

Forage Analysis Report

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SOIL, PLANT & PEST CENTER
UTEXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

Sample Name: Oct 1 2nd cut
Lab Number: 118712
Type (Identified by Client): Hay
Forage Species (Identified by Client): Mixed Grasses



Payment Information:
Check 2520 - \$47.00

Report Date: 10/12/2026

Near-Infrared Spectroscopy Analysis (NIRS)

Water Content

		<i>as received</i>
DM	Dry Matter (Final)	87.23 %
Moisture	Moisture	12.77 %

Protein

		<i>100% DM basis</i>
CP	Crude Protein	13.30 %
ADICP	Acid Detergent Insoluble Crude Protein	1.01 %
NDICP	Neutral Detergent Insoluble Crude Protein	2.56 %
InsolCP	Insoluble Crude Protein	7.45 %
Lysine	Lysine	0.46 %

Fiber

ADF	Acid Detergent Fiber	35.51 %
NDF	Neutral Detergent Fiber	66.46 %
Lignin	Lignin	5.41 %
aNDFom	amylase-treated NDF corrected for organic matter	64.60 %

Carbohydrates

ESC	Sugar	5.25 %
Fructan	Fructan	1.93 %
Starch	Starch	0.57 %
WSC	Water-Soluble Carbohydrates	5.97 %
NSC	Non-Structural Carbohydrates	6.54 %
NFC	Non-Fiber Carbohydrates	14.70 %

Digestibility

IVTDMD48h	<i>in-vitro</i> True DM Digestibility at 48h	69.56 %
IVTDMD30h	<i>in-vitro</i> True DM Digestibility at 30h	60.14 %
NDFD48h	Neutral Digestible Fiber Digestibility at 48h	51.47 %
dNDF30h	Digestible Neutral Detergent Fiber at 30h	23.64 %
NDFD30h	Neutral Detergent Fiber Digestibility at 30h	35.57 %
dNDF48h	Digestible Neutral Detergent Fiber at 48h	34.21 %
uNDF240h	Undigestible Neutral Detergent Fiber at 240h	18.44 %
uNDF240om	Undigestible Neutral Detergent Fiber at 240om	18.57 %

Fat Content

Fat	Fat	2.73 %
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Minerals

		100% DM basis
Ash	Ash	2.81 %
P	Phosphorus (Chemistry)	0.31 %
K	Potassium (Chemistry)	2.02 %
Ca	Calcium (Chemistry)	0.40 %
Mg	Magnesium (Chemistry)	0.38 %
S	Sulfur (Chemistry)	0.21 %
Zn	Zinc (Chemistry)	17 ppm
B	Boron (Chemistry)	3 ppm
Fe	Iron (Chemistry)	85 ppm
Cu	Copper (Chemistry)	5 ppm
Mn	Manganese (Chemistry)	90 ppm

Nitrates

		100% DM basis
NO ₃	Nitrates	330 ppm

Energy Calculations

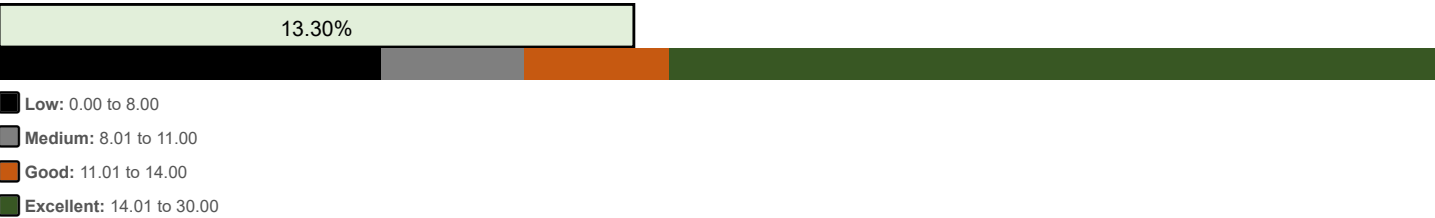
TDN	Total Digestible Nutrients	61.41 %
DE	Digestible Energy	1.76 MCal/kg
ME	Metabolizable Energy	1.01 MCal/lb
NE _m	Net-Energy for Maintenance	0.62 MCal/lb
NE _g	Net-Energy for Gain	0.35 MCal/lb
NE _l	Net-Energy for Lactation	0.62 MCal/lb

Nutritive Value Parameters

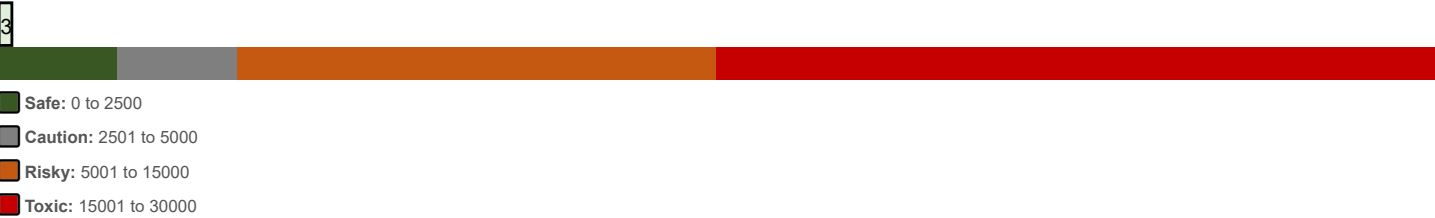
		Scale
RFQ	Relative Forage Quality	90

Understanding Forage Quality

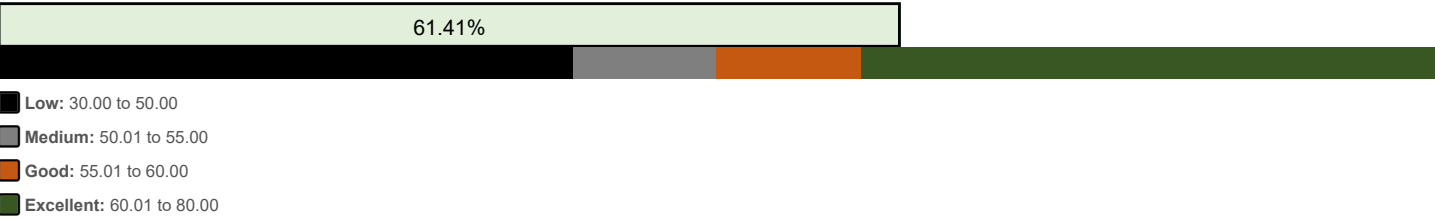
Crude Protein (CP)



Nitrates (NO₃)



Total Digestible Nutrients (TDN)



Disclaimer: This benchmark graph is based on forage samples for alfalfa and grass hay/haylage submitted by Tennessee producers and may not represent all hay produced in the state. There is not a benchmark graphical representation available for corn silage. Comparisons are made

with similar forage types and are intended for educational purposes only. Results should be used as general benchmarks, not as the sole basis for feeding, marketing, pricing, or management decisions.

[Additional grading information from USDAAMS](#)

Information on forage nitrates can be found on UT Extension publication W 1314, Nitrate Toxicity in Forages: https://solutions.tennessee.edu/?view_pub_pdf=2604

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- 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. Certification with the National Forage Testing Association.
 - For conversions: ppm = mg/kg
 - Relative Forage Quality (RFQ) is reported for all grass, mixed, legume hays and haylages.
 - Relative Feed Value (RFV) is reported for Alfalfa only.
 - No nutritive value parameter scale is available for corn silage.

Forage Analysis Definitions Publication W1341

For more information about your forage analysis, please visit with your local UT/TSU Extension Agent.

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