



Beaverton Fertilizer Nitrogen+ Trial 2019

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)	3857 ± 116	9201 ± 1438	0.00935 **
Crude Protein (%)	5.8 ± 0	6.67 ± 0.40	0.0268 *
Acid Detergent Fiber (% ADF)	34.03 ± 0.57	35.97 ± 1.16	0.0955
Neutral Detergent Fiber (% NDF)	55.47 ± 1.01	59.6 ± 0.95	0.0208 *
Relative Feed Value (RFV)	104.3 ± 2.52	95 ± 1.73	0.0181 *
Total Digestible Nutrients (TDN)	62.23 ± 0.61	60.27 ± 1.27	0.112
Digestible Protein (%)	1.4 ± 0	2.27 ± 0.4	0.0268 *
Digestible Dry Matter (% DDM)	62.4 ± 0.46	60.93 ± 0.9	0.102
Dry Matter Intake (DMI)	2.17 ± 0.06	2 ± 0	0.012 *
Digestible Energy (MCAL/kg)	2.74 ± 0.03	2.66 ± 0.06	0.121
Metabolizable Energy (MSCAL/kg)	2.32 ± 0.03	2.23 ± 0.06	0.0976
Net Energy Lact. (MCAL/kg)	1.41 ± 0.01	1.36 ± 0.03	0.104
Net Energy Maint. (MCAL/kg)	1.89 ± 0.03	1.81 ± 0.06	0.125
Net Energy Gain (MCAL/kg)	1.19 ± 0.02	1.12 ± 0.04	0.113
Phosphorous (%)	0.1 ± 0.01	0.18 ± 0.01	0.00146 **
Potassium (%)	1.2 ± 0.13	1.55 ± 0.05	0.0321 *
Calcium (%)	0.44 ± 0.01	0.44 ± 0.04	0.778
Magnesium (%)	0.22 ± 0.01	0.2 ± 0.01	0.0267 *

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

For more information please contact Brook Brouwer at brook.brouwer@wsu.edu. Access to the Beaverton Preserve for this research was provided by the San Juan County Land Bank.