OceanGrown, Inc.
7453-C Commercial Circle , Fort Pierce FL 34951
Phone: (941)921-2401 Fax: (941)866-0318
www.oceangrown.com email: info@oceangrown.com

OceanSolution Ag Broadcast

Trial – Indiana

x1 Application - Alfalfa

August 2014

OCEAN SOLUTION

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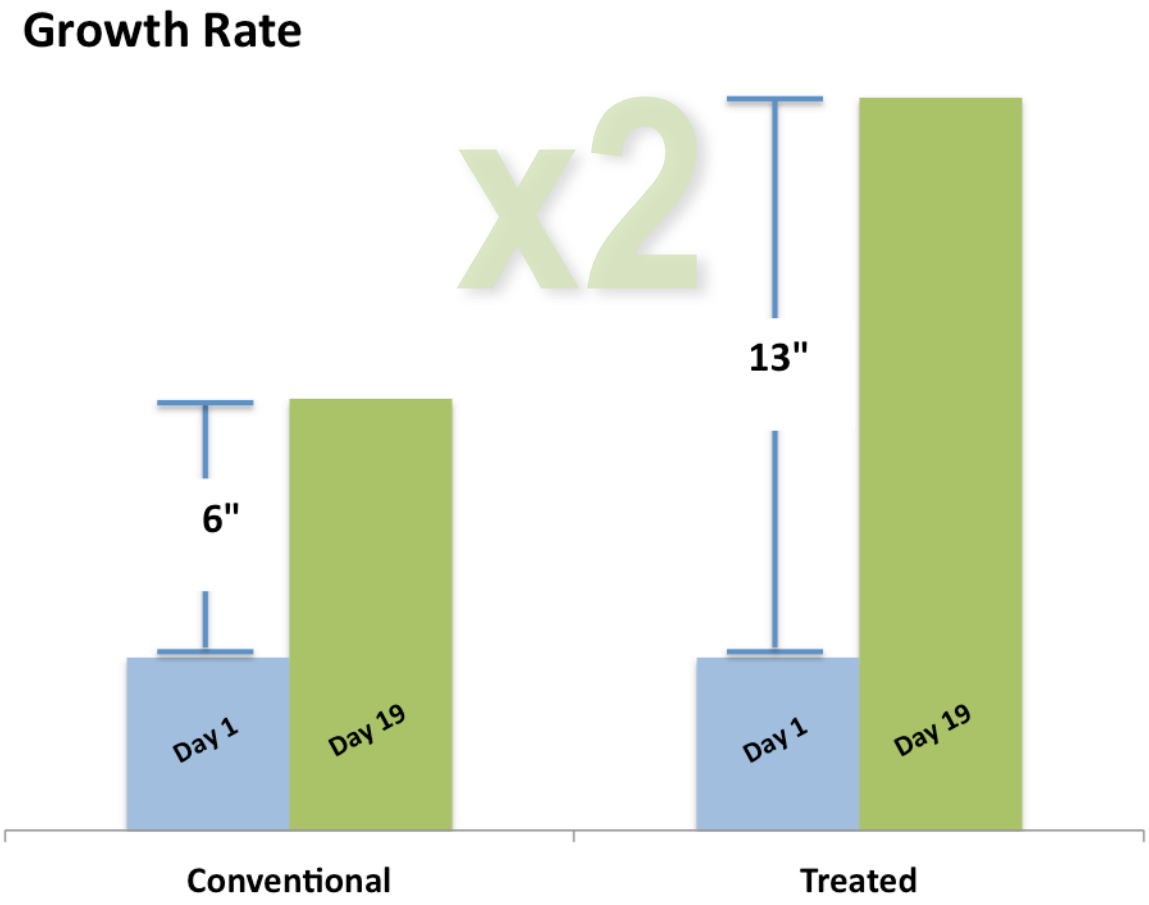

Alfalfa treated after cutting 4 inches high. 19 days later the conventional had grown 6inches and the treated had grown 13inches. Growth was more then doubled compared to conventional fertilizer.

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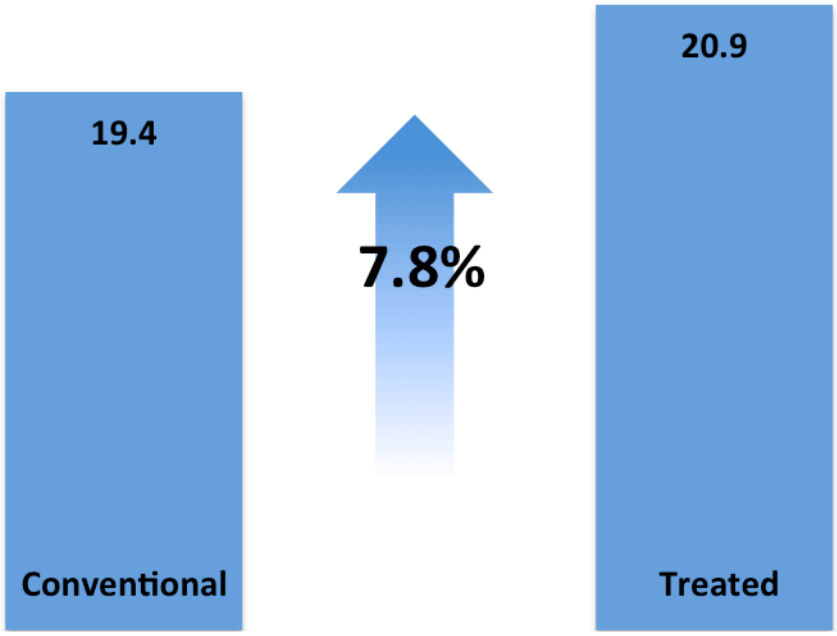
Crude Protein



Crude protein measures the nitrogen content of a feedstuff, including both true protein and non-protein nitrogen.

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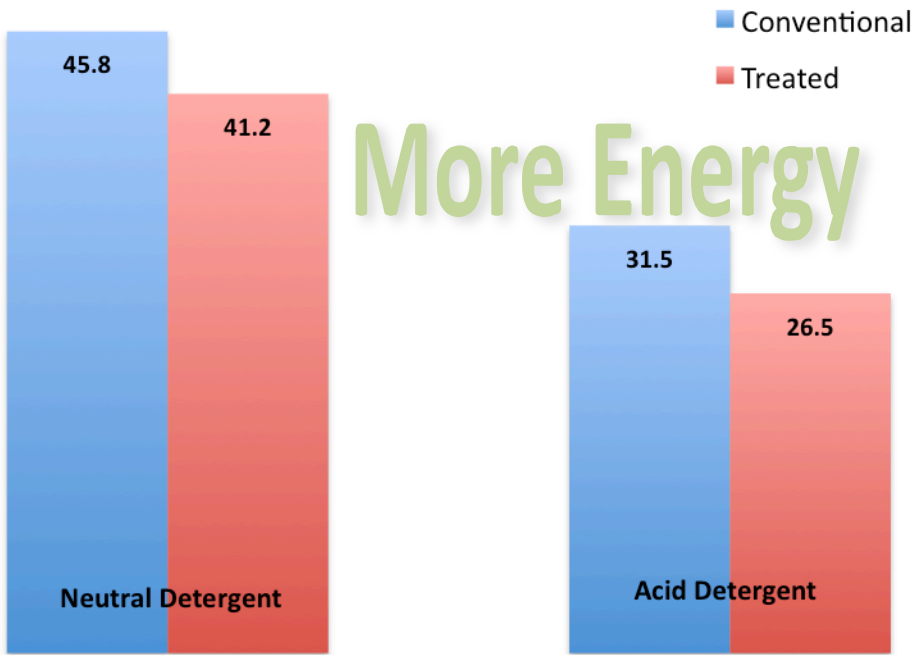
Fiber



Neutral Detergent Fiber (NDF): Structural components of the plant, specifically cell wall. NDF is a predictor of voluntary intake because it provides bulk or fill. In general, low NDF values are desired because NDF increases as forages mature.

Acid Detergent Fiber (ADF): The least digestible plant components, including cellulose and lignin. ADF values are inversely related to digestibility, so forages with low ADF concentrations are usually higher in energy.

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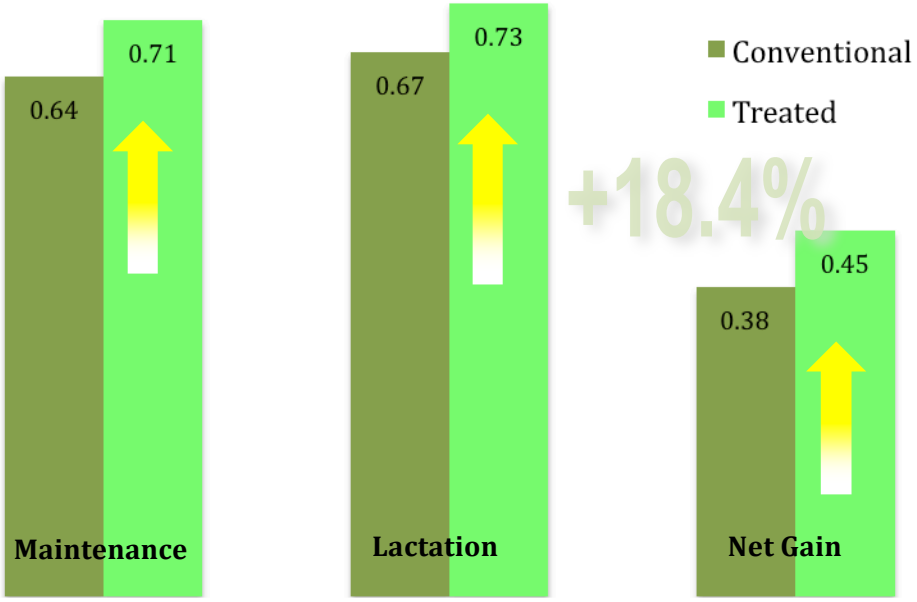
Energy



The net energy system separates the energy requirements into their fractional components used for tissue maintenance, tissue gain, and lactation. Net tissue gain was increased by 18.4%.

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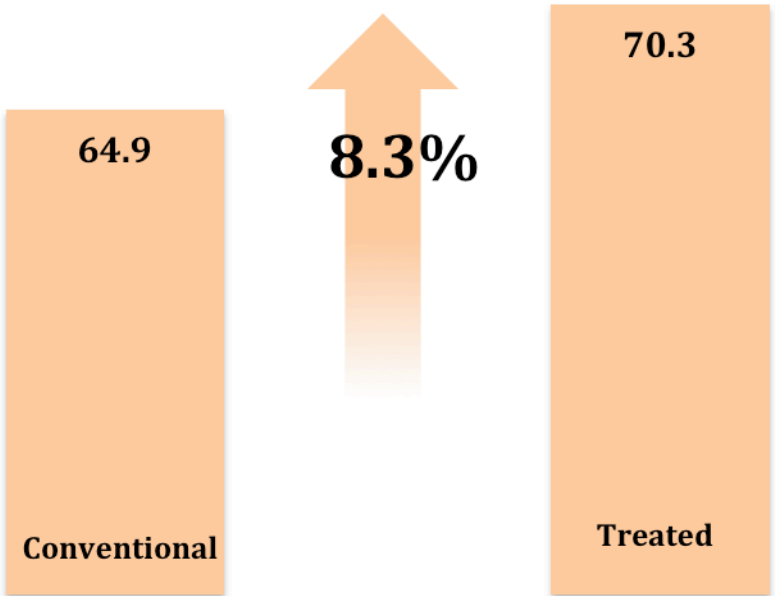
Total Digestable Nutrients (TDN)



Total digestible nutrients (TDN) is the sum of the digestible fiber, protein, lipid, and carbohydrate components of a feedstuff or diet.

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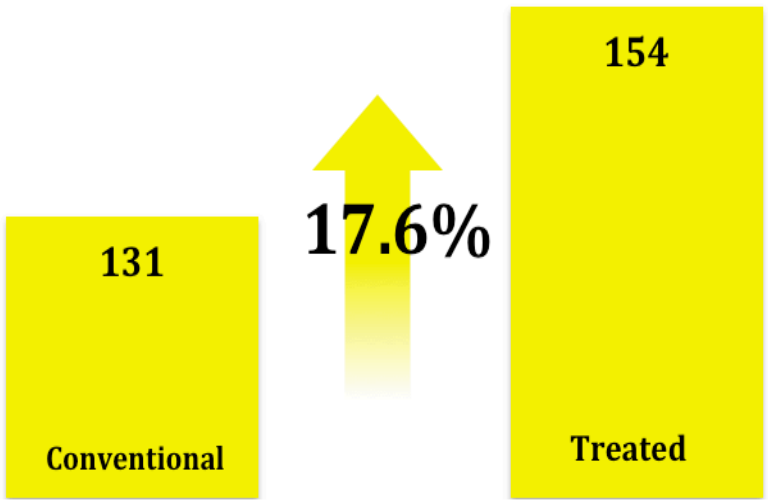
Relative Feed Value



Relative feed value is a prediction of feeding value that combines estimated intake (NDF) and estimated digestibility (ADF) into a single index.

Report No.
F14220-0255
Account No.
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QUALITY ANALYSES FOR INFORMED DECISIONS®

To: SHAUN WARDEN
2861 NE 21ST AVE
WHITEHOUSE, FL 33064
USA

954-821-9469
PAID MC

P.O. NUMBER: 220-0255

Date Received: 08/08/2014 **Date Reported:** 08/12/2014

SOIL TEST REPORT

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH		Cation Exchange Capacity meq/100g	Percent Cation Saturation				
			Bray-1 Equiv ppm-P	Bray P2 ppm-P					Soil pH	Buffer pH		% K	% Mg	% Ca	% H	% Na
W/FERT	39444	3.9	14 *L*		109 *M*	185 *H*	900 *L*		5.9	6.8	8.7	3.2	17.7	51.6	27.5	

VL = VERY LOW *L* = LOW *M* = MEDIUM *H* = HIGH *VH* = VERY HIGH

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO3-N ppm	Ammonium NH4-N ppm	Bicarb-P P ppm				Comments

REPORT PRINTED 8/13/2014 A&L-R

Report No:
F14220-0255
Account No:
99990

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QUALITY ANALYSES FOR INFORMED DECISIONS®

REPORT PRINTED 8/13/2014

To: SHAUN WARDEN
2861 NE 21ST AVE
WHITEHOUSE, FL 33064
USA

For:

Copy To: 954-821-9469
PAID MC

Date Received: 08/08/2014
Date Reported: 08/13/2014

SOIL FERTILITY RECOMMENDATIONS

Sample ID	Intended Crop	Previous Crop	Yield Goal	Lime Tons/A	Nitrogen N lb/A	Phosphate P2O5 lb/A	Potash K2O lb/A	Magnesium Mg lb/A	Sulfur S lb/A	Zinc Zn lb/A	Manganese Mn lb/A	Iron Fe lb/A	Copper Cu lb/A	Boron B lb/A
W/FERT	Alfalfa Hay		6 tons	1.5	0	120	310	0						

a&l-rec

Sample W/FERT: ALFALFA - Recommendations are for topdressing established alfalfa. P and K maintenance is included. For new seedings, apply 25-30 lbs N per acre and incorporate a portion of the P and K prior to seeding.
Sample W/FERT: LIME RECOMMENDATION: The lime recommendation is a one-time application intended for a 3-4 year period. Adjust the application rate based on lime quality.

Report No,
F14220-5051
Account No.
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PLANT ANALYSIS REPORT

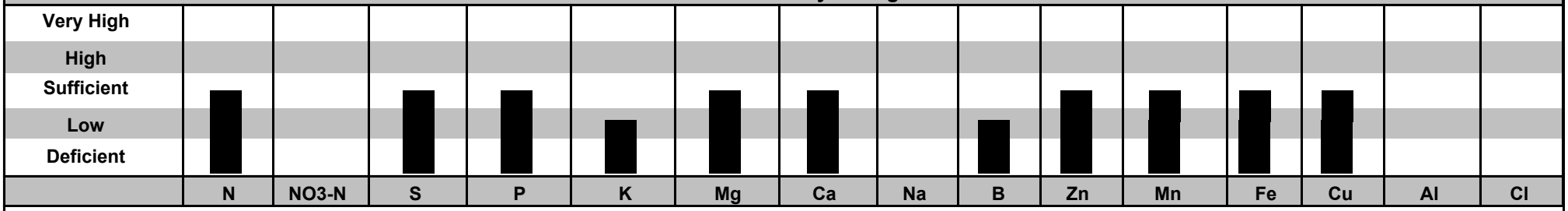
To: SHAUN WARDEN
2861 NE 21ST AVE
WHITEHOUSE, FL 33064
USA
USA

Purchase Order: 220-5051
Sample ID: WITH FERT
Plant Type: ALFALFA
Growth Stage: BLOOM (301)
Plant Part: TOPS
Date Received: 08/08/2014 **Date Reported:** 08/11/2014

Date Sampled	Lab Number	Nitrogen (%)	Nitrate Nitrogen (%)	Sulfur (%)	Phosphorus (%)	Potassium (%)	Magnesium (%)	Calcium (%)	Sodium (%)	Boron (ppm)	Zinc (ppm)	Manganese (ppm)	Iron (ppm)	Copper (ppm)	Aluminum (ppm)	Chloride (%)
	545913	3.44		0.21	0.26	1.49	0.48	1.86	0.01	28	34	81	70	13	32	
Normal Range		2.60 5.00		0.20 0.48	0.23 0.40	2.10 4.60	0.30 0.60	1.00 4.00		30 80	20 70	30 150	30 250	5 30		

	N/S	N/K	P/S	P/Zn	K/Mg	K/Mn	Fe/Mn	Ca/B							
Actual Ratio	16.5	2.3	1.2	75	3.1	184	0.9	669							
Expected Ratio	13.0	1.3	1.0	60	6.7	375	1.9	500							

Nutrient Sufficiency Ratings



- These plants are low in BORON. Causes include low soil boron or droughty soil conditions.
- These plants are low in POTASSIUM. Possible causes include low soil potassium levels, poor soil drainage, droughty soil conditions or compaction.

A&L

Report Approved By: David Henry - Agronomist / Technical Services

Approval Date: 8/11/2014

Report No,
F14220-5051
Account No.
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QUALITY ANALYSES FOR INFORMED DECISIONS®

PLANT ANALYSIS REPORT

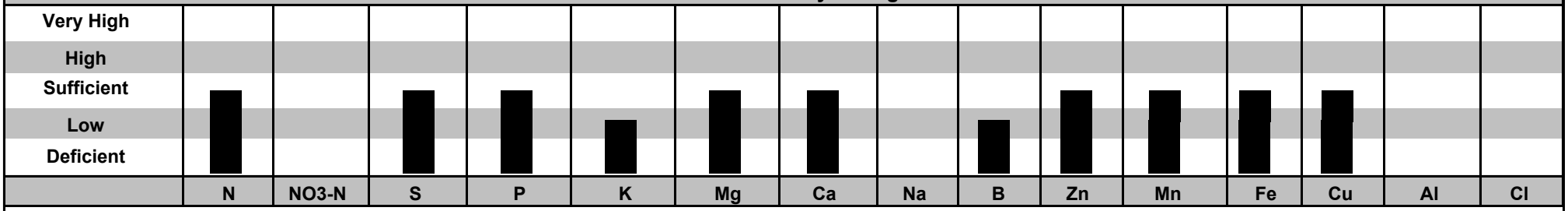
To: SHAUN WARDEN
2861 NE 21ST AVE
WHITEHOUSE, FL 33064
USA
USA

Purchase Order: 220-5051
Sample ID: WITHOUT FERT
Plant Type: ALFALFA
Growth Stage: BLOOM (301)
Plant Part: TOPS
Date Received: 08/08/2014 **Date Reported:** 08/11/2014

Date Sampled	Lab Number	Nitrogen (%)	Nitrate Nitrogen (%)	Sulfur (%)	Phosphorus (%)	Potassium (%)	Magnesium (%)	Calcium (%)	Sodium (%)	Boron (ppm)	Zinc (ppm)	Manganese (ppm)	Iron (ppm)	Copper (ppm)	Aluminum (ppm)	Chloride (%)
	545914	3.55		0.24	0.29	1.32	0.46	1.85	0.02	22	29	75	65	12	57	
Normal Range		2.60 5.00		0.20 0.48	0.23 0.40	2.10 4.60	0.30 0.60	1.00 4.00		30 80	20 70	30 150	30 250	5 30		

	N/S	N/K	P/S	P/Zn	K/Mg	K/Mn	Fe/Mn	Ca/B							
Actual Ratio	14.5	2.7	1.2	99	2.9	176	0.9	835							
Expected Ratio	13.0	1.3	1.0	60	6.7	375	1.9	500							

Nutrient Sufficiency Ratings



- These plants are low in BORON. Causes include low soil boron or droughty soil conditions.
- These plants are low in POTASSIUM. Possible causes include low soil potassium levels, poor soil drainage, droughty soil conditions or compaction.

REPORT NO.
F14227-6001

ACCOUNT NO.
99990

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QUALITY ANALYSES FOR INFORMED DECISIONS®

TO: SHAUN WARDEN
2861 NE 21ST AVE
LIGHTHOUSE, FL 33064
USA

COPY: PD MC

PURCHASE ORDER: 227-6001

FEED ANALYSIS REPORT

LAB NUMBER: 227607
SAMPLE ID: FERT 19 DAYS AGO

DATE RECEIVED: 08/15/2014
DATE REPORTED: 08/19/2014

PARAMETER	UNIT	AS RECEIVED BASIS	DRY BASIS
Moisture	%	70.21	
Dry Matter	%	29.79	
Nitrogen	%	1.00	3.35
Crude Protein	%	6.28	20.92
Acid Detergent Fiber (ADF)	%	7.9	26.5
Neutral Detergent Fiber (NDF)	%	12.3	41.2
Total Digestible Nutrients (TDN)	%	21.1	70.3
Net Energy of Maintenance (NEm)	Mcal/lb	0.21	0.71
Net Energy of Gain (NEg)	Mcal/lb	0.14	0.45
Net Energy of Lactation (NEL)	Mcal/lb	0.22	0.73
Digestible Dry Matter (DDM)	%		68.3
Dry Matter Intake (DMI)	%		2.9
Relative Feed Value (RFV)			154
Calcium (Ca)	%	0.54	1.81

Report Approved By: Randall Warden
Randall L. Warden - President / CEO - CPAg/SS/CCA

Approval Date: 8/19/2014

A&L

REPORT NO.
F14227-6001

ACCOUNT NO.
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FEED ANALYSIS REPORT

LAB NUMBER: 227607
SAMPLE ID: FERT 19 DAYS AGO

DATE RECEIVED: 08/15/2014
DATE REPORTED: 08/19/2014

PARAMETER	UNIT	AS RECEIVED BASIS	DRY BASIS
Potassium (K)	%	0.47	1.58
Magnesium (Mg)	%	0.13	0.43
Sodium (Na)	%	0.01	0.02
Phosphorus (P)	%	0.06	0.21
Sulfur (S)	%	0.07	0.24
Aluminum (Al)	ppm	1	4
Boron (B)	ppm	8	26
Copper (Cu)	ppm	3	11
Iron (Fe)	ppm	18	61
Manganese (Mn)	ppm	26	86
Zinc (Zn)	ppm	7	24

REPORT NO.
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COPY: PD MC

PURCHASE ORDER: 227-6001

FEED ANALYSIS REPORT

LAB NUMBER: 227608
SAMPLE ID: WITHOUT FERT

DATE RECEIVED: 08/15/2014
DATE REPORTED: 08/19/2014

PARAMETER	UNIT	AS RECEIVED BASIS	DRY BASIS
Moisture	%	70.72	
Dry Matter	%	29.28	
Nitrogen	%	0.91	3.11
Crude Protein	%	5.63	19.41
Acid Detergent Fiber (ADF)	%	9.2	31.5
Neutral Detergent Fiber (NDF)	%	13.4	45.8
Total Digestible Nutrients (TDN)	%	18.8	64.9
Net Energy of Maintenance (NEm)	Mcal/lb	0.19	0.64
Net Energy of Gain (NEg)	Mcal/lb	0.11	0.38
Net Energy of Lactation (NEL)	Mcal/lb	0.19	0.67
Digestible Dry Matter (DDM)	%		64.4
Dry Matter Intake (DMI)	%		2.6
Relative Feed Value (RFV)			131
Calcium (Ca)	%	0.47	1.59

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FEED ANALYSIS REPORT

LAB NUMBER: 227608
SAMPLE ID: WITHOUT FERT

DATE RECEIVED: 08/15/2014
DATE REPORTED: 08/19/2014

PARAMETER	UNIT	AS RECEIVED BASIS	DRY BASIS
Potassium (K)	%	0.48	1.62
Magnesium (Mg)	%	0.12	0.39
Sodium (Na)	%	0.00	0.01
Phosphorus (P)	%	0.08	0.26
Sulfur (S)	%	0.06	0.19
Aluminum (Al)	ppm	10	34
Boron (B)	ppm	8	26
Copper (Cu)	ppm	3	12
Iron (Fe)	ppm	25	86
Manganese (Mn)	ppm	18	61
Zinc (Zn)	ppm	9	31