL	0.50	0.50	0.50								1.00	10

RBVD-dom

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RBVD-dom

RBLVD-Dom

Sample description: RBLVD-Dom

Sample date: 12/26/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	8.79	0.00	8.79								542.00	347
DL	0.50	0.50	0.50								1.00	10

D. SOIL ANALYSES

No soil analyses entered.

E. PLANT TISSUE ANALYSES

Field BN - 01/05/2014: Almond, in shell

Almonds

Sample and source description: Almonds

Sample date: 09/29/2023 Source of analysis: Other/estimated Method of reporting: Dry-weight

Moisture: 5.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	68,419.00	10,526.00	52,628.00		4.50
DL	1,000.00	1,000.00	1,000.00		0.10

Field BS - 12/16/2022: Wheat, silage, soft dough

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Field BS - 12/16/2022: Wheat, silage, soft dough

Wheat Hay

Sample and source description: Wheat Hay

Sample date: 05/25/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 54.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,000.00	2,300.00	18,300.00		0.00
DL	1,000.00	1,000.00	1,000.00		0.10

Wheat Hay

Sample and source description: Wheat Hay

Sample date: 05/28/2023 Source of analysis: Other/estimated Method of reporting: Dry-weight

Moisture: 8.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	18,500.00	2,030.00	19,200.00		10.90
DL	1,000.00	1,000.00	1,000.00		0.10

Field BS - 06/28/2023: Corn, silage

Corn Silages

Sample and source description: Corn Silages

Sample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 61.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	10,200.00	1,540.00	11,500.00		5.50
DL	1,000.00	1,000.00	1,000.00		0.10

Field D - 12/09/2022: Wheat, silage, soft dough

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Field D - 12/09/2022: Wheat, silage, soft dough

Winter Forage

Sample and source description: Winter Forage

Sample date: 05/23/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,300.00	2,640.00	20,700.00		10.00
DL	1,000.00	1,000.00	1,000.00		0.10

Field D - 06/27/2023: Corn, silage

Corn Silages

Sample and source description: Corn Silages

Sample date: 10/15/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 72.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	15,900.00	2,530.00	19,900.00		7.90
DL	1,000.00	1,000.00	1,000.00		0.10

Field H E&W - 01/10/2023: Alfalfa, hay

Alfalfa Hay

Sample and source description: Alfalfa Hay

Sample date: 05/25/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 18.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	41,920.00	4,300.00	20,400.00		9.60
DL	1,000.00	1,000.00	1,000.00		0.10

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Field H E&W - 01/10/2023: Alfalfa, hay

Alfalfa Haylage

Sample and source description: Alfalfa Haylage

Sample date: 05/25/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 59.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	38,400.00	3,800.00	13,100.00		0.00
DL	1,000.00	1,000.00	1,000.00		0.10

Field L - 12/09/2022: Wheat, silage, soft dough

Winter Forage

Sample and source description: Winter Forage

Sample date: 05/23/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 64.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	19,600.00	3,000.00	21,400.00		10.20
DL	1,000.00	1,000.00	1,000.00		0.10

Field L - 06/29/2023: Corn, silage

Corn Silages

Sample and source description: Corn Silages

Sample date: 10/15/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	11,200.00	1,760.00	11,700.00		5.30
DL	1,000.00	1,000.00	1,000.00		0.10

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Field MN - 01/03/2012: Almond, in shell

Almonds

Sample and source description: Almonds

Sample date: 09/29/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 5.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	68,419.00	10,526.00	52,628.00		4.50
DL	1,000.00	1,000.00	1,000.00		0.10

Field MS - 01/02/2020: Almond, in shell

Almonds

Sample and source description: Almonds

Sample date: 09/29/2023 Source of analysis: Other/estimated Method of reporting: Dry-weight

Moisture: 5.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	68,419.00	10,526.00	52,628.00		4.50
DL	1,000.00	1,000.00	1,000.00		0.10

Field RBN - 12/08/2022: Wheat, silage, soft dough

Winter Forage

Sample and source description: Winter Forage

Sample date: 05/22/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 60.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	17,500.00	2,600.00	17,600.00		11.60
DL	1,000.00	1,000.00	1,000.00		0.10

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Field RBN - 07/18/2023: Corn, silage

Corn SilagesSample and source description: Corn SilagesSample date: 11/11/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 70.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,100.00	2,140.00	15,000.00		6.90
DL	1,000.00	1,000.00	1,000.00		0.10

Field RBS - 11/17/2019: Alfalfa, hay

Alfalfa HaylageSample and source description: Alfalfa HaylageSample date: 02/24/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 58.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	42,240.00	4,200.00	15,000.00		0.00
DL	1,000.00	1,000.00	1,000.00		0.10

Alfalfa HaySample and source description: Alfalfa HaySample date: 05/25/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 18.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	41,920.00	4,300.00	20,400.00		9.60
DL	1,000.00	1,000.00	1,000.00		0.10

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

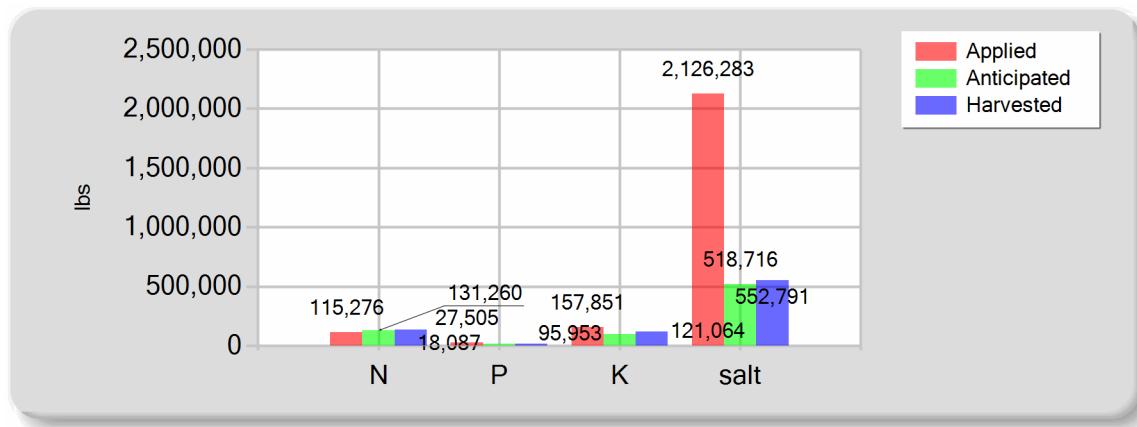
No subsurface (tile) drainage analyses entered.

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

	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	7,500.00	0.00	0.00	0.00
Dry manure	68,938.13	22,257.45	113,113.58	1,551,655.44
Process wastewater	26,064.44	5,247.98	44,736.94	122,827.72
Fresh water	7,985.82	0.00	0.00	451,799.54
Atmospheric deposition	4,788.00	0.00	0.00	0.00
Total nutrients applied	115,276.38	27,505.43	157,850.53	2,126,282.69
Anticipated crop nutrient removal	131,260.00	18,086.60	95,953.00	518,716.00
Actual crop nutrient removal	136,647.24	18,411.03	121,064.42	552,791.01
Nutrient balance	-21,370.86	9,094.40	36,786.10	1,573,491.69
Applied to removed ratio	0.84	1.49	1.30	3.85

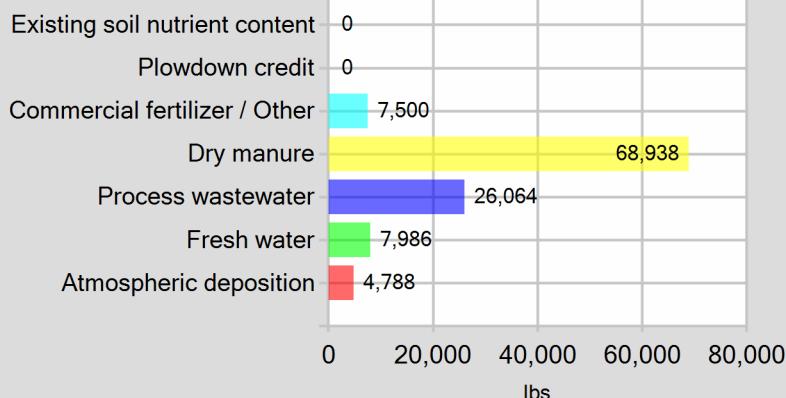
B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL

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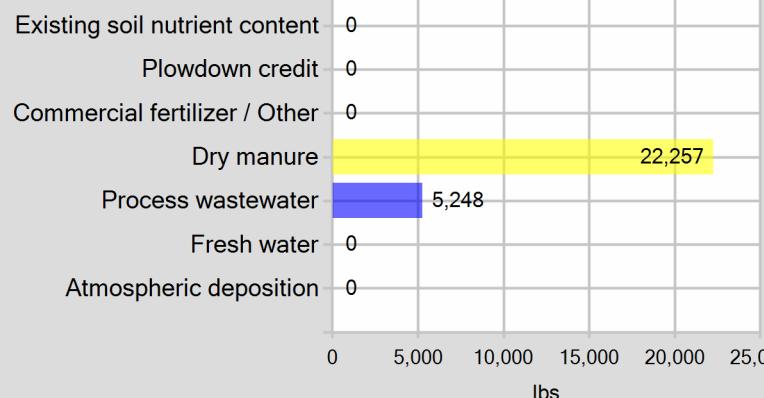
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C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE

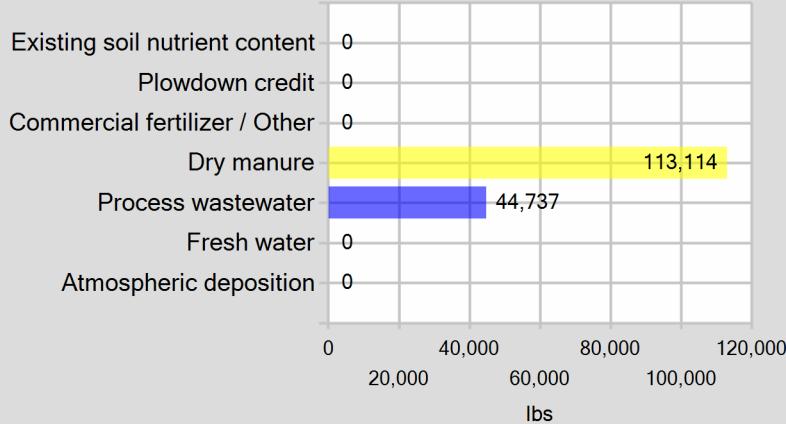
Pounds of nitrogen applied



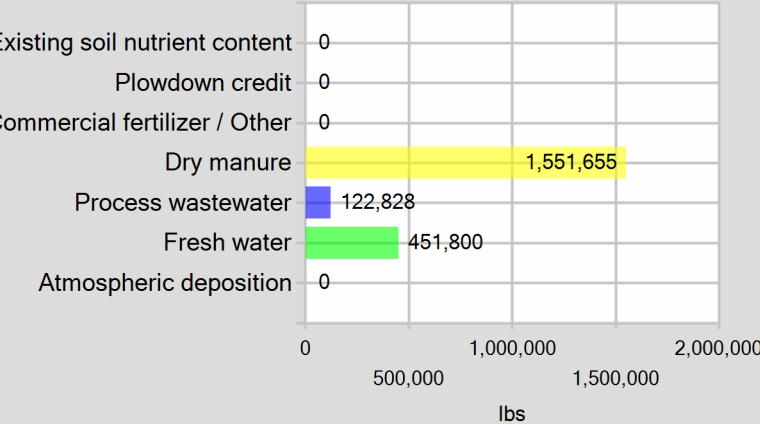
Pounds of phosphorus applied



Pounds of potassium applied



Pounds of salt applied



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EXCEPTION REPORTING

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

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

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

B. STORM WATER DISCHARGES

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

No stormwater discharges occurred during the reporting period.

C. LAND APPLICATION AREA TO SURFACE WATER DISCHARGES

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

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

NUTRIENT MANAGEMENT PLAN AND EXPORT AGREEMENT STATEMENTS

A. NUTRIENT MANAGEMENT PLAN STATEMENTS

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

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

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

B. EXPORT AGREEMENT STATEMENT

Are there any written agreements with third parties to receive manure or process wastewater that are new or were revised within the reporting period? No _____

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

ADDITIONAL NOTES

A. NOTES

HANSEN DAIRY

Dairy sold Milk Cows and Dry Cows on November 1, 2023. Heifers, 7-24 months were moved back to the dairy site.

Almonds are irrigated by drip and fertilizer is applied through the drip is used to fertilize the trees.

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

CERTIFICATION

A. OWNER AND/OR OPERATOR CERTIFICATION

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

Dennis Hansen

Dennis Hansen (Jun 19, 2024 08:47 PDT)

SIGNATURE OF OWNER OF FACILITY

SIGNATURE OF OPERATOR OF FACILITY

Dennis Hansen

SAME AS OWNER

PRINT OR TYPE NAME

PRINT OR TYPE NAME

Jun 19, 2024

DATE

DATE

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

ATTACHMENTS

A. REQUIRED ATTACHMENTS

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

Annual Dairy Facility Assessment

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

Manure/Process Wastewater Tracking Manifests

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

Corrective Actions Documents

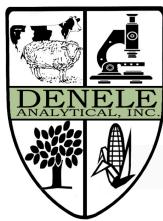
Provide records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements of the General Order. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.

Groundwater Monitoring

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

Storm Water Monitoring

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



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Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

Hansen & Sons, Inc.
20279 Road 13
Chowchilla, CA 93610

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 8/23/23 2:30 PM
SUBMITTED BY: Dan
ANALYZED DATE: 8/25/23

Irrigation/ Ground Water (H1)

SOURCE: Canal Water

NOTES: Temperature was above qualifying at 25.2c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
C.W.D. Canal	T3235032B	Electrical Conductivity (EC)	EPA 120.1 and	< 0.100	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	< 0.140	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	16.6	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	101	95.1 (T3235024B)	95.9 (T3235024B)	0.815
Electrical Conductivity (EC)	97.1			4.81
Nitrate Nitrogen (NO3-N)	104			7.24

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DENELE ANALYTICAL, INC.
865 S. KILROY
TURLOCK, CA 95380

PH# 209-634-9055 FAX# 209-634-9057

Client: HANSEN DAIRY
Mailing address: 20279 Road 13, Chowchilla CA93610
(not facility address)
Phone#: 559-416-6999

IRRIGATION/GROUND WATER

H1 EC*, NO3-N, NH4-N*
H6 EC, TN, TDS
H7 Combination of H1 & H6
H14 EC, NO3-N, NH4-N, Ca, Mg, Na, Bicarb
Carb, SO4, Cl, TDS

PROCESS WASTE WATER

H3 EC*, NH4-N, TKN, TP, K, TDS
H4 EC*, NO3-N, NH4-N, TKN, TP, K, TDS
H5 Ca, Mg, Na, Bicarb, Carb, SO4, Cl
H8 Combination of H3 & H5
H9 Combination of H4 & H5

TILE DRAIN

H2 EC*, NO3-N, TP, NH4-N*, TDS

*Required Field Measurement

— (Check here if performed)

Date Collected	Time Collected	Sample ID	Description	Temp	Well Purge	Analysis			
8-23-23	1125	16-2-3		24.4C		X			
8-23-23	1135	C.W.D. CANAL		25.2C		X			
3									
4									
5									
6									
7									
8									
9									
10									

CHAIN OF CUSTODY RECORDING

Signature	Company	Received Date & Time	Relinquished Date & Time	(LABORATORY USE ONLY)
1st <i>Mw8</i>	HeartLand Consulting		8-23-23 1430	Logged In By: LABORATORY NUMBER
2nd <i> </i>	DENELE ANALYTICAL, INC.	8-23-23 2:30		T 3235032

Required to be submitted to any agency? (YES / NO)

DAIRY COMPLIANCE

Authorized Copy Released To:

hlcdn@yahoo.com

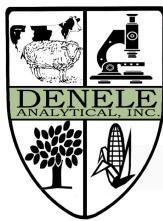
Sampled By: Daniel Roos

Project ID:

SOIL

K3 Soluble Phosphorus
K4 1ft NO3, Organic Matter
K5 Pre-Plant (2ft NO3), Fall (1-2ft NO3), Fall (2-3ft NO3)
K6 0-1ft EC, NO3, Soluble P, K, Organic Matter
K7 Combination of K3 & K4
K8 Combination of K3 & K5

H1	H3	M3	F18	OTHER



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Compliance Analysis Report

Customer

Hansen & Sons, Inc.
20279 Road 13
Chowchilla, CA 93610

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 12/27/23 8:00 AM
SUBMITTED BY: Dan-Drop Box
ANALYZED DATE: 12/27/23

Irrigation/ Ground Water (H1)

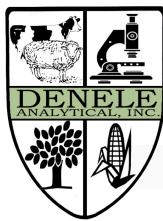
SOURCE: Well Water

NOTES: Temperature was above qualifying at 7.6c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
Dairy-DOM	T3361001A	Electrical Conductivity (EC)	EPA 120.1 and	0.693	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	1.99	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	444	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	91.8	95.8 (T3355006J)	94.6 (T3355006J)	1.26
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Irrigation/ Ground Water (H1)

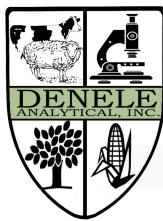
SOURCE: Well Water

NOTES: Temperature was above qualifying at 8.0c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
DW-1	T3361001B	Electrical Conductivity (EC)	EPA 120.1 and	0.404	mmhos/cm
		Nitrate Nitrogen (NO ₃ -N)	EPA 353.2	1.96	mg/L
		Ammonia Nitrogen (NH ₃ -N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	259	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH ₃ -N)	91.8	95.8 (T3355006J)	94.6 (T3355006J)	1.26
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO ₃ -N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Irrigation/ Ground Water (H1)

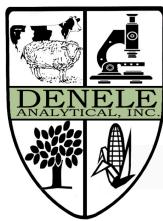
SOURCE: Well Water

NOTES: Temperature was above qualifying at 7.2c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
DW-2	T3361001C	Electrical Conductivity (EC)	EPA 120.1 and	0.486	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	6.16	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	311	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	91.8	95.8 (T3355006J)	94.6 (T3355006J)	1.26
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Irrigation/ Ground Water (H1)

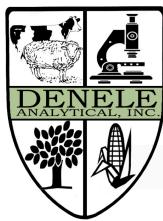
SOURCE: Well Water

NOTES: Temperature was above qualifying at 7.2c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
LAWS-DOM	T3361001D	Electrical Conductivity (EC)	EPA 120.1 and	0.620	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	10.8	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	397	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	91.8	95.8 (T3355006J)	94.6 (T3355006J)	1.26
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Irrigation/ Ground Water (H1)

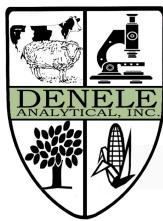
SOURCE: Well Water

NOTES: Temperature was above qualifying at 7.6c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
DW-HAYNES	T3361001E	Electrical Conductivity (EC)	EPA 120.1 and	0.631	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	10.4	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	404	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	91.8	95.8 (T3355006J)	94.6 (T3355006J)	1.26
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Merced, CA 95344

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RECEIVED DATE: 12/27/23 8:00 AM
SUBMITTED BY: Dan-Drop Box
ANALYZED DATE: 12/27/23

Irrigation/ Ground Water (H1)

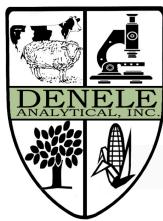
SOURCE: Well Water

NOTES: Temperature was above qualifying at 7.2c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
BOWEN-DW	T3361001F	Electrical Conductivity (EC)	EPA 120.1 and	0.458	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	6.51	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	293	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	91.8	95.8 (T3355006J)	94.6 (T3355006J)	1.26
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Irrigation/ Ground Water (H1)

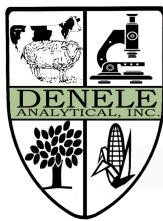
SOURCE: Well Water

NOTES: Temperature was above qualifying at 8.2c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
DW-BOWEN	T3361001G	Electrical Conductivity (EC)	EPA 120.1 and	0.540	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	6.60	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	346	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	99.0	100 (T3361001G)	98.2 (T3361001G)	1.81
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Irrigation/ Ground Water (H1)

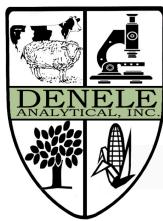
SOURCE: Well Water

NOTES: Temperature was above qualifying at 7.0c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
R-BLVD-DOM	T3361001H	Electrical Conductivity (EC)	EPA 120.1 and	0.542	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	8.79	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	347	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	99.0	100 (T3361001G)	98.2 (T3361001G)	1.81
Electrical Conductivity (EC)	97.2			1.65
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

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Irrigation/ Ground Water (H1)

SOURCE: Well Water

NOTES: Temperature was above qualifying at 7.6c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
DW-R-BLVD	T3361001I	Electrical Conductivity (EC)	EPA 120.1 and	0.669	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	9.71	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	428	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	99.0	100 (T3361001G)	98.2 (T3361001G)	1.81
Electrical Conductivity (EC)	98.8			0.901
Nitrate Nitrogen (NO3-N)	103	104 (T3361008A)	100 (T3361008A)	3.27

The warranty of Denele Analytical is limited to the accuracy of the analyses of the samples as received. Denele Analytical assumes no responsibility for which the customer uses our test results, nor liability for any other warranties, express or implied. These terms and conditions shall supercede any conflicting terms and conditions submitted on customer purchase orders or other forms submitted for work.



DENELE ANALYTICAL, INC.
865 S. KILROY
TURLOCK, CA 95380

PH# 209-634-9055 FAX# 209-634-9057

Client: HANSEN DAIRY
Mailing address: 20279 Road 13, Chowchilla CA93610
(not facility address)
Phone#: 559-416-6999

IRRIGATION/GROUND WATER

H1 EC*, NO3-N, NH4-N*
H6 EC, TN, TDS
H7 Combination of H1 & H6
H14 EC, NO3-N, NH4-N, Ca, Mg, Na, Bicarb
Carb, SO4, Cl, TDS

PROCESS WASTE WATER

H3 EC*, NH4-N, TKN, TP, K, TDS
H4 EC*, NO3-N, NH4-N, TKN, TP, K, TDS
H5 Ca, Mg, Na, Bicarb, Carb, SO4, Cl
H8 Combination of H3 & H5
H9 Combination of H4 & H5

TILE DRAIN

H2 EC*, NO3-N, TP, NH4-N*, TDS

* Required Field Measurement

(Check here if performed)

Date Collected	Time Collected	Description	Temp	Well Purge	Analysis
12-26-23	1210	Dairy - DOM	7.6 °C	X	
2	1220	DN - 1	8.0 °C	X	
3	1225	DN - 2	7.2 °C	X	
4	1235	LAWs - DOM	7.2 °C	X	
5	1243	DN - HAYNES	7.6 °C	X	
6	1250	BOWEN - DOM	7.2 °C	X	
7	1300	DN - BOWEN	8.2 °C	X	
8	1315	R-BWD - DOM	7.0 °C	X	
9	12-26-23	DN - R-BWD,	7.6 °C	X	
10					

CHAIN OF CUSTODY RECORDING

Signature	Company	Received Date & Time	Relinquished Date & Time	(LABORATORY USE ONLY)
1st	HeartLand Consulting		12-26-23 1730	Logged In By:
2nd	DENELE ANALYTICAL, INC.	12-27-23 8:00		LABORATORY NUMBER T3361001

Required to be submitted to any agency? (YES / NO)

DAIRY COMPLIANCE

Authorized Copy Released To:

hlcdn@yahoo.com

Sampled By: Daniel Roos

Project ID:

SOIL

K3 Soluble Phosphorus
K4 1ft NO3, Organic Matter
K5 Pre-Plant (2ft NO3), Fall (1-2ft NO3), Fall (2-3ft NO3)
K6 0-1ft EC, NO3, Soluble P, K, Organic Matter
K7 Combination of K3 & K4
K8 Combination of K3 & K5

H1	H3	M3	F18	OTHER

2023 AR HANSEN DAIRY

Final Audit Report

2024-06-19

Created:	2024-06-18
By:	Daniel Roos (hlcdn@yahoo.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAp8QZNLZmpez5f2a4kY28VgUmrdxY4mVp

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-  Document created by Daniel Roos (hlcdn@yahoo.com)
2024-06-18 - 5:54:05 PM GMT- IP address: 52.53.197.200
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-  Signer darlenehansen12@yahoo.com entered name at signing as Dennis Hansen
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