

Forage Analysis Report

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

Sample Name: Hurst 3
Lab Number: 118337
Type (Identified by Client): Hay
Forage Species (Identified by Client): Orchardgrass



Payment Information:
Check 168 - \$182.00

Report Date: 8/13/2026

Near-Infrared Spectroscopy Analysis (NIRS)

Water Content

as received

DM	Dry Matter (Final)	91.64 %
Moisture	Moisture	8.36 %

Protein

100% DM basis

CP	Crude Protein	13.42 %
ADICP	Acid Detergent Insoluble Crude Protein	1.16 %
NDICP	Neutral Detergent Insoluble Crude Protein	3.55 %
InsolCP	Insoluble Crude Protein	9.15 %
Lysine	Lysine	0.47 %

Fiber

ADF	Acid Detergent Fiber	36.86 %
NDF	Neutral Detergent Fiber	61.04 %
Lignin	Lignin	5.60 %
aNDFom	amylase-treated NDF corrected for organic matter	60.12 %

Carbohydrates

ESC	Sugar	4.58 %
Fructan	Fructan	1.99 %
Starch	Starch	0.21 %
WSC	Water-Soluble Carbohydrates	5.82 %
NSC	Non-Structural Carbohydrates	6.03 %
NFC	Non-Fiber Carbohydrates	14.48 %

Digestibility

IVTDMD48h	<i>in-vitro</i> True DM Digestibility at 48h	75.77 %
IVTDMD30h	<i>in-vitro</i> True DM Digestibility at 30h	58.74 %
NDFD48h	Neutral Digestible Fiber Digestibility at 48h	56.51 %
dNDF30h	Digestible Neutral Detergent Fiber at 30h	23.30 %
NDFD30h	Neutral Detergent Fiber Digestibility at 30h	38.16 %
dNDF48h	Digestible Neutral Detergent Fiber at 48h	34.50 %
uNDF240h	Undigestible Neutral Detergent Fiber at 240h	13.77 %
uNDF240om	Undigestible Neutral Detergent Fiber at 240om	14.42 %

Fat Content

Fat	Fat	3.74 %
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Minerals

100% DM basis

Ash	Ash	7.32 %
P	Phosphorus	0.27 %

K	Potassium	2.38 %
Ca	Calcium	0.54 %
Mg	Magnesium	0.24 %
Energy Calculations		
TDN	Total Digestible Nutrients	60.00 %
DE	Digestible Energy	1.71 MCal/kg
ME	Metabolizable Energy	0.99 MCal/lb
NE _m	Net-Energy for Maintenance	0.60 MCal/lb
NE _g	Net-Energy for Gain	0.33 MCal/lb
NE _l	Net-Energy for Lactation	0.61 MCal/lb
Nutritive Value Parameters		<i>Scale</i>
RFQ	Relative Forage Quality	96
RFV	Relative Feed Value (Alfalfa only)	92

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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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