



Beaverton Fertilizer Nitrogen+ Trial 2018

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

	No Fertilizer ± SD	With Fertilizer ± SD	P-Value
Total Dry Weight (lbs./acre)	3,806 ± 107	4,663 ± 928	0.219
Crude Protein (%)	5 ± 0.36	7.77 ± 0.70	0.013 *
Acid Detergent Fiber (% ADF)	36.73 ± 0.55	34.37 ± 1.29	0.106
Neutral Detergent Fiber (% NDF)	59.47 ± 1.5	57.33 ± 1.32	0.277
Relative Feed Value (RFV)	94.67 ± 3.06	101 ± 3.61	0.193
Total Digestible Nutrients (TDN)	59.37 ± 0.61	61.93 ± 1.38	0.098
Digestible Protein (%)	0.6 ± 0.36	3.37 ± 0.70	0.013 *
Digestible Dry Matter (% DDM)	60.27 ± 0.45	62.23 ± 1.12	0.112
Dry Matter Intake (DMI)	2.03 ± 0.06	2.77 ± 1.15	0.396
Digestible Energy (MCAL/kg)	2.62 ± 0.03	2.73 ± 0.06	0.0899
Metabolizable Energy (MSCAL/kg)	2.19 ± 0.03	2.31 ± 0.06	0.108
Net Energy Lact. (MCAL/kg)	1.34 ± 0.02	1.40 ± 0.03	0.0814
Net Energy Maint. (MCAL/kg)	1.78 ± 0.03	1.88 ± 0.05	0.0972
Net Energy Gain (MCAL/kg)	1.09 ± 0.02	1.18 ± 0.05	0.103
Phosphorous (%)	0.07 ± 0.01	0.08 ± 0.01	0.423
Potassium (%)	0.99 ± 0.01	1.22 ± 0.06	0.0172 *
Calcium (%)	0.43 ± 0.05	0.42 ± 0.04	0.742
Magnesium (%)	0.21 ± 0.02	0.22 ± 0.01	0.874

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

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.