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

Forage Analysis Report

DAVID JONES
1056 HWY 131
THORN HILL, TN 37881

County: Hancock
Email: davidjones1955@hotmail.com

Sample ID: APR,1st
Lab Number: 113073
Reported: 6/6/2023
Type: Hay
Species: Mixed Grasses

Near-Infared Spectroscopy Analysis (NIRS)[1]

Water Content		*as received*
DM	Dry Matter	93 %
Moisture	Moisture	7 %
Protein		*100% DM basis*
CP	Crude Protein	17.24 %
ADICP	Acid Detergent Insoluble CP	0.87 %
NDICP	Neutral Detergent Insoluble CP	3.97 %
InsolCP	Insoluble Crude Protein	10.53 %
Lysine	Lysine	0.60 %
Fiber		*100% DM basis*
ADF	Acid Detergent Fiber	24.06 %
NDF	Neutral Detergent Fiber	50.58 %
Lignin	Lignin	2.05 %
Carbohydrates		*100% DM basis*
ESC	Sugar	12.24 %
Fructan	Fructan	1.86 %
Starch	Starch	3.26 %
WSC	Water Soluble Carbohydrates	14.21 %
NSC	Non-Structural Carbohydrates	17.47 %
NFC	Non-Fiber Carbohydrates	26.46 %
Digestibility		*100% DM basis*
IVTDMD48h	*in-vitro* True DM Digestibility 48h	85.42 %
NDFD48h	Neutral Detergent Fiber Digestibility 48h	72.00 %

[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	2.79 %
Minerals		*100% DM basis*
Ash	Ash	2.93 %
Ca	Calcium	%
P	Phosphorus	%
Mg	Magnesium	%
K	Potassium	%
Energy Calculations		*100% DM basis*
TDN	Total Digestible Nutrients	73.41 %
DE	Digestible Energy	2.05 MCal/kg
NE_m	Net Energy Maintenance	0.79 MCal/lb
NE_g	Net Energy Gain	0.51 MCal/lb
NE_l	Net Energy Lacatation	0.76 MCal/lb
Components		*Wet Chemistry*
pH	Ensiled	pH
NO_3	Nitrates	343 ppm[2]
Calculated Parameters[3]		*Scale*
RFQ	Relative Forage Quality	142
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	0.49	%
P	Phosphorus	0.32	%
Mg	Magnesium	0.25	%
K	Potassium	1.85	%
S	Sulfur	0.19	%
Cu	Copper	6	ppm[1]
Zn	Zinc	24	ppm
Mn	Manganese	165	ppm
Fe	Iron	78	ppm
B	Boron	4	ppm

[1] ppm = mg/kg

Payment Details

Receipt: 17083
Amount: $47.00
Method: 2303
Payment Date: 5/9/2023