HOLMES LABORATORY, INC. FORAGE/FEEDSTUFF

3559 U.S. 62 ANALYSIS REPORT

Millersburg, Ohio 44654 Web site: www.holmeslab.com

Phone:(330)893-2933 Date Reported: 07/08/2009

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Customer: Joyful Journey Alpacas

[A Vital Key to Todays Agriculture] Lab Number: 09-2417

SAMPLE I.D.:Grass Hay

Joyful Journey Alpacas, LLC Orchard Grass

13920 W. State Rd. 77

Hayward, WI 54843

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Item Units As Sampled Basis Dry Matter Basis

Moisture % 16.85

Dry Matter % 83.15

Crude Protein % 9.15 11.00

Available Protein % 8.39 10.09

Adjusted Crude Protein % 9.15 11.00

A.D.F. Protein % .76 .91

N.D.F. Protein % 2.11 2.54

Soluble Protein %

Degraded Protein %

Protein Solubility %

Protein Degradability %

Lignin % 2.79 3.35

Acid Detergent Fiber % 21.34 25.66

Neutral Detergent Fiber % 32.00 38.48

N.D.F.(Protein Free) % 29.88 35.94

NFC (Non-Fiber Carbohydrate) % 34.32 41.27

Sugar %

Starch (est.) % 5.15 6.19

Crude Fat % 2.57 3.09

TDN % 56.78 68.29

NEl Mcal/lb. .585 .704

NEm Mcal/lb. .595 .716

NEg Mcal/lb. .369 .444

Ash % 6.54 7.86

Lignin Insoluble Ash % 1.74 2.09

Calcium (Ca) % .28 .34

Phosphorus (P) % .22 .26

Magnesium (Mg) % .17 .20

Potassium (K) % 1.78 2.14

Sulfur (S) % .12 .15

Sodium (Na) % .015 .018

Chloride (Cl) %

Copper (Cu) ppm 6 7

Manganese (Mn) ppm 80 96

Zinc (Zn) ppm 11 13

Iron (Fe) ppm 54 65

Molybdenum (Mo) ppm

Aluminum (Al) ppm

Nitrate (NO3) % Negative

pH

RFV (Relative Feed Value) 167

Horse DE Mcal/lb.

Horse TDN %

Crude Fiber %

DCAD meq./100g DM

DCAD meq./1 lb.DM

National Forage Testing Association Certified