Soil, Plant & Pest Center
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UTEXTENSION INSTITUTE OF AGRICULTURE THE UNIVERSITY OF TENNESSEE

Forage Analysis Report

GREGORY MOCK
157 ETT BROWN ROAD
DEER LODGE, TN 37726

County: Morgan
Email: GDM1951@GMAIL.COM

Sample ID: JB Timothy
Lab Number: 116441
Reported: 7/24/2025
Type: Hay
Forage Species (Identified by Client): Mixed Grasses

Near-Infared Spectroscopy Analysis (NIRS)[1]

Water Content		as received
DM	Dry Matter	89 %
Moisture	Moisture	11 %
Protein		*100% DM basis*
CP	Crude Protein	8.64 %
ADICP	Acid Detergent Insoluble CP	0.97 %
NDICP	Neutral Detergent Insoluble CP	2.05 %
InsolCP	Insoluble Crude Protein	5.22 %
Lysine	Lysine	0.30 %
Fiber		*100% DM basis*
ADF	Acid Detergent Fiber	38.37 %
NDF	Neutral Detergent Fiber	67.56 %
Lignin	Lignin	6.71 %
Carbohydrates		*100% DM basis*
ESC	Sugar	6.32 %
Fructan	Fructan	2.03 %
Starch	Starch	2.18 %
WSC	Water Soluble Carbohydrates	9.10 %
NSC	Non-Structural Carbohydrates	11.28 %
NFC	Non-Fiber Carbohydrates	18.58 %
Digestibility		*100% DM basis*
IVTDMD48h	*in-vitro* True DM Digestibility 48h	65.78 %
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		*100% DM basis*
Fat	Fat	2.03 %
Minerals		*100% DM basis*
Ash	Ash	3.19 %
Ca	Calcium	0.34 %
P	Phosphorus	0.22 %
Mg	Magnesium	0.14 %
K	Potassium	1.15 %
Energy Calculations		*100% DM basis*
TDN	Total Digestible Nutrients	58.41 %
DE	Digestible Energy	1.66 MCal/kg
NE_m	Net Energy Maintenance	0.57 MCal/lb
NE_g	Net Energy Gain	0.31 MCal/lb
NE_l	Net Energy Lacatation	0.59 MCal/lb
Components		*Wet Chemistry*
pH	Ensiled	pH
NO_3	Nitrates	ppm[2]
Calculated Parameters[3]		*Scale*
RFQ	Relative Forage Quality	84
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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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 utbeef.com.

Crude Protein (CP)

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

Total Digestible Nutrients (TDN)

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

Wet Chemistry

Minerals		*as received*
Ca	Calcium	%
P	Phosphorus	%
Mg	Magnesium	%
K	Potassium	%
S	Sulfur	%
Cu	Copper	ppm[1]
Zn	Zinc	ppm
Mn	Manganese	ppm
Fe	Iron	ppm
B	Boron	ppm

[1] ppm = mg/kg

Payment Details

Receipt:
Amount: $17.00
Method: 1208
Payment Date: 7/21/2025