



# CUMBERLAND VALLEY ANALYTICAL SERVICES

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

**Farm:** SALAZAR RANCHES  
**Desc:** ERS 9 ALFALFA  
**Submitter:** SALAZAR, JOHN T.  
**Account:** SALAZAR RANCHES

**Copies to:**

**Lab ID:** 22907 020  
**Sampled:**  
**Arrived:** 10/13/2017  
**Completed:** 10/13/2017  
**Reported:** 10/13/2017

## ERS 9 ALFALFA

### SAMPLE INFORMATION

Lab ID: 22907 020      Version: 1.0  
Crop Year: 2017      Series:  
Feed Type: LEGUME FORAGE      Cutting#: 3  
Package: BASIC NIR

### NIR ANALYSIS RESULTS

Moisture 15.0  
Dry Matter 85.0

### PROTEINS

	% SP	% CP	% DM
Crude Protein			21.8
Adjusted Protein			
Soluble Protein		34.0	7.4
Ammonia (CPE)	8.9	3.0	0.66
ADF Protein (ADICP)		5.6	1.21
NDF Protein (NDICP)		11.8	2.56
NDR Protein (NDRCP)			
Rumen Degr. Protein		67.0	14.6
Rumen Deg. CP (Strep.G)			

### FIBER

	% NDFom	NDFom %DM	% NDF	% DM
ADF			81.3	26.2
aNDF		31.6		32.2
NDR (NDF w/o sulfite)				
peNDF				
Crude Fiber				
Lignin			17.8	5.72
NDF Digestibility (12 hr)				
NDF Digestibility (24 hr)				
NDF Digestibility (30 hr)	45.9	14.5	44.9	14.4
NDF Digestibility (48 hr)				
NDF Digestibility (120 hr)	49.4	15.6	48.4	15.6
NDF Digestibility (240 hr)	52.3	16.5	51.3	16.5
uNDF (30 hr)	54.1	17.1	55.1	17.7
uNDF (120 hr)	50.6	16.0	51.6	16.6
uNDF (240 hr)	47.7	15.1	48.7	15.7

### CARBOHYDRATES

	% Starch	% NFC	% DM
Silage Acids			
Ethanol Soluble CHO (Sugar)		29.7	10.9
Water Soluble CHO (Sugar)			
Starch		8.2	3.0
Soluble Fiber			
Starch Dig. (7 hr, 4 mm)			
Fatty Acids, Total			1.98
Fatty Acids (%Fat)			66.7
Crude Fat			2.97

### MINERALS

Ash (%DM)	9.02
Calcium (%DM)	1.42
Phosphorus (%DM)	0.26
Magnesium (%DM)	0.29
Potassium (%DM)	2.36
Sulfur (%DM)	0.32
Sodium (%DM)	
Chloride (%DM)	
Iron (PPM)	
Manganese (PPM)	
Zinc (PPM)	
Copper (PPM)	
Nitrate Ion (%DM)	
Selenium (PPM)	
Molybdenum (PPM)	

### QUALITATIVE

Total VFA (%DM)	
Lactic Acid (%DM)	
Lactic as % of Total VFA	
Acetic Acid (%DM)	
Butyric Acid (%DM)	
1, 2 Propanediol (%DM)	
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)	67.3
Net Energy Lactation (Mcal/lb)	0.69
Net Energy Maintenance (Mcal/lb)	0.69
Net Energy Gain (Mcal/lb)	0.42
NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	4.65
NDF Dig. Rate (Kd, %HR, uNDF)	6.05
Starch Dig. Rate (Kd, %HR, Mertens)	
Relative Feed Value (RFV)	198
Relative Feed Quality (RFQ)	197
Milk per Ton (lbs/ton)	3331
Dig. Organic Matter Index (lbs/ton)	1246
Non Fiber Carbohydrates (%DM)	36.7
Non Structural Carbohydrates (%DM)	13.9
DCAD (meq/100gdm)	
CNCPS / CPM Lignin Factor	6.5
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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# CUMBERLAND VALLEY ANALYTICAL SERVICES

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

**Farm:** SALAZAR RANCHES  
**Desc:** ERS 6 3RD CUT ALFALFA  
**Submitter:** SALAZAR, JOHN T.  
**Account:** SALAZAR RANCHES

**Copies to:**

**Lab ID:** 22907 021  
**Sampled:**  
**Arrived:** 10/13/2017  
**Completed:** 10/13/2017  
**Reported:** 10/13/2017

## ERS 6 3RD CUT ALFALFA

### SAMPLE INFORMATION

Lab ID: 22907 021      Version: 1.0  
Crop Year: 2017      Series:  
Feed Type: LEGUME FORAGE      Cutting#: 3  
Package: BASIC NIR

### NIR ANALYSIS RESULTS

Moisture 11.9  
Dry Matter 88.1

### PROTEINS

	% SP	% CP	% DM
Crude Protein			21.6
Adjusted Protein			
Soluble Protein		36.3	7.8
Ammonia (CPE)	5.4	1.9	0.42
ADF Protein (ADICP)		5.8	1.24
NDF Protein (NDICP)		11.8	2.55
NDR Protein (NDRCP)			
Rumen Degr. Protein		68.1	14.7
Rumen Deg. CP (Strep.G)			

### FIBER

	% NDFom	NDFom %DM	% NDF	% DM
ADF			82.9	27.4
aNDF		31.8		33.1
NDR (NDF w/o sulfite)				
peNDF				
Crude Fiber				
Lignin			17.9	5.91
NDF Digestibility (12 hr)				
NDF Digestibility (24 hr)				
NDF Digestibility (30 hr)	45.3	14.4	43.5	14.4
NDF Digestibility (48 hr)				
NDF Digestibility (120 hr)	49.4	15.7	47.4	15.7
NDF Digestibility (240 hr)	51.6	16.4	49.5	16.4
uNDF (30 hr)	54.7	17.4	56.5	18.7
uNDF (120 hr)	50.6	16.1	52.6	17.4
uNDF (240 hr)	48.4	15.4	50.5	16.7

### CARBOHYDRATES

	% Starch	% NFC	% DM
Silage Acids			
Ethanol Soluble CHO (Sugar)		27.3	9.4
Water Soluble CHO (Sugar)			
Starch		9.1	3.1
Soluble Fiber			
Starch Dig. (7 hr, 4 mm)			
Fatty Acids, Total			2.01
Fatty Acids (%Fat)			64.6
Crude Fat			3.11

### MINERALS

Ash (%DM)	10.6
Calcium (%DM)	1.41
Phosphorus (%DM)	0.26
Magnesium (%DM)	0.26
Potassium (%DM)	2.84
Sulfur (%DM)	0.31
Sodium (%DM)	
Chloride (%DM)	
Iron (PPM)	
Manganese (PPM)	
Zinc (PPM)	
Copper (PPM)	
Nitrate Ion (%DM)	
Selenium (PPM)	
Molybdenum (PPM)	

### QUALITATIVE

Total VFA (%DM)  
Lactic Acid (%DM)  
Lactic as % of Total VFA  
Acetic Acid (%DM)  
Butyric Acid (%DM)  
1, 2 Propanediol (%DM)

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)	65.4
Net Energy Lactation (Mcal/lb)	0.67
Net Energy Maintenance (Mcal/lb)	0.66
Net Energy Gain (Mcal/lb)	0.39
NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	4.38
NDF Dig. Rate (Kd, %HR, uNDF)	5.84
Starch Dig. Rate (Kd, %HR, Mertens)	
Relative Feed Value (RFV)	190
Relative Feed Quality (RFQ)	181
Milk per Ton (lbs/ton)	3144
Dig. Organic Matter Index (lbs/ton)	1246
Non Fiber Carbohydrates (%DM)	34.2
Non Structural Carbohydrates (%DM)	12.5
DCAD (meq/100gdm)	
CNCPS / CPM Lignin Factor	7.0
Summative Index % (Mass Balance)	
Additional sample information, source and lab pictures	



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# CUMBERLAND VALLEY ANALYTICAL SERVICES

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**Farm:** SALAZAR RANCHES  
**Desc:** ERS 4 3RD CUTTING ALFALFA  
**Submitter:** SALAZAR, JOHN T.  
**Account:** SALAZAR RANCHES

**Copies to:**

**Lab ID:** 22907 019  
**Sampled:**  
**Arrived:** 10/13/2017  
**Completed:** 10/13/2017  
**Reported:** 10/13/2017

## ERS 4 3RD CUTTING ALFALFA

### SAMPLE INFORMATION

Lab ID: 22907 019      Version: 1.0  
Crop Year: 2017      Series:  
Feed Type: LEGUME FORAGE      Cutting#: 3  
Package: BASIC NIR

### NIR ANALYSIS RESULTS

Moisture 17.7  
Dry Matter 82.3

### PROTEINS

	% SP	% CP	% DM
Crude Protein			21.7
Adjusted Protein			
Soluble Protein		38.2	8.3
Ammonia (CPE)	6.5	2.5	0.54
ADF Protein (ADICP)		5.5	1.20
NDF Protein (NDICP)		10.7	2.31
NDR Protein (NDRCP)			
Rumen Degr. Protein		69.1	15.0
Rumen Deg. CP (Strep.G)			

### FIBER

	% NDFom	NDFom %DM	% NDF	% DM
ADF			79.1	24.4
aNDF		30.3		30.9
NDR (NDF w/o sulfite)				
peNDF				
Crude Fiber				
Lignin			17.5	5.39
NDF Digestibility (12 hr)				
NDF Digestibility (24 hr)				
NDF Digestibility (30 hr)	48.9	14.8	47.9	14.8
NDF Digestibility (48 hr)				
NDF Digestibility (120 hr)	56.5	17.1	55.2	17.0
NDF Digestibility (240 hr)	59.5	18.0	58.1	17.9
uNDF (30 hr)	51.1	15.5	52.1	16.1
uNDF (120 hr)	43.5	13.2	44.8	13.8
uNDF (240 hr)	40.6	12.3	41.9	12.9

### CARBOHYDRATES

	% Starch	% NFC	% DM
Silage Acids			
Ethanol Soluble CHO (Sugar)		32.1	12.0
Water Soluble CHO (Sugar)			
Starch		9.1	3.4
Soluble Fiber			
Starch Dig. (7 hr, 4 mm)			
Fatty Acids, Total			1.88
Fatty Acids (%Fat)			63.9
Crude Fat			2.94

### MINERALS

Ash (%DM)	9.50
Calcium (%DM)	1.35
Phosphorus (%DM)	0.28
Magnesium (%DM)	0.26
Potassium (%DM)	2.78
Sulfur (%DM)	0.30
Sodium (%DM)	
Chloride (%DM)	
Iron (PPM)	
Manganese (PPM)	
Zinc (PPM)	
Copper (PPM)	
Nitrate Ion (%DM)	
Selenium (PPM)	
Molybdenum (PPM)	

### QUALITATIVE

Total VFA (%DM)	
Lactic Acid (%DM)	
Lactic as % of Total VFA	
Acetic Acid (%DM)	
Butyric Acid (%DM)	
1, 2 Propanediol (%DM)	
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)	67.5
Net Energy Lactation (Mcal/lb)	0.69
Net Energy Maintenance (Mcal/lb)	0.69
Net Energy Gain (Mcal/lb)	0.42
NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	5.18
NDF Dig. Rate (Kd, %HR, uNDF)	7.04
Starch Dig. Rate (Kd, %HR, Mertens)	
Relative Feed Value (RFV)	211
Relative Feed Quality (RFQ)	213
Milk per Ton (lbs/ton)	3384
Dig. Organic Matter Index (lbs/ton)	1225
Non Fiber Carbohydrates (%DM)	37.3
Non Structural Carbohydrates (%DM)	15.4
DCAD (meq/100gdm)	
CNCPS / CPM Lignin Factor	5.4
Summative Index % (Mass Balance)	
Additional sample information, source and lab pictures	



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