

Ag Testing - Consulting

Account No. : 858

NIR Analysis Report

WYOMING HAY SHOW, STATE FAIR
WYOMING HAY AND FORAGE ASSOCIATION
PO BOX 601
LINGLE WY 82223

Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5400

Results For : BILL COX
Sample ID : OC #1 1ST CUT
Description : ALFALFA HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	14.16	0.00
Dry Matter, %	85.84	100.00
PROTEIN		
Crude Protein, %	17.4	20.3
FIBERS		
Acid Detergent Fiber, %	26.2	30.5
Neutral Detergent Fiber, %	32.1	37.5
NDFD (digestibility) 48 hr, % of NDF		40
IVTDMD (in vitro true digestibility) 48 hr, %	67.9	79.1
ENERGIES		
TDN Est., %	51.1	59.5
Net Energy Lact, MCal/lb	0.5207	0.6066
Net Energy Maint, MCal/lb	0.5041	0.5873
Net Energy Gain, MCal/lb	0.2813	0.3277
QUALITY VALUE		
Relative Feed Value		162
Relative Forage Quality		155
MINERALS		
Calcium, % Ca	1.42	1.65
Phosphorus, % P	0.19	0.22
Potassium, % K	1.40	1.63
Magnesium, % Mg	0.31	0.36
Ash, %	5.71	6.65
OTHER ANALYSIS		
Fat, %	1.4	1.6
Starch, %	2.4	2.8
Lignin, %	5.94	6.92
Non Fiber Carbohydrates, %	30.9	36.0
Ethanol-Soluble Carbohydrates, %	8.1	9.4
Water-Soluble Carbohydrates, %	7.3	8.5

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Copy : 1

Page 1 of 1

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Date Reported : 08/08/2019
Lab Number : 5403

Results For : DAVID HINMAN
Sample ID : OC #2 1ST CUT
Description : ALFALFA HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.02	0.00
Dry Matter, %	89.98	100.00
PROTEIN		
Crude Protein, %	18.9	21.0
FIBERS		
Acid Detergent Fiber, %	26.7	29.7
Neutral Detergent Fiber, %	31.4	34.9
NDFD (digestibility) 48 hr, % of NDF		43
IVTDMD (in vitro true digestibility) 48 hr, %	71.5	79.4
ENERGIES		
TDN Est., %	54.1	60.1
Net Energy Lact, MCal/lb	0.5520	0.6134
Net Energy Maint, MCal/lb	0.5368	0.5966
Net Energy Gain, MCal/lb	0.3025	0.3362
QUALITY VALUE		
Relative Feed Value		175
Relative Forage Quality		177
MINERALS		
Calcium, % Ca	1.47	1.63
Phosphorus, % P	0.22	0.25
Potassium, % K	1.95	2.17
Magnesium, % Mg	0.31	0.34
Ash, %	7.10	7.89
OTHER ANALYSIS		
Fat, %	1.6	1.8
Starch, %	1.7	1.9
Lignin, %	6.07	6.75
Non Fiber Carbohydrates, %	32.8	36.5
Ethanol-Soluble Carbohydrates, %	9.5	10.6
Water-Soluble Carbohydrates, %	9.3	10.3

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Page 1 of 1

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Lab Number : 5404

Results For : DAVID HINMAN
Sample ID : OC #3 2ND CUT
Description : ALFALFA HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.37	0.00
Dry Matter, %	90.63	100.00
PROTEIN		
Crude Protein, %	24.3	26.8
FIBERS		
Acid Detergent Fiber, %	20.8	22.9
Neutral Detergent Fiber, %	23.4	25.8
NDFD (digestibility) 48 hr, % of NDF		54
IVTDMD (in vitro true digestibility) 48 hr, %	78.3	86.4
ENERGIES		
TDN Est., %	59.1	65.2
Net Energy Lact, MCal/lb	0.6070	0.6697
Net Energy Maint, MCal/lb	0.6090	0.6720
Net Energy Gain, MCal/lb	0.3665	0.4043
QUALITY VALUE		
Relative Feed Value		256
Relative Forage Quality		281
MINERALS		
Calcium, % Ca	1.26	1.39
Phosphorus, % P	0.29	0.32
Potassium, % K	2.49	2.75
Magnesium, % Mg	0.35	0.39
Ash, %	8.00	8.83
OTHER ANALYSIS		
Fat, %	1.7	1.9
Starch, %	1.4	1.5
Lignin, %	4.49	4.95
Non Fiber Carbohydrates, %	35.0	38.6
Ethanol-Soluble Carbohydrates, %	9.7	10.6
Water-Soluble Carbohydrates, %	8.9	9.8

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Page 1 of 1

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Date Received : 08/08/2019
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Lab Number : 5410

Results For : GERRY DANKE
Sample ID : OC #4 3RD CUT
Description : ALFALFA HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.52	0.00
Dry Matter, %	89.48	100.00
PROTEIN		
Crude Protein, %	19.0	21.2
FIBERS		
Acid Detergent Fiber, %	18.5	20.7
Neutral Detergent Fiber, %	24.7	27.6
NDFD (digestibility) 48 hr, % of NDF		64
IVTDMD (in vitro true digestibility) 48 hr, %	81.2	90.7
ENERGIES		
TDN Est., %	59.8	66.8
Net Energy Lact, MCal/lb	0.6161	0.6885
Net Energy Maint, MCal/lb	0.6234	0.6967
Net Energy Gain, MCal/lb	0.3816	0.4265
QUALITY VALUE		
Relative Feed Value		245
Relative Forage Quality		292
MINERALS		
Calcium, % Ca	1.28	1.43
Phosphorus, % P	0.25	0.28
Potassium, % K	2.19	2.45
Magnesium, % Mg	0.30	0.34
Ash, %	7.46	8.34
OTHER ANALYSIS		
Fat, %	2.1	2.3
Starch, %	1.9	2.2
Lignin, %	4.23	4.73
Non Fiber Carbohydrates, %	38.0	42.5
Ethanol-Soluble Carbohydrates, %	12.7	14.1
Water-Soluble Carbohydrates, %	12.8	14.3

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Page 1 of 1

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Date Reported : 08/08/2019
Lab Number : 5405

Results For : DAVID HINMAN
Sample ID : OC #5 3RD/4TH CUT
Description : ALFALFA HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.65	0.00
Dry Matter, %	90.35	100.00
PROTEIN		
Crude Protein, %	21.2	23.4
FIBERS		
Acid Detergent Fiber, %	21.4	23.7
Neutral Detergent Fiber, %	25.1	27.8
NDFD (digestibility) 48 hr, % of NDF		48
IVTDMD (in vitro true digestibility) 48 hr, %	76.6	84.8
ENERGIES		
TDN Est., %	58.3	64.6
Net Energy Lact, MCal/lb	0.5992	0.6632
Net Energy Maint, MCal/lb	0.5993	0.6633
Net Energy Gain, MCal/lb	0.3583	0.3966
QUALITY VALUE		
Relative Feed Value		236
Relative Forage Quality		248
MINERALS		
Calcium, % Ca	1.49	1.65
Phosphorus, % P	0.24	0.27
Potassium, % K	1.98	2.19
Magnesium, % Mg	0.34	0.38
Ash, %	7.63	8.44
OTHER ANALYSIS		
Fat, %	1.8	2.0
Starch, %	2.6	2.8
Lignin, %	4.84	5.36
Non Fiber Carbohydrates, %	36.5	40.4
Ethanol-Soluble Carbohydrates, %	10.6	11.8
Water-Soluble Carbohydrates, %	10.3	11.4

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Copy : 1

Page 1 of 1

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Lab Number : 5397

Results For : MARK BAPPE
Sample ID : OC #6 3/4 CUT
Description : ALFALFA HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.34	0.00
Dry Matter, %	89.66	100.00
PROTEIN		
Crude Protein, %	21.5	24.0
FIBERS		
Acid Detergent Fiber, %	13.7	15.3
Neutral Detergent Fiber, %	15.7	17.5
NDFD (digestibility) 48 hr, % of NDF		62
IVTDMD (in vitro true digestibility) 48 hr, %	83.8	93.5
ENERGIES		
TDN Est., %	63.5	70.9
Net Energy Lact, MCal/lb	0.6574	0.7332
Net Energy Maint, MCal/lb	0.6766	0.7546
Net Energy Gain, MCal/lb	0.4286	0.4780
QUALITY VALUE		
Relative Feed Value		409
Relative Forage Quality		463
MINERALS		
Calcium, % Ca	1.43	1.59
Phosphorus, % P	0.25	0.28
Potassium, % K	1.71	1.91
Magnesium, % Mg	0.39	0.44
Ash, %	6.57	7.33
OTHER ANALYSIS		
Fat, %	2.1	2.3
Starch, %	2.5	2.8
Lignin, %	2.95	3.29
Non Fiber Carbohydrates, %	45.6	50.9
Ethanol-Soluble Carbohydrates, %	13.8	15.4
Water-Soluble Carbohydrates, %	13.4	14.9

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Page 1 of 1

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Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5401

Results For : BILL COX
Sample ID : OC #7 1ST CUT
Description : MIXED HAY OVER 50 ALFALFA

	Analysis As Received	Analysis Dry Basis
Moisture, %	12.79	0.00
Dry Matter, %	87.21	100.00
PROTEIN		
Crude Protein, %	17.3	19.9
FIBERS		
Acid Detergent Fiber, %	23.2	26.6
Neutral Detergent Fiber, %	32.1	36.8
NDFD (digestibility) 48 hr, % of NDF		57
IVTDMD (in vitro true digestibility) 48 hr, %	73.5	84.3
ENERGIES		
TDN Est., %	63.0	72.2
Net Energy Lact, MCal/lb	0.6537	0.7495
Net Energy Maint, MCal/lb	0.6747	0.7736
Net Energy Gain, MCal/lb	0.4315	0.4947
QUALITY VALUE		
Relative Feed Value		172
Relative Forage Quality		166
MINERALS		
Calcium, % Ca	1.11	1.27
Phosphorus, % P	0.24	0.27
Potassium, % K	2.02	2.32
Magnesium, % Mg	0.27	0.31
Ash, %	5.22	5.99
OTHER ANALYSIS		
Fat, %	1.7	2.0
Starch, %	1.8	2.1
Lignin, %	5.33	6.11
Non Fiber Carbohydrates, %	32.1	36.8
Ethanol-Soluble Carbohydrates, %	9.8	11.3
Water-Soluble Carbohydrates, %	10.9	12.4

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Page 1 of 1

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Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5411

Results For : GERRY DANKE
Sample ID : OC #8 2ND CUT
Description : MIXED HAY OVER 50 ALFALFA

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.39	0.00
Dry Matter, %	89.61	100.00
PROTEIN		
Crude Protein, %	19.6	21.9
FIBERS		
Acid Detergent Fiber, %	18.2	20.3
Neutral Detergent Fiber, %	24.1	26.9
NDFD (digestibility) 48 hr, % of NDF		67
IVTDMD (in vitro true digestibility) 48 hr, %	81.3	90.7
ENERGIES		
TDN Est., %	71.2	79.4
Net Energy Lact, MCal/lb	0.7438	0.8300
Net Energy Maint, MCal/lb	0.7836	0.8745
Net Energy Gain, MCal/lb	0.5221	0.5827
QUALITY VALUE		
Relative Feed Value		253
Relative Forage Quality		188
MINERALS		
Calcium, % Ca	1.19	1.33
Phosphorus, % P	0.25	0.28
Potassium, % K	2.51	2.80
Magnesium, % Mg	0.28	0.31
Ash, %	6.32	7.05
OTHER ANALYSIS		
Fat, %	2.1	2.3
Starch, %	2.1	2.3
Lignin, %	4.77	5.32
Non Fiber Carbohydrates, %	39.1	43.6
Ethanol-Soluble Carbohydrates, %	11.1	12.4
Water-Soluble Carbohydrates, %	12.8	14.3

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Page 1 of 1

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Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5396

Results For : BAUMGARTNER PROPERTIES
Sample ID : OC #9 2ND CUT
Description : MIXED HAY OVER 50 ALFALFA

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.36	0.00
Dry Matter, %	89.64	100.00
PROTEIN		
Crude Protein, %	21.4	23.8
FIBERS		
Acid Detergent Fiber, %	23.2	25.9
Neutral Detergent Fiber, %	27.3	30.5
NDFD (digestibility) 48 hr, % of NDF		51
IVTDMD (in vitro true digestibility) 48 hr, %	77.2	86.2
ENERGIES		
TDN Est., %	65.5	73.0
Net Energy Lact, MCal/lb	0.6802	0.7588
Net Energy Maint, MCal/lb	0.7040	0.7854
Net Energy Gain, MCal/lb	0.4528	0.5051
QUALITY VALUE		
Relative Feed Value		210
Relative Forage Quality		138
MINERALS		
Calcium, % Ca	1.34	1.50
Phosphorus, % P	0.24	0.27
Potassium, % K	2.87	3.20
Magnesium, % Mg	0.27	0.30
Ash, %	6.19	6.91
OTHER ANALYSIS		
Fat, %	1.4	1.5
Starch, %	0.8	0.9
Lignin, %	6.13	6.84
Non Fiber Carbohydrates, %	34.3	38.3
Ethanol-Soluble Carbohydrates, %	8.1	9.0
Water-Soluble Carbohydrates, %	8.8	9.9

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Page 1 of 1

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Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5406

Results For : DAVID HINMAN
Sample ID : OC #10 2ND CUT
Description : MIXED HAY OVER 50 ALFALFA

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.32	0.00
Dry Matter, %	89.68	100.00
PROTEIN		
Crude Protein, %	20.0	22.3
FIBERS		
Acid Detergent Fiber, %	24.2	26.9
Neutral Detergent Fiber, %	35.1	39.1
NDFD (digestibility) 48 hr, % of NDF		61
IVTDMD (in vitro true digestibility) 48 hr, %	74.4	83.0
ENERGIES		
TDN Est., %	64.4	71.8
Net Energy Lact, MCal/lb	0.6685	0.7455
Net Energy Maint, MCal/lb	0.6892	0.7685
Net Energy Gain, MCal/lb	0.4396	0.4902
QUALITY VALUE		
Relative Feed Value		162
Relative Forage Quality		140
MINERALS		
Calcium, % Ca	1.00	1.11
Phosphorus, % P	0.28	0.31
Potassium, % K	2.48	2.76
Magnesium, % Mg	0.26	0.29
Ash, %	7.05	7.86
OTHER ANALYSIS		
Fat, %	2.1	2.4
Starch, %	1.2	1.4
Lignin, %	4.77	5.32
Non Fiber Carbohydrates, %	27.2	30.3
Ethanol-Soluble Carbohydrates, %	8.9	9.9
Water-Soluble Carbohydrates, %	10.1	11.3

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Page 1 of 1

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Date Reported : 08/08/2019
Lab Number : 5407

Results For : DAVID HINMAN
Sample ID : OC #11 2ND CUT
Description : MIXED HAY OVER 50 ALFALFA

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.39	0.00
Dry Matter, %	90.61	100.00
PROTEIN		
Crude Protein, %	21.6	23.8
FIBERS		
Acid Detergent Fiber, %	20.1	22.1
Neutral Detergent Fiber, %	28.9	32.0
NDFD (digestibility) 48 hr, % of NDF		67
IVTDMD (in vitro true digestibility) 48 hr, %	80.7	89.1
ENERGIES		
TDN Est., %	70.0	77.3
Net Energy Lact, MCal/lb	0.7307	0.8064
Net Energy Maint, MCal/lb	0.7659	0.8453
Net Energy Gain, MCal/lb	0.5050	0.5574
QUALITY VALUE		
Relative Feed Value		209
Relative Forage Quality		159
MINERALS		
Calcium, % Ca	1.10	1.21
Phosphorus, % P	0.28	0.31
Potassium, % K	2.58	2.85
Magnesium, % Mg	0.30	0.33
Ash, %	6.70	7.39
OTHER ANALYSIS		
Fat, %	2.6	2.8
Starch, %	2.1	2.3
Lignin, %	4.16	4.59
Non Fiber Carbohydrates, %	32.9	36.3
Ethanol-Soluble Carbohydrates, %	9.5	10.5
Water-Soluble Carbohydrates, %	10.9	12.0

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Copy : 1

Page 1 of 1

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Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5412

Results For : GERRY DANKE
Sample ID : OC #12 3RD CUT
Description : MIXED HAY OVER 50 ALFALFA

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.92	0.00
Dry Matter, %	90.08	100.00
PROTEIN		
Crude Protein, %	18.9	21.0
FIBERS		
Acid Detergent Fiber, %	19.2	21.3
Neutral Detergent Fiber, %	27.3	30.3
NDFD (digestibility) 48 hr, % of NDF		75
IVTDMD (in vitro true digestibility) 48 hr, %	83.1	92.3
ENERGIES		
TDN Est., %	70.5	78.3
Net Energy Lact, MCal/lb	0.7365	0.8176
Net Energy Maint, MCal/lb	0.7739	0.8591
Net Energy Gain, MCal/lb	0.5129	0.5694
QUALITY VALUE		
Relative Feed Value		222
Relative Forage Quality		195
MINERALS		
Calcium, % Ca	0.94	1.04
Phosphorus, % P	0.28	0.31
Potassium, % K	2.69	2.99
Magnesium, % Mg	0.24	0.27
Ash, %	6.59	7.32
OTHER ANALYSIS		
Fat, %	2.3	2.6
Starch, %	2.3	2.5
Lignin, %	3.86	4.29
Non Fiber Carbohydrates, %	36.8	40.8
Ethanol-Soluble Carbohydrates, %	11.5	12.8
Water-Soluble Carbohydrates, %	13.4	14.9

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Copy : 1

Page 1 of 1

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Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5398

Results For : MARK BAPPE
Sample ID : OC #13 2ND CUT
Description : MIXED HAY UP TO 50 ALFALFA

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.27	0.00
Dry Matter, %	90.73	100.00
PROTEIN		
Crude Protein, %	18.1	19.9
FIBERS		
Acid Detergent Fiber, %	25.2	27.8
Neutral Detergent Fiber, %	34.6	38.2
NDFD (digestibility) 48 hr, % of NDF		61
IVTDMD (in vitro true digestibility) 48 hr, %	78.3	86.3
ENERGIES		
TDN Est., %	64.3	70.8
Net Energy Lact, MCal/lb	0.6662	0.7343
Net Energy Maint, MCal/lb	0.6843	0.7542
Net Energy Gain, MCal/lb	0.4333	0.4776
QUALITY VALUE		
Relative Feed Value		164
Relative Forage Quality		162
MINERALS		
Calcium, % Ca	1.04	1.15
Phosphorus, % P	0.28	0.31
Potassium, % K	2.42	2.67
Magnesium, % Mg	0.26	0.29
Ash, %	6.41	7.07
OTHER ANALYSIS		
Fat, %	2.2	2.4
Starch, %	1.8	2.0
Lignin, %	5.16	5.69
Non Fiber Carbohydrates, %	31.2	34.4
Ethanol-Soluble Carbohydrates, %	8.7	9.6
Water-Soluble Carbohydrates, %	10.2	11.3

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Page 1 of 1

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Account No. : 858

NIR Analysis Report

WYOMING HAY SHOW, STATE FAIR
WYOMING HAY AND FORAGE ASSOCIATIO
PO BOX 601
LINGLE WY 82223

Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5413

Results For : GERRY DANKE
Sample ID : OC #14 1ST CUT
Description : GRASS HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.83	0.00
Dry Matter, %	89.17	100.00
PROTEIN		
Crude Protein, %	17.8	19.9
FIBERS		
Acid Detergent Fiber, %	18.4	20.7
Neutral Detergent Fiber, %	30.3	34.0
NDFD (digestibility) 48 hr, % of NDF		101
IVTDMD (in vitro true digestibility) 48 hr, %	88.1	98.8
ENERGIES		
TDN Est., %	70.4	79.0
Net Energy Lact, MCal/lb	0.7355	0.8248
Net Energy Maint, MCal/lb	0.7741	0.8681
Net Energy Gain, MCal/lb	0.5146	0.5771
QUALITY VALUE		
Relative Feed Value		199
Relative Forage Quality		227
MINERALS		
Calcium, % Ca	0.45	0.50
Phosphorus, % P	0.21	0.23
Potassium, % K	1.74	1.95
Magnesium, % Mg	0.26	0.29
Ash, %	7.37	8.27
OTHER ANALYSIS		
Fat, %	3.1	3.5
Starch, %	2.8	3.2
Lignin, %	1.85	2.08
Non Fiber Carbohydrates, %	33.3	37.3
Ethanol-Soluble Carbohydrates, %	15.5	17.4
Water-Soluble Carbohydrates, %	17.5	19.6

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Page 1 of 1

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NIR Analysis Report

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WYOMING HAY AND FORAGE ASSOCIATIO
PO BOX 601
LINGLE WY 82223

Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5402

Results For : BILL COX
Sample ID : OC #15 1ST CUT
Description : GRASS HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	11.61	0.00
Dry Matter, %	88.39	100.00
PROTEIN		
Crude Protein, %	14.3	16.2
FIBERS		
Acid Detergent Fiber, %	23.4	26.5
Neutral Detergent Fiber, %	42.9	48.6
NDFD (digestibility) 48 hr, % of NDF		71
IVTDMD (in vitro true digestibility) 48 hr, %	75.8	85.8
ENERGIES		
TDN Est., %	64.0	72.4
Net Energy Lact, MCal/lb	0.6641	0.7513
Net Energy Maint, MCal/lb	0.6858	0.7759
Net Energy Gain, MCal/lb	0.4391	0.4967
QUALITY VALUE		
Relative Feed Value		131
Relative Forage Quality		178
MINERALS		
Calcium, % Ca	0.37	0.42
Phosphorus, % P	0.23	0.26
Potassium, % K	2.03	2.30
Magnesium, % Mg	0.17	0.19
Ash, %	5.72	6.47
OTHER ANALYSIS		
Fat, %	2.2	2.5
Starch, %	2.2	2.5
Lignin, %	3.46	3.91
Non Fiber Carbohydrates, %	25.0	28.3
Ethanol-Soluble Carbohydrates, %	10.4	11.8
Water-Soluble Carbohydrates, %	11.8	13.4

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Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5408

Results For : DAVID HINMAN
Sample ID : OC #16 1ST CUT
Description : GRASS HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	10.23	0.00
Dry Matter, %	89.77	100.00
PROTEIN		
Crude Protein, %	11.2	12.5
FIBERS		
Acid Detergent Fiber, %	32.2	35.8
Neutral Detergent Fiber, %	53.6	59.7
NDFD (digestibility) 48 hr, % of NDF		53
IVTDMD (in vitro true digestibility) 48 hr, %	66.8	74.4
ENERGIES		
TDN Est., %	55.4	61.7
Net Energy Lact, MCal/lb	0.5676	0.6323
Net Energy Maint, MCal/lb	0.5570	0.6204
Net Energy Gain, MCal/lb	0.3212	0.3578
QUALITY VALUE		
Relative Feed Value		95
Relative Forage Quality		122
MINERALS		
Calcium, % Ca	0.47	0.52
Phosphorus, % P	0.22	0.25
Potassium, % K	2.23	2.48
Magnesium, % Mg	0.19	0.21
Ash, %	5.91	6.58
OTHER ANALYSIS		
Fat, %	1.8	2.0
Starch, %	1.3	1.4
Lignin, %	4.51	5.02
Non Fiber Carbohydrates, %	18.5	20.6
Ethanol-Soluble Carbohydrates, %	7.9	8.8
Water-Soluble Carbohydrates, %	9.0	10.0

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Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5399

Results For : KELLY BURCH
Sample ID : OC #17 1ST CUT
Description : ORCHARD GRASS

	Analysis As Received	Analysis Dry Basis
Moisture, %	11.47	0.00
Dry Matter, %	88.53	100.00
PROTEIN		
Crude Protein, %	11.9	13.4
FIBERS		
Acid Detergent Fiber, %	29.4	33.2
Neutral Detergent Fiber, %	49.7	56.1
NDFD (digestibility) 48 hr, % of NDF		61
IVTDMD (in vitro true digestibility) 48 hr, %	70.0	79.1
ENERGIES		
TDN Est., %	57.2	64.7
Net Energy Lact, MCal/lb	0.5892	0.6655
Net Energy Maint, MCal/lb	0.5884	0.6646
Net Energy Gain, MCal/lb	0.3521	0.3977
QUALITY VALUE		
Relative Feed Value		104
Relative Forage Quality		137
MINERALS		
Calcium, % Ca	0.42	0.48
Phosphorus, % P	0.23	0.26
Potassium, % K	2.37	2.68
Magnesium, % Mg	0.20	0.23
Ash, %	7.36	8.31
OTHER ANALYSIS		
Fat, %	2.4	2.7
Starch, %	1.5	1.6
Lignin, %	3.18	3.59
Non Fiber Carbohydrates, %	19.2	21.7
Ethanol-Soluble Carbohydrates, %	6.8	7.6
Water-Soluble Carbohydrates, %	7.9	8.9

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Page 1 of 1

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PO BOX 601
LINGLE WY 82223

Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5395

Results For : ROBERT LAIRD
Sample ID : OC #18 1ST CUT
Description : GRASS HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.53	0.00
Dry Matter, %	90.47	100.00
PROTEIN		
Crude Protein, %	5.5	6.1
FIBERS		
Acid Detergent Fiber, %	31.6	34.9
Neutral Detergent Fiber, %	54.2	60.0
NDFD (digestibility) 48 hr, % of NDF		61
IVTDMD (in vitro true digestibility) 48 hr, %	71.1	78.6
ENERGIES		
TDN Est., %	56.7	62.7
Net Energy Lact, MCal/lb	0.5826	0.6440
Net Energy Maint, MCal/lb	0.5755	0.6361
Net Energy Gain, MCal/lb	0.3366	0.3720
QUALITY VALUE		
Relative Feed Value		96
Relative Forage Quality		116
MINERALS		
Calcium, % Ca	0.26	0.29
Phosphorus, % P	0.17	0.19
Potassium, % K	2.03	2.24
Magnesium, % Mg	0.08	0.09
Ash, %	6.16	6.81
OTHER ANALYSIS		
Fat, %	1.7	1.9
Starch, %	2.8	3.1
Lignin, %	3.58	3.96
Non Fiber Carbohydrates, %	24.1	26.7
Ethanol-Soluble Carbohydrates, %	9.2	10.1
Water-Soluble Carbohydrates, %	10.8	11.9

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Page 1 of 1

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LINGLE WY 82223

Invoice No. : 1294943
Date Received : 08/08/2019
Date Reported : 08/08/2019
Lab Number : 5409

Results For : DAVID HINMAN
Sample ID : OC #19 3RD CUT
Description : GRASS HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	11.41	0.00
Dry Matter, %	88.59	100.00
PROTEIN		
Crude Protein, %	19.8	22.3
FIBERS		
Acid Detergent Fiber, %	18.6	21.0
Neutral Detergent Fiber, %	27.1	30.6
NDFD (digestibility) 48 hr, % of NDF		70
IVTDMD (in vitro true digestibility) 48 hr, %	79.3	89.6
ENERGIES		
TDN Est., %	69.6	78.6
Net Energy Lact, MCal/lb	0.7268	0.8204
Net Energy Maint, MCal/lb	0.7642	0.8626
Net Energy Gain, MCal/lb	0.5071	0.5724
QUALITY VALUE		
Relative Feed Value		220
Relative Forage Quality		181
MINERALS		
Calcium, % Ca	1.08	1.22
Phosphorus, % P	0.26	0.29
Potassium, % K	2.22	2.51
Magnesium, % Mg	0.30	0.34
Ash, %	6.30	7.11
OTHER ANALYSIS		
Fat, %	2.3	2.6
Starch, %	1.6	1.8
Lignin, %	3.57	4.03
Non Fiber Carbohydrates, %	35.0	39.5
Ethanol-Soluble Carbohydrates, %	12.1	13.6
Water-Soluble Carbohydrates, %	13.5	15.2