



Beaverton Fertilizer Nitrogen+ Trial 2021

Table 1. Forage Yield and Quality With and Without Bone Meal, Feather Meal, and K+SOP

	No Fertilizer ± SD	With Fertilizer ± SD	P-Value
Total Dry Weight (lbs/acre)	3054 ± 470	4208 ± 605	0.013 *
Crude Protein (%)	5.23 ± 0.32	5.1 ± 0	0.547
Acid Detergent Fiber (% ADF)	38.6 ± 0.47	36.7 ± 2.76	0.373
Neutral Detergent Fiber (% NDF)	59.8 ± 0.87	60.6 ± 0.51	0.251
Relative Feed Value (RFV)	91.7 ± 1.15	92.3 ± 4.16	0.826
Total Digestible Nutrients (TDN)	57.4 ± 0.47	59.5 ± 2.97	0.368
Digestible Protein (%)	0.83 ± 0.32	0.7 ± 0	0.547
Digestible Dry Matter (% DDM)	58.8 ± 0.36	60.4 ± 2.12	0.355
Dry Matter Intake (DMI)	2 ± 0	2 ± 0	0.423
Digestible Energy (MCAL/kg)	2.53 ± 0.02	2.62 ± 0.13	0.351
Metabolizable energy (MSCAL/kg)	2.11 ± 0.02	2.2 ± 0.13	0.368
Net Energy Lact. (MCAL/kg)	1.29 ± 0.01	1.34 ± 0.07	0.356
Net Energy Maint. (MCAL/kg)	1.70 ± 0.02	1.78 ± 0.12	0.365
Net Energy Gain. (MCAL/kg)	1.02 ± 0.02	1.1 ± 0.1	0.347
Phosphorous (%)	0.08 ± 0.01	0.11 ± 0.01	0.057
Potassium (%)	1.03 ± 0.06	1.22 ± 0.09	0.062
Calcium (%)	0.42 ± 0.03	0.43 ± 0.05	0.843
Magnesium (%)	0.22 ± 0.01	0.2 ± 0.01	0.074

Mean plus or minus standard deviation (SD).

*p-value <0.05, **p-value <0.01, ***p-value <0.001

Trial Methods

5/19/18 & 5/23/18 - Applied organic fertilizer 117lbs N, 130 lbs. P, 330 lbs. K per acre as K+SOP (0-0-50) @ 660 lbs./acre, Bone Meal (4-13-0) @ 1000 lbs./acre, Feather Meal (11-0-0) @ 700 lbs./acre

7/3/18 - Sampled forage yield and quality

July 2018 - Hayed

6/20/19 - Sampled forage yield and quality

6/21/19 - Hayed

6/19/20 - Sampled forage yield and quality
July 2020 - Hayed
6/29/21 - Sampled forage yield and quality
July 2021 – Mowed (biomass left in place)

For more information, please contact Brook Brouwer at brook.brouwer@wsu.edu.

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Citation

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