



CUMBERLAND VALLEY ANALYTICAL SERVICES

Laboratory services for agriculture ... from the field to the feed bunk.

Farm: BROCK, ADEN
Desc: ALFALFA 3 TIE NEVADA
Submitter: BROOK, ADEN
Account: AGRI SALES USA, INC.

Copies to:

Lab ID: 20937 036
Sampled:
Arrived: 11/03/2016
Completed: 11/08/2016
Reported: 11/18/2016

ALFALFA 3 TIE NEVADA

SAMPLE INFORMATION

Lab ID: 20937 036 Version: 2.0
Crop Year: 2016 Series:
Feed Type: LEGUME FORAGE Cutting#: 2
Package: BASIC NIR

NIR ANALYSIS RESULTS

Moisture 10.3
Dry Matter 89.7

PROTEINS

	% SP	% CP	% DM
Crude Protein			19.0
Adjusted Protein			
Soluble Protein		44.3	8.4
Ammonia (CPE)	18.5	8.2	1.55
ADF Protein (ADICP)		6.1	1.16
NDF Protein (NDICP)		9.3	1.76
NDR Protein (NDRCP)			
Rumen Degr. Protein		72.2	13.7
Rumen Deg. CP (Strep.G)			

FIBER

	% NDFom	NDFom %DM	% NDF	% DM
ADF			84.6	31.2
aNDF		35.4		36.9
NDR (NDF w/o sulfite)				
peNDF				
Crude Fiber				
Lignin			18.6	6.86
NDF Digestibility (12 hr)				
NDF Digestibility (24 hr)				
NDF Digestibility (30 hr)	44.3	15.7	42.6	15.7
NDF Digestibility (48 hr)				
NDF Digestibility (120 hr)	49.7	17.6	47.8	17.6
NDF Digestibility (240 hr)	52.5	18.6	50.3	18.6
uNDF (30 hr)	55.7	19.7	57.4	21.2
uNDF (120 hr)	50.3	17.8	52.2	19.3
uNDF (240 hr)	47.5	16.8	49.7	18.3

CARBOHYDRATES

	% Starch	% NFC	% DM
Ethanol Soluble CHO (Sugar)		27.1	9.1
Water Soluble CHO (Sugar)			
Starch		6.8	2.3
Soluble Fiber			
Starch Dig. (7 hr, 4 mm)			
Fatty Acids, Total			1.55
Fatty Acids (%Fat)			54.4
Crude Fat			2.85

MINERALS

Ash (%DM)	9.47
Calcium (%DM)	1.58
Phosphorus (%DM)	0.29
Magnesium (%DM)	0.34
Potassium (%DM)	2.14
Sulfur (%DM)	0.29
Sodium (%DM)	
Chloride (%DM)	
Iron (PPM)	
Manganese (PPM)	
Zinc (PPM)	
Copper (PPM)	
Nitrate Ion (%DM)	0.21
Selenium (PPM)	0.03
Molybdenum (PPM)	

QUALITATIVE

Total VFA (%DM)
Lactic Acid (%DM)
Lactic as % of Total VFA
Acetic Acid (%DM)
Butyric Acid (%DM)
1, 2 Propanediol (%DM)
Titratable Acidity (meq/100gm)

Soil Contamination Probability Probable low to none
Nitrate Probability Probable low nitrate level
NIR Statistical Confidence Excellent prediction potential

ENERGY & INDEX CALCULATIONS

pH	
TDN (%DM)	63.3
Net Energy Lactation (mcal/lb)	0.64
Net Energy Maintenance (mcal/lb)	0.63
Net Energy Gain (mcal/lb)	0.36
NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	4.47
NDF Dig. Rate (Kd, %HR, uNDF)	5.48
Starch Dig. Rate (Kd, %HR, Mertens)	
Relative Feed Value (RFV)	163
Relative Feed Quality (RFQ)	158
Milk per Ton (lbs/ton)	2984
Dig. Organic Matter Index (lbs/ton)	1245
Non Fiber Carbohydrates (%DM)	33.6
Non Structural Carbohydrates (%DM)	11.4
DCAD (meq/100gdm)	
CNCPS / CPM Lignin Factor	7.6
Summative Index % (Mass Balance)	
Additional sample information, source and lab pictures	



Values in bold were analyzed by wet chemistry methods.

Definitions and explanation of report terms



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Additional Memo

Water Soluble Carbohydrates = 9.6% of Dry Matter

Guide to Safety of Forages with Varying Nitrate Content

0.0 to 0.44 Safe to feed under all conditions.

0.44 to 0.66 Safe for non-pregnant animals under all conditions. For pregnant animals, limit to 50% of the total dry matter in the ration.

0.66 to 0.88 Limit to 50% of the total dry matter in the ration.

0.88 to 1.54 Limit to 35% to 40% of the total dry matter in the ration.

More than 1.54 Feeds with more than 1.76% nitrate ion are potentially toxic. Do not feed.

Should be tempered by nitrate and nitrite content of the water supply. A total intake of more than 30 g of nitrate ion per cwt bodyweight of normal animals may result in acute toxicity and possible death. Levels of 8 to 22 g of nitrate per cwt bodyweight may result in acute toxicity if animals are undergoing a change in feed or have otherwise impaired rumen metabolism. Nitrites may be six to eight times as toxic as nitrates and are more apt to occur in water. Most problems of toxicity result from levels exceeding 1%.

From: Penn State Dairy Reference Manual



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