

Forage Analysis Report

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

Sample Name: Seth 1
Lab Number: 118383
Type (Identified by Client): Hay
Forage Species (Identified by Client): Alfalfa



Payment Information:
Check 170 - \$17.00

Report Date: 8/21/2026

Near-Infrared Spectroscopy Analysis (NIRS)

Water Content

as received

DM	Dry Matter (Final)	86.57 %
Moisture	Moisture	13.43 %

Protein

100% DM basis

CP	Crude Protein	20.57 %
ADICP	Acid Detergent Insoluble Crude Protein	1.12 %
NDICP	Neutral Detergent Insoluble Crude Protein	1.93 %
InsolCP	Insoluble Crude Protein	11.92 %
Lysine	Lysine	0.72 %

Fiber

ADF	Acid Detergent Fiber	29.51 %
NDF	Neutral Detergent Fiber	36.86 %
Lignin	Lignin	6.29 %
aNDFom	amylase-treated NDF corrected for organic matter	36.12 %

Carbohydrates

ESC	Sugar	7.95 %
Fructan	Fructan	2.28 %
Starch	Starch	2.17 %
WSC	Water-Soluble Carbohydrates	9.76 %
NSC	Non-Structural Carbohydrates	11.93 %
NFC	Non-Fiber Carbohydrates	32.52 %

Digestibility

IVTDMD48h	<i>in-vitro</i> True DM Digestibility at 48h	81.50 %
IVTDMD30h	<i>in-vitro</i> True DM Digestibility at 30h	79.83 %
NDFD48h	Neutral Digestible Fiber Digestibility at 48h	46.52 %
dNDF30h	Digestible Neutral Detergent Fiber at 30h	15.11 %
NDFD30h	Neutral Detergent Fiber Digestibility at 30h	41.00 %
dNDF48h	Digestible Neutral Detergent Fiber at 48h	17.15 %
uNDF240h	Undigestible Neutral Detergent Fiber at 240h	17.81 %
uNDF240om	Undigestible Neutral Detergent Fiber at 240om	16.65 %

Fat Content

Fat	Fat	2.11 %
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Minerals

100% DM basis

Ash	Ash	7.94 %
P	Phosphorus	0.30 %

K	Potassium	2.18 %
Ca	Calcium	1.60 %
Mg	Magnesium	0.31 %

Energy Calculations

TDN	Total Digestible Nutrients	67.70 %
DE	Digestible Energy	1.89 MCal/kg
ME	Metabolizable Energy	1.11 MCal/lb
NE _m	Net-Energy for Maintenance	0.71 MCal/lb
NE _g	Net-Energy for Gain	0.44 MCal/lb
NE _l	Net-Energy for Lactation	0.69 MCal/lb

Nutritive Value Parameters

		Scale
RFQ	Relative Forage Quality	179
RFV	Relative Feed Value (Alfalfa only)	166

- 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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