



Forage Analysis Report

GREGORY MOCK 157 ETT BROWN ROAD DEER LODGE, TN 37726 County: Morgan Email: GDM1951@GMAIL.COM Sample ID: Cool Season Mix Lab Number: 116284

Reported: 7/10/2025

Type: Hay

Forage Species (Identified by Client): Mixed Grasses

Near-Infared Spectroscopy Analysis (NIRS)

	11001111	iai eu Spi	
Water Content			red
DM	Dry Matter	92	%
Moisture	Moisture	8	%
Protein		100% DM	basi
СР	Crude Protein	9.37	%
ADICP	Acid Detergent Insoluble CP	0.96	%
NDICP	Neutral Detergent Insoluble CP	2.47	%
InsoICP	Insoluble Crude Protein	5.41	%
Lysine	Lysine	0.33	%
Fiber		100% DM	basi
ADF	Acid Detergent Fiber	41.37	%
NDF	Neutral Detergent Fiber	69.13	%
Lignin	Lignin	6.37	%
Carbohydrates		100% DM	basi
ESC	Sugar	4.82	%
Fructan	Fructan	1.71	%
Starch	Starch	0.82	%
WSC	Water Soluble Carbohydrates	6.90	%
NSC	Non-Structural Carbohydrates	7.72	%
NFC	Non-Fiber Carbohydrates	12.05	%
Digestibility		100% DM	basi
IVTDMD48h	in-vitro True DM Digestibility 48h	65.17	%
NDFD48h	Neutral Detergent Fiber Digestibility 48h	48.00	%

¹ All nutritive analyses at 100% Dry Matter (DM) basis unless otherwise noted. Not all constituents are available for each forage type submitted to the Soil, Plant and Pest Center. Forage analysis calibrations provided by the NIRS Forage and Feed Consortium.

Fat Fat Fat 2.06 % Minerals 1000% DM basis Ash Ash 7.39 % Ca Calcium 0.38 % P Phosphorus 0.17 % Mg Magnesium 0.17 % K Potassium 1.40 % Energy Calculations 1000% DM basis TDN Total Digestible Nutrients 55.27 % DE Digestible Energy 1.59 MCal/kg NEm Net Energy Maintenance 0.52 MCal/lb NEm Net Energy Gain 0.27 MCal/lb NEm Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry pH Ensiled pH NO3 Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78 RFV Relative Feed Value 0	ору Апа	alysis (NIRS) ¹	
MineralsAshAsh7.39 %CaCalcium0.38 %PPhosphorus0.17 %MgMagnesium0.17 %KPotassium1.40 %Energy CalculationsTDNTotal Digestible Nutrients55.27 %DEDigestible Energy1.59 MCal/kgNEmNet Energy Maintenance0.52 MCal/lbNEgNet Energy Gain0.27 MCal/lbNElNet Energy Lacatation0.55 MCal/lbComponentsWet ChemistryPHEnsiledpHNO3Nitratesppm²Calculated Parameters³ScaleRFQRelative Forage Quality78	Fat		100% DM basis
Ash Ash 7.39 % Ca Calcium 0.38 % P Phosphorus 0.17 % Mg Magnesium 0.17 % K Potassium 1.40 % Energy Calculations 100% DM basis TDN Total Digestible Nutrients 55.27 % DE Digestible Energy 1.59 MCal/kg NE _m Net Energy Maintenance 0.52 MCal/lb NE _g Net Energy Gain 0.27 MCal/lb NE _l Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry PH Ensiled Ph NO ₃ Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	Fat	Fat	2.06 %
Ca Calcium 0.38 % P Phosphorus 0.17 % Mg Magnesium 0.17 % K Potassium 1.40 % Energy Calculations 100% DM basis TDN Total Digestible Nutrients 55.27 % DE Digestible Energy 1.59 MCal/kg NE _m Net Energy Maintenance 0.52 MCal/lb NE _g Net Energy Gain 0.27 MCal/lb NE _l Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry PH Ensiled pH NO ₃ Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	Minerals		100% DM basis
P Phosphorus 0.17 % Mg Magnesium 0.17 % K Potassium 1.40 % Energy Calculations 100% DM basis TDN Total Digestible Nutrients 55.27 % DE Digestible Energy 1.59 MCal/kg NEm Net Energy Maintenance 0.52 MCal/lb NEg Net Energy Gain 0.27 MCal/lb NEl Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry PH Ensiled pH NO3 Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	Ash	Ash	7.39 %
Mg Magnesium 0.17 % K Potassium 1.40 % Energy Calculations 100% DM basis TDN Total Digestible Nutrients 55.27 % DE Digestible Energy 1.59 MCal/kg NE _m Net Energy Maintenance 0.52 MCal/lb NE _g Net Energy Gain 0.27 MCal/lb NE _l Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry PH Ensiled pH NO ₃ Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	Ca	Calcium	0.38 %
K Potassium 1.40 % Energy Calculations 100% DM basis TDN Total Digestible Nutrients 55.27 % DE Digestible Energy 1.59 MCal/kg NE _m Net Energy Maintenance 0.52 MCal/lb NE _g Net Energy Gain 0.27 MCal/lb NE _l Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry PH Ensiled pH NO ₃ Nitrates ppm ² Calculated Parameters ³ Scale RFQ Relative Forage Quality 78	Р	Phosphorus	0.17 %
Energy CalculationsTDNTotal Digestible Nutrients55.27 %DEDigestible Energy1.59 MCal/kgNEmNet Energy Maintenance0.52 MCal/lbNEgNet Energy Gain0.27 MCal/lbNElNet Energy Lacatation0.55 MCal/lbComponentsWet ChemistrypHEnsiledpHNO3Nitratesppm²Calculated Parameters³ScaleRFQRelative Forage Quality78	Mg	Magnesium	0.17 %
TDN Total Digestible Nutrients 55.27 % DE Digestible Energy 1.59 MCal/kg NE _m Net Energy Maintenance 0.52 MCal/lb NE _g Net Energy Gain 0.27 MCal/lb NE _l Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry pH Ensiled pH NO ₃ Nitrates ppm ² Calculated Parameters ³ Scale RFQ Relative Forage Quality 78	K	Potassium	1.40 %
DE Digestible Energy 1.59 MCal/kg NE _m Net Energy Maintenance 0.52 MCal/lb NE _g Net Energy Gain 0.27 MCal/lb NE _l Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry PH Ensiled pH NO ₃ Nitrates ppm ² Calculated Parameters ³ Scale RFQ Relative Forage Quality 78	Energy Calculations		100% DM basis
NEm Net Energy Maintenance 0.52 MCal/lb NEg Net Energy Gain 0.27 MCal/lb NEl Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry pH Ensiled pH NO3 Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	TDN	Total Digestible Nutrients	55.27 %
NEg Net Energy Gain 0.27 MCal/lb NEl Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry pH Ensiled pH NO3 Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	DE	Digestible Energy	1.59 MCal/kg
NEI Net Energy Lacatation 0.55 MCal/lb Components Wet Chemistry pH Ensiled pH NO3 Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	NE _m	Net Energy Maintenance	0.52 MCal/lb
Components PH Ensiled NO ₃ Nitrates Ppm ² Calculated Parameters ³ RFQ Relative Forage Quality 78	NE_g	Net Energy Gain	0.27 MCal/lb
pHEnsiledpHNO3Nitrates ppm^2 Calculated Parameters3ScaleRFQRelative Forage Quality78	NE _I	Net Energy Lacatation	0.55 MCal/lb
NO ₃ Nitrates ppm² Calculated Parameters³ Scale RFQ Relative Forage Quality 78	Components		Wet Chemistry
Calculated Parameters ³ RFQ Relative Forage Quality 78	рН	Ensiled	рН
RFQ Relative Forage Quality 78	NO ₃	Nitrates	ppm²
	Calcula	ted Parameters ³	Scale
RFV Relative Feed Value 0	RFQ	Relative Forage Quality	78
	RFV	Relative Feed Value	0

 $^{^{2}}$ ppm = mg/kg

³ Relative Forage Quality (RFQ) is reported for all grass, mixed, legume hays and haylages; and, Relative Feed Value (RFV) is reported for Alfalfa only. No nutritive value scale is available for corn silage

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Email: GDM1951@GMAIL.COM

Sample ID: Cool Season Mix

Lab Number: 116284 Reported: 7/10/2025

Type: Hay

Forage Species (Identified by Client): Mixed Grasses

Understanding Hay Quality

The graphs below are presented to provide a general guide to evaluate the Crude Protein (CP) and Total Digestible Nutrients (TDN) levels of the forage submitted for testing. If you need help understanding the results or information on developing a balanced ration for a specific animal(s), please contact your local UT Extension agent or visit <u>utbeef.com</u>.

Crude Protein (CP)

Your Sample - 9.37%

Low Medium Good Excellent

Low = <8% | Medium = 8% to 10.9% | Good = 11% to 13.9% | Excellent = ≥14%

Total Digestible Nutrients (TDN)

Your Sample - 55.27%

Low Medium Good Excellent

Low = <50% | Medium = 50% to 55% | Good = 55.1% to 59.9% | Excellent = ≥60%

Wet Chemistry					
Minerals		as received			
Ca	Calcium	%			
Р	Phosphorus	%			
Mg	Magnesium	%			
K	Potassium	%			
S	Sulfur	%			
Cu	Copper	ppm ¹			
Zn	Zinc	ppm			
Mn	Manganese	ppm			
Fe	Iron	ppm			
В	Boron	ppm			

Payment Details

Receipt:

Amount: \$17.00 Method: 1207

Payment Date: 7/7/2025

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S.

Department of Agriculture and county governments cooperating. UT Extension provides equal opportunities in programs and employment.

 $^{^{1}}$ ppm = mg/kg