### Soil, Plant & Pest Center

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# Forage Analysis Report

David Jones 1056 Hwy 131 Horn Hill, TN 37881 County: Hancock Email: dkpearson444@gmail.com Sample ID: Sept. late 1st cut Lab Number: 116975 Reported: 10/2/2025

Type: Hay

Forage Species (Identified by Client): Mixed Grasses

### Near-Infared Spectroscopy Analysis (NIRS)<sup>1</sup>

Water Content			ed
DM	Dry Matter	84	%
Moisture	Moisture	16	%
Protein		100% DM E	basis
СР	Crude Protein	11.37	%
ADICP	Acid Detergent Insoluble CP	0.76	%
NDICP	Neutral Detergent Insoluble CP	2.30	%
InsoICP	Insoluble Crude Protein	6.87	%
Lysine	Lysine	0.40	%
Fiber		100% DM E	basis
ADF	Acid Detergent Fiber	37.69	%
NDF	Neutral Detergent Fiber	64.86	%
Lignin	Lignin	5.06	%
Carbohydrates		100% DM E	basis
ESC	Sugar	6.22	%
Fructan	Fructan	2.09	%
Starch	Starch	1.24	%
WSC	Water Soluble Carbohydrates	8.71	%
NSC	Non-Structural Carbohydrates	9.95	%
NFC	Non-Fiber Carbohydrates	14.69	%
Digestibility		100% DM E	basis
IVTDMD48h	in-vitro True DM Digestibility 48h	72.05	%
NDFD48h	Neutral Detergent Fiber Digestibility 48h	55.00	%

<sup>&</sup>lt;sup>1</sup> 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.

17	ilysis (NIK3)	
Fat		100% DM basis
Fat	Fat	2.28 %
Minerals		100% DM basis
Ash	Ash	6.80 %
Ca	Calcium	%
Р	Phosphorus	%
Mg	Magnesium	%
K	Potassium	%
Energy	Calculations	100% DM basis
TDN	Total Digestible Nutrients	59.13 %
DE	Digestible Energy	1.69 MCal/kg
$NE_{m}$	Net Energy Maintenance	0.58 MCal/lb
$NE_g$	Net Energy Gain	0.32 MCal/lb
$NE_{l}$	Net Energy Lacatation	0.60 MCal/lb
Components		Wet Chemistry
рН	Ensiled	рН
$NO_3$	Nitrates	523 ppm <sup>2</sup>
Calculated Parameters <sup>3</sup>		Scale
RFQ	Relative Forage Quality	89
RFV	Relative Feed Value	0

 $<sup>^2</sup> ppm = mg/kg$ 

<sup>&</sup>lt;sup>3</sup> 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 <a href="https://doi.org/10.1007/journal.org/">https://doi.org/10.1007/journal.org/</a>

### **Crude Protein (CP)**

 Your Sample - 11.37%

 Low
 Medium
 Good
 Excellent

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

#### **Total Digestible Nutrients (TDN)**

Your Sample - 59.13%			
Low	Medium	Good	Excellent

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

wet Cnemistry						
Minerals		as received				
Ca	Calcium	0.46 %				
Р	Phosphorus	0.26 %				
Mg	Magnesium	0.38 %				
K	Potassium	2.10 %				
S	Sulfur	0.22 %				
Cu	Copper	5 ppm <sup>1</sup>				
Zn	Zinc	18 ppm				
Mn	Manganese	113 ppm				
Fe	Iron	105 ppm				
В	Boron	4 ppm				

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Payment	Detail

Receipt: Amount: \$47.00 Method: 2580

Payment Date: 9/25/2025

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.

 $<sup>^{1}</sup>$  ppm = mg/kg