



## Beaverton Fertilizer Nitrogen+ Trial 2022

**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)	6331 ± 918	7618 ± 1105	0.271
Crude Protein (%)	6.23 ± 0.25	6.47 ± 0.6	0.603
Acid Detergent Fiber (%ADF)	34.4 ± 0.35	35.4 ± 0.78	0.177
Neutral Detergent Fiber (%NDF)	55.9 ± 0.86	57.5 ± 1.47	0.192
Relative Feed Value (RFV)	103 ± 2.08	99.3 ± 3.51	0.201
Total Digestible Nutrients (TDN)	61.9 ± 0.38	60.8 ± 0.81	0.163
Digestible Protein (%)	1.83 ± 0.25	2.07 ± 0.6	0.603
Digestible Dry Matter (%DDM)	62.1 ± 0.27	61.3 ± 0.55	0.156
Dry Matter Intake (DMI)	2.17 ± 0.06	2.07 ± 0.06	0.164
Digestible Energy (MCAL/kg)	2.73 ± 0.02	2.68 ± 0.04	0.190
Metabolizable Energy (MCAL/kg)	2.31 ± 0.02	2.26 ± 0.03	0.148
Net Energy Lact. (MCAL/kg)	1.4 ± 0.01	1.37 ± 0.02	0.182
Net Energy Maint. (MCAL/kg)	1.88 ± 0.02	1.84 ± 0.03	0.172
Net Energy Gain (MCAL/kg)	1.18 ± 0.01	1.14 ± 0.03	0.17
Phosphorous (%)	<b>0.11 ± 0.01</b>	<b>0.15 ± 0.02</b>	<b>0.047 *</b>
Potassium (%)	1.58 ± 0.02	1.76 ± 0.14	0.143
Calcium (%)	0.35 ± 0.04	0.35 ± 0.02	0.877
Magnesium (%)	0.18 ± 0.01	0.18 ± 0.01	0.694

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)  
6/14/22 - Sampled forage yield and quality

For more information, please contact Brook Brouwer at [brook.brouwer@wsu.edu](mailto:brook.brouwer@wsu.edu).

### **Acknowledgment**

Access to the Beaverton Preserve for this research was provided by the San Juan County Land Bank.

### **Citation**

Walton Andrews and Brook Brouwer. 2022. Beaverton Fertilizer Nitrogen+ Trial 2022. WSU San Juan County Extension Trial Report. <https://extension.wsu.edu/sanjuan/ag-researchreports/>