

Figure 1. Producer mob grazing sites in South Dakota.

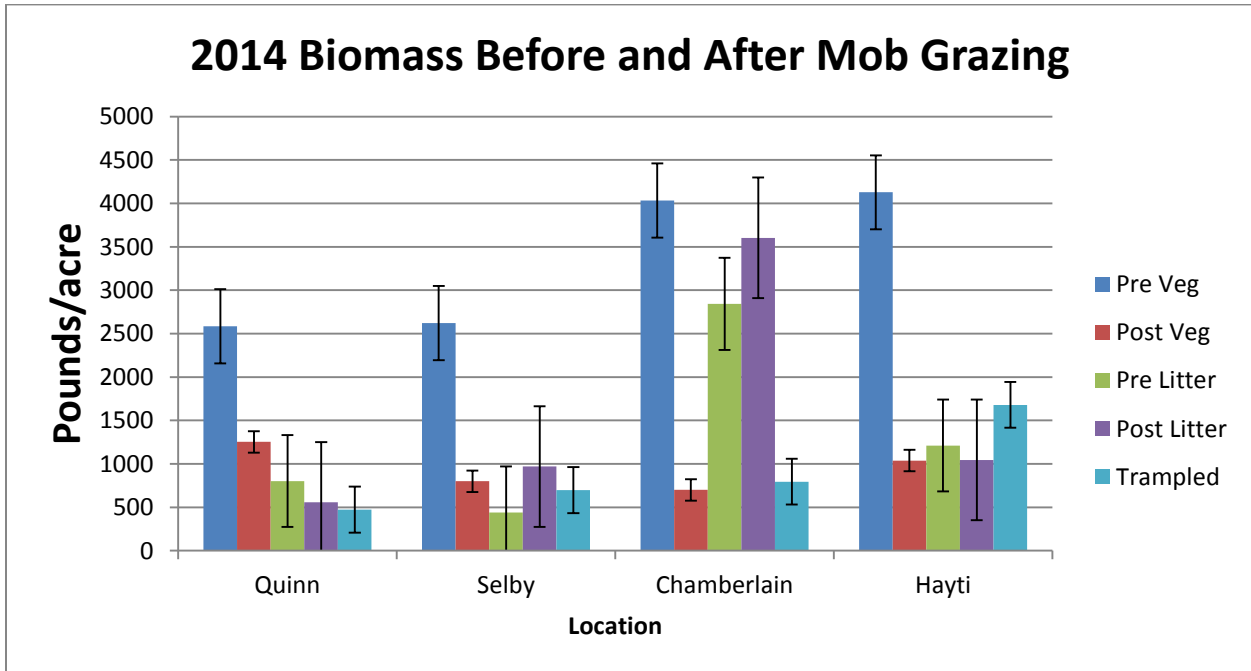


Figure 2. Biomass of vegetation before and after mob grazing events.

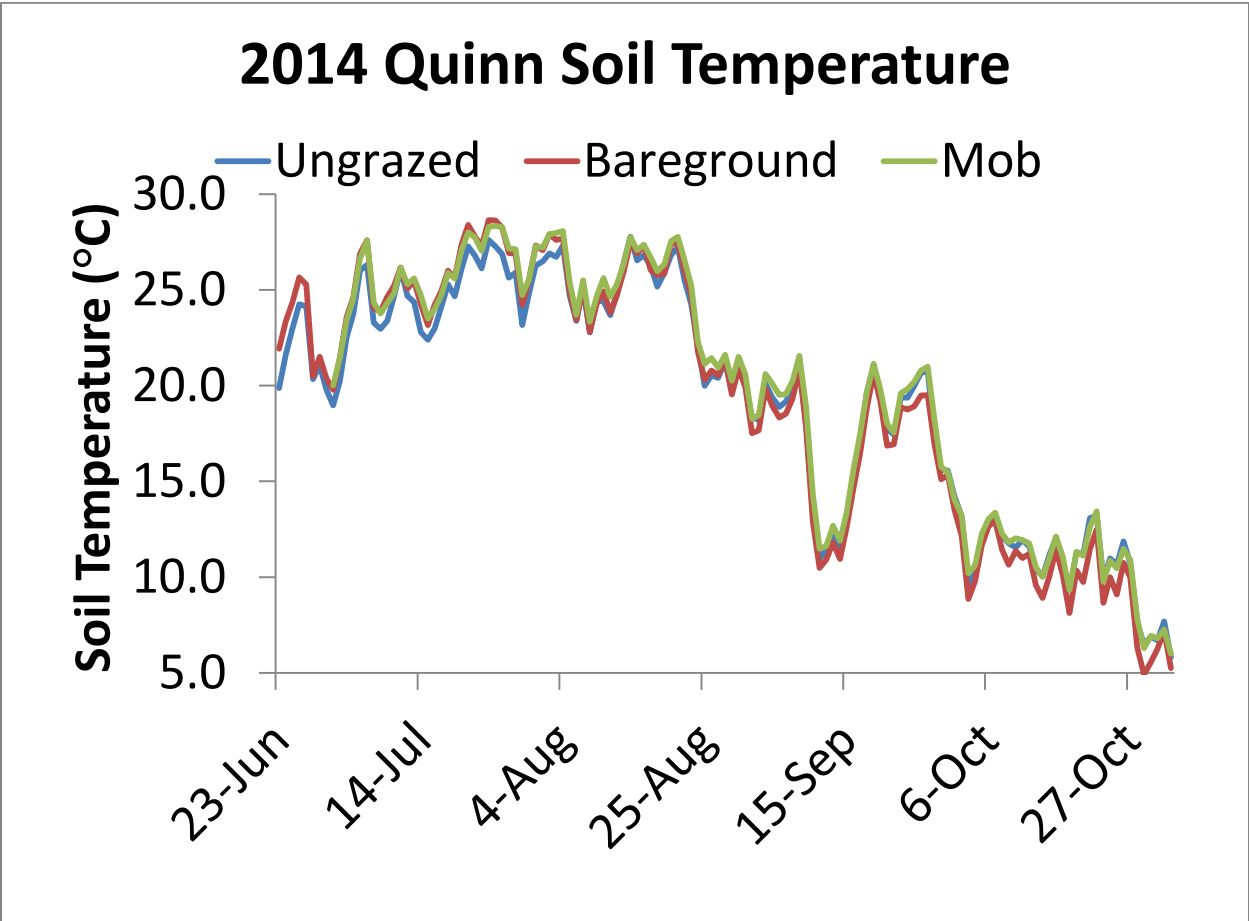
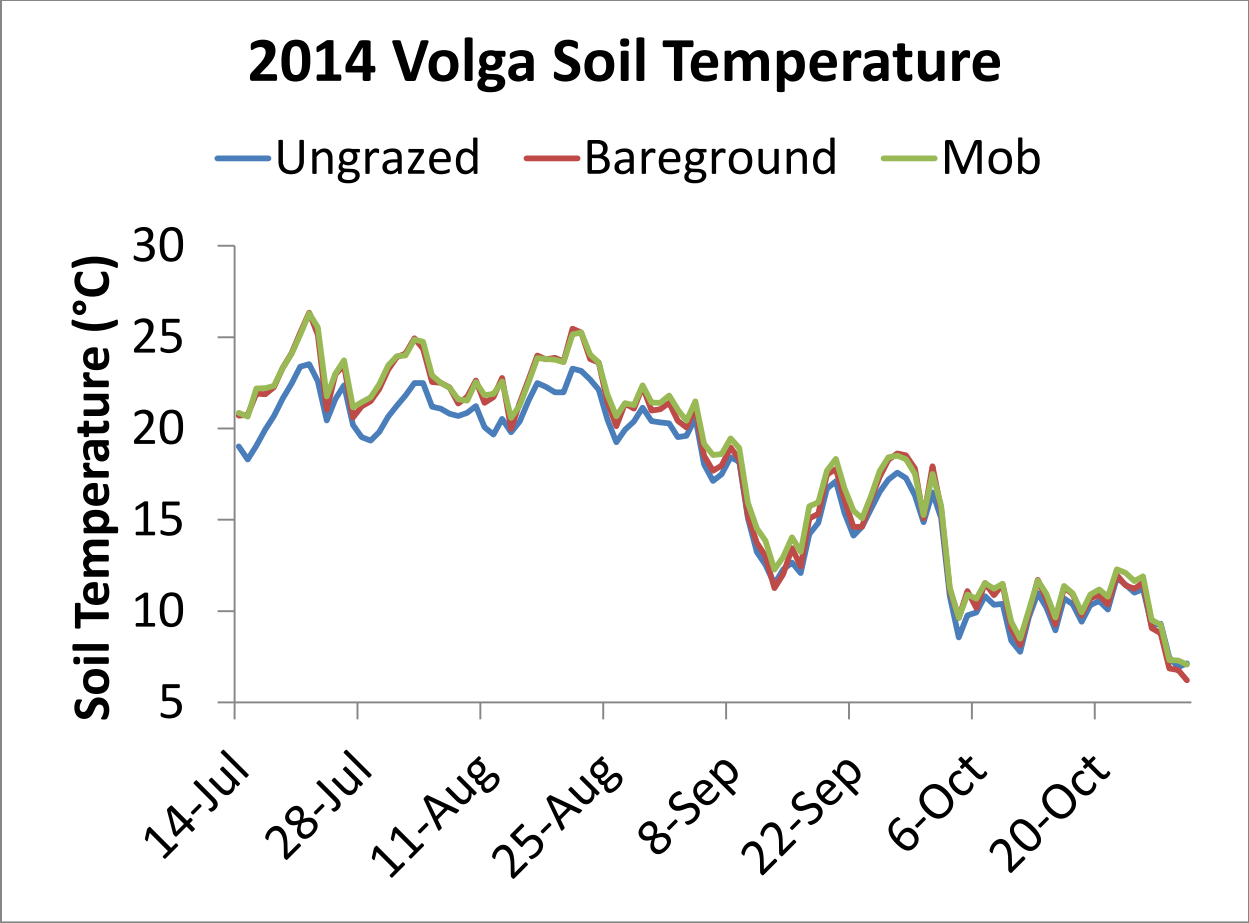


Figure 3. Changes in soil temperature from mob grazing, ungrazed, and bare ground at Quinn in 2014.



**Figure 4.** Changes in soil temperature from mob grazing, ungrazed, and bare ground at Volga in 2014.

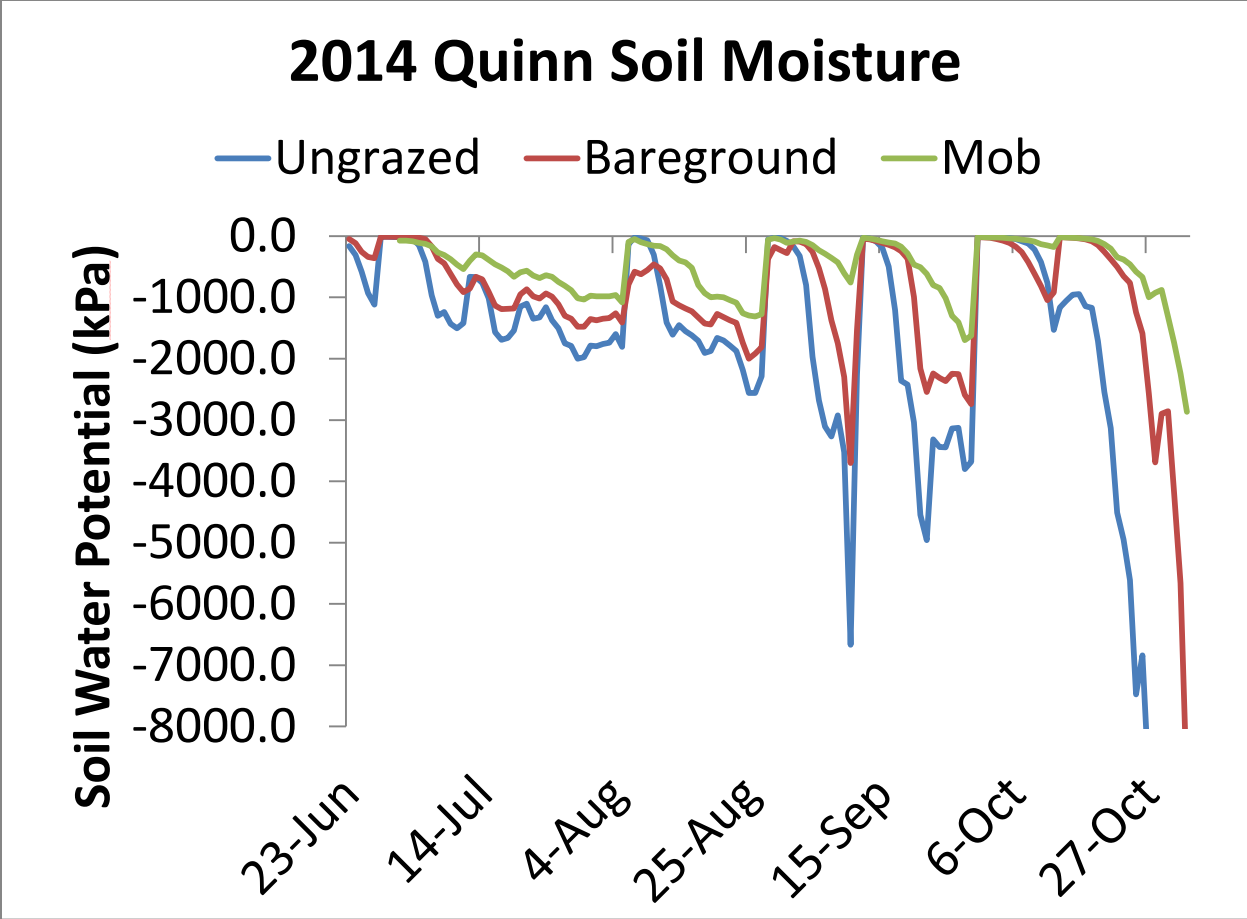


Figure 5. Changes in soil moisture from mob grazing, ungrazed, and bare ground at Quinn in 2014.

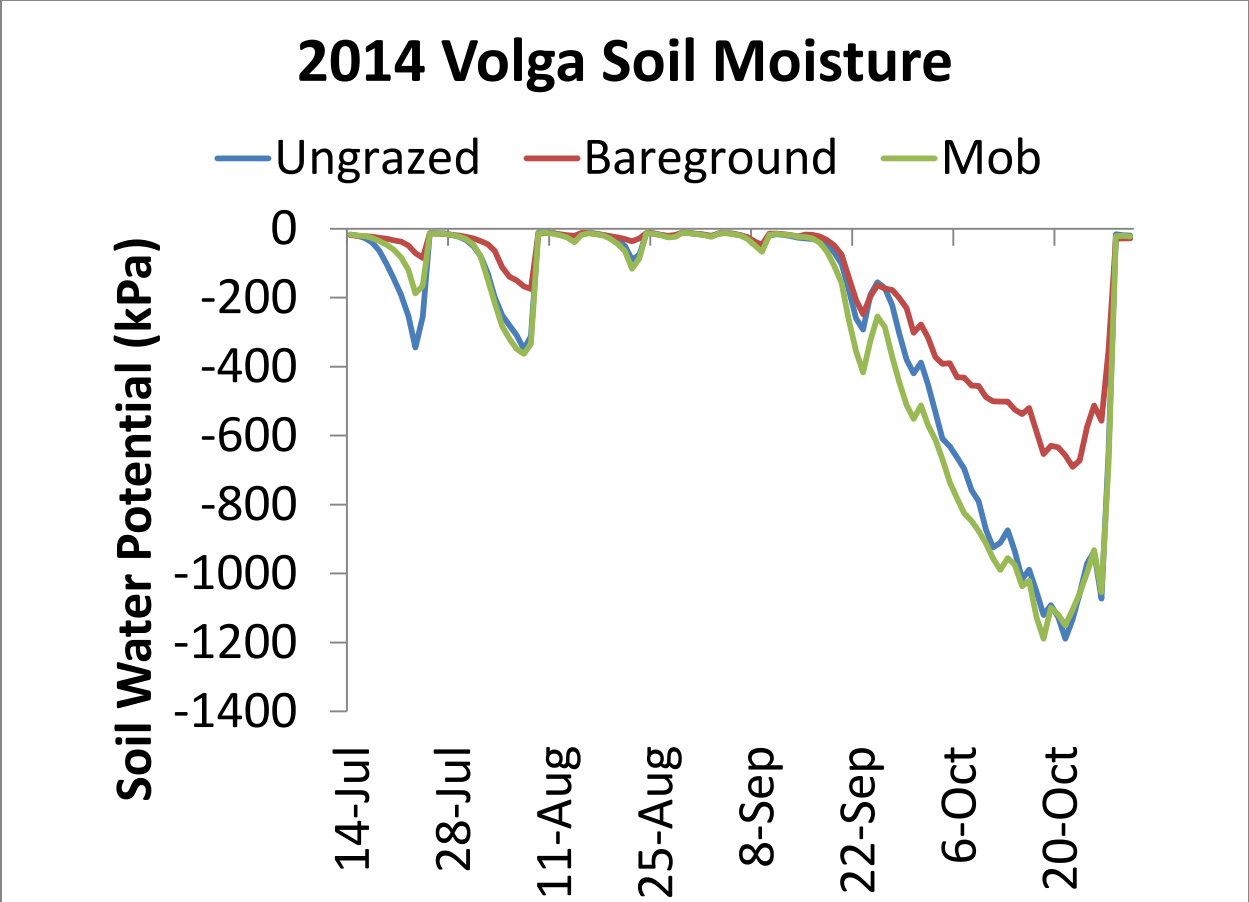


Figure 6. Changes in soil moisture from mob grazing, ungrazed, and bare ground at Volga in 2014.

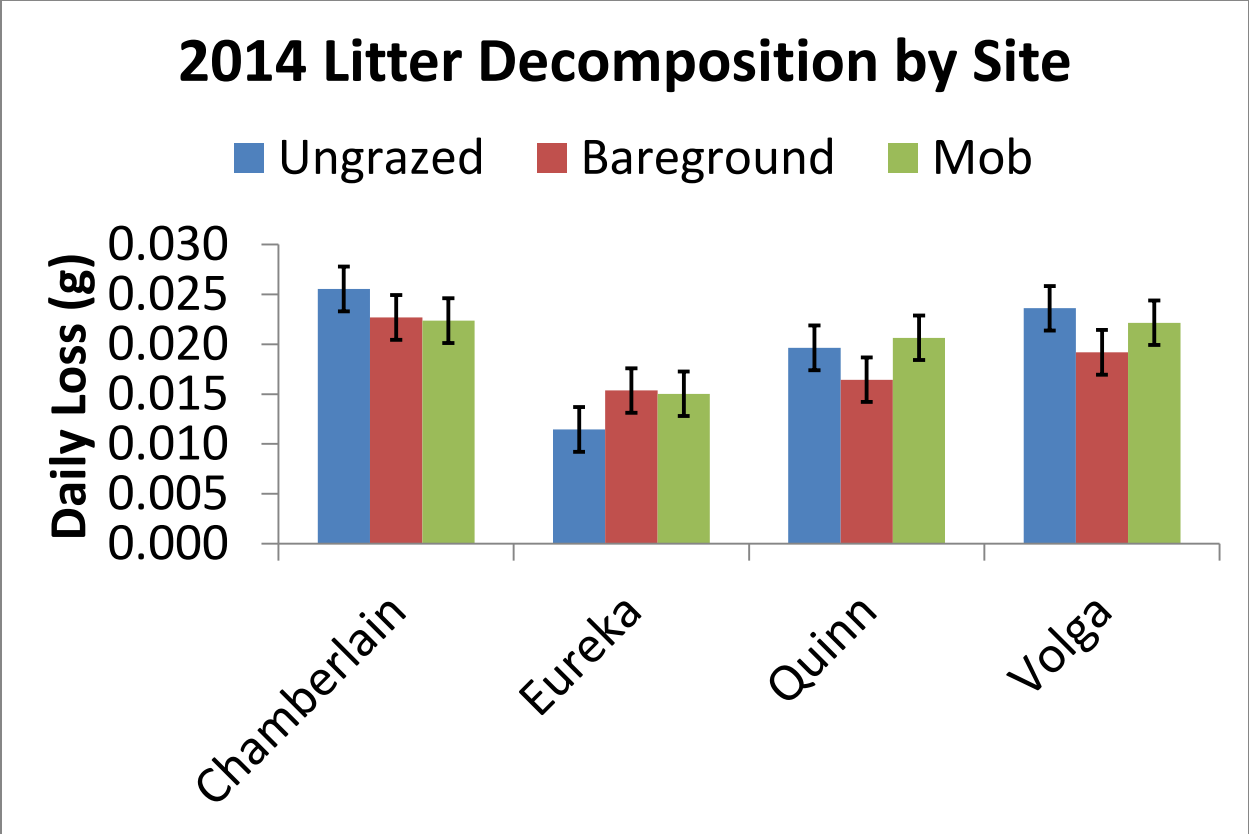


Figure 7. 2014 Litter decomposition by site (Site x treatment interaction was not significant).

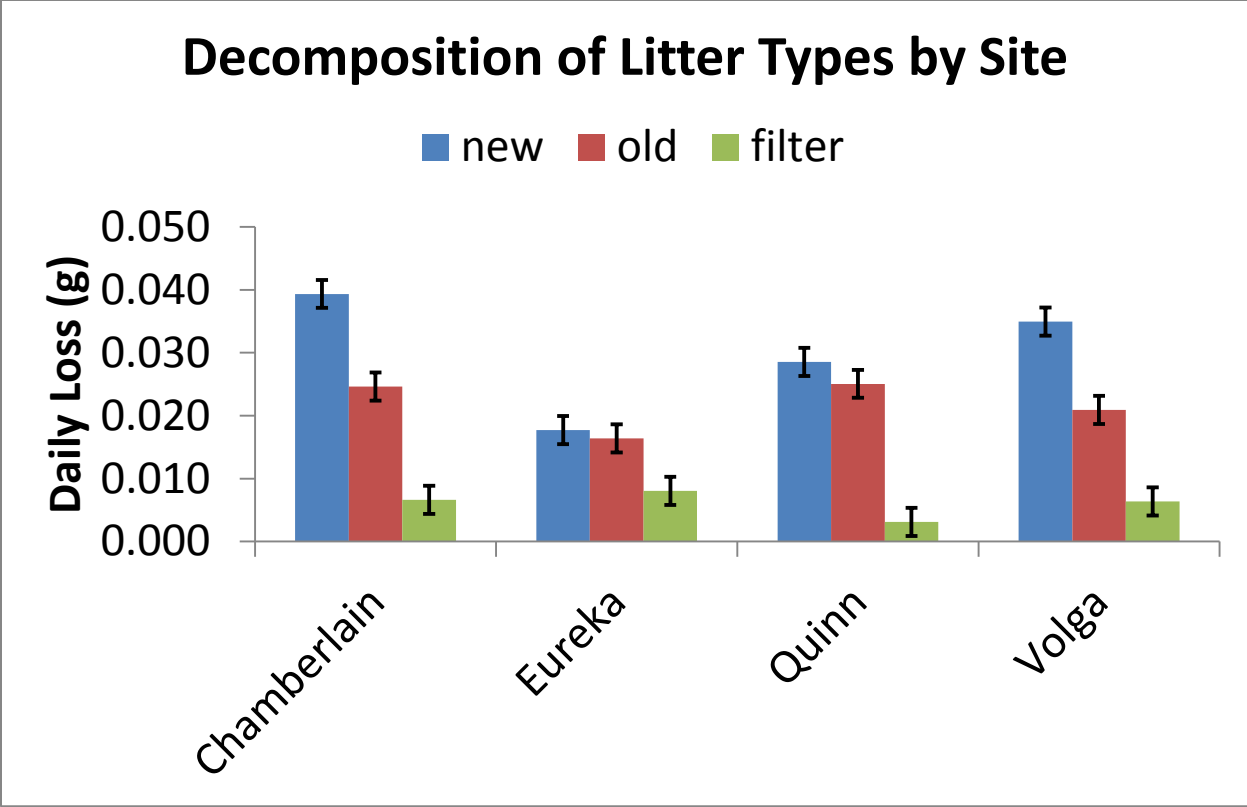
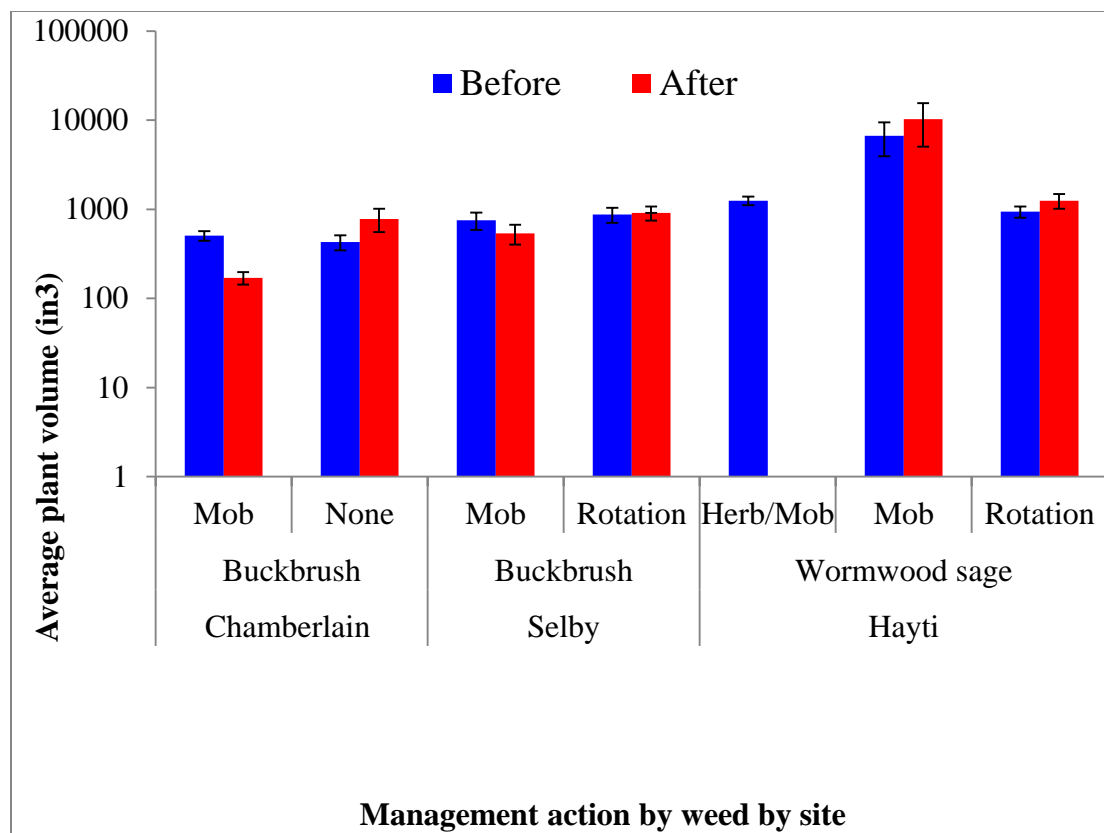


Figure 8. Decomposition of litter types by site.



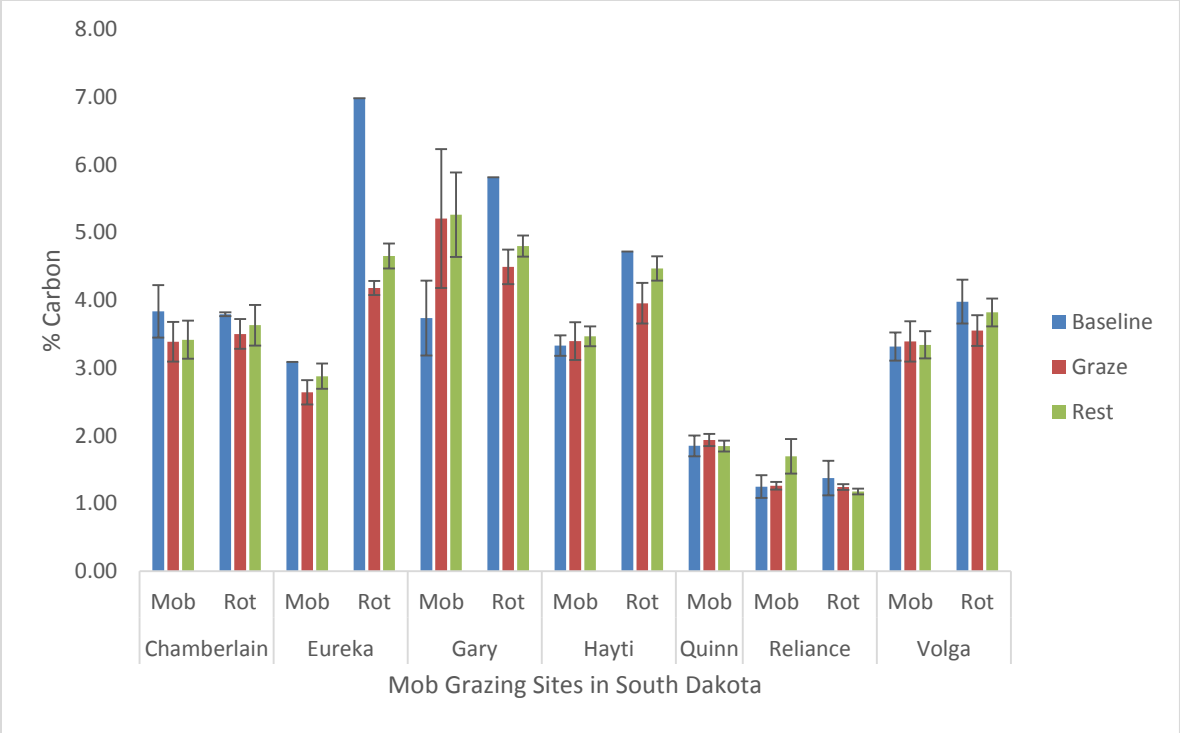
**Figure 9.** Weed response from mob grazing, no grazing, rotation, and herbicide/mob grazing on buckbrush and wormwood sage at three locations in 2013.

**Table 1.** Comparison of mob grazing and once per week rotation.

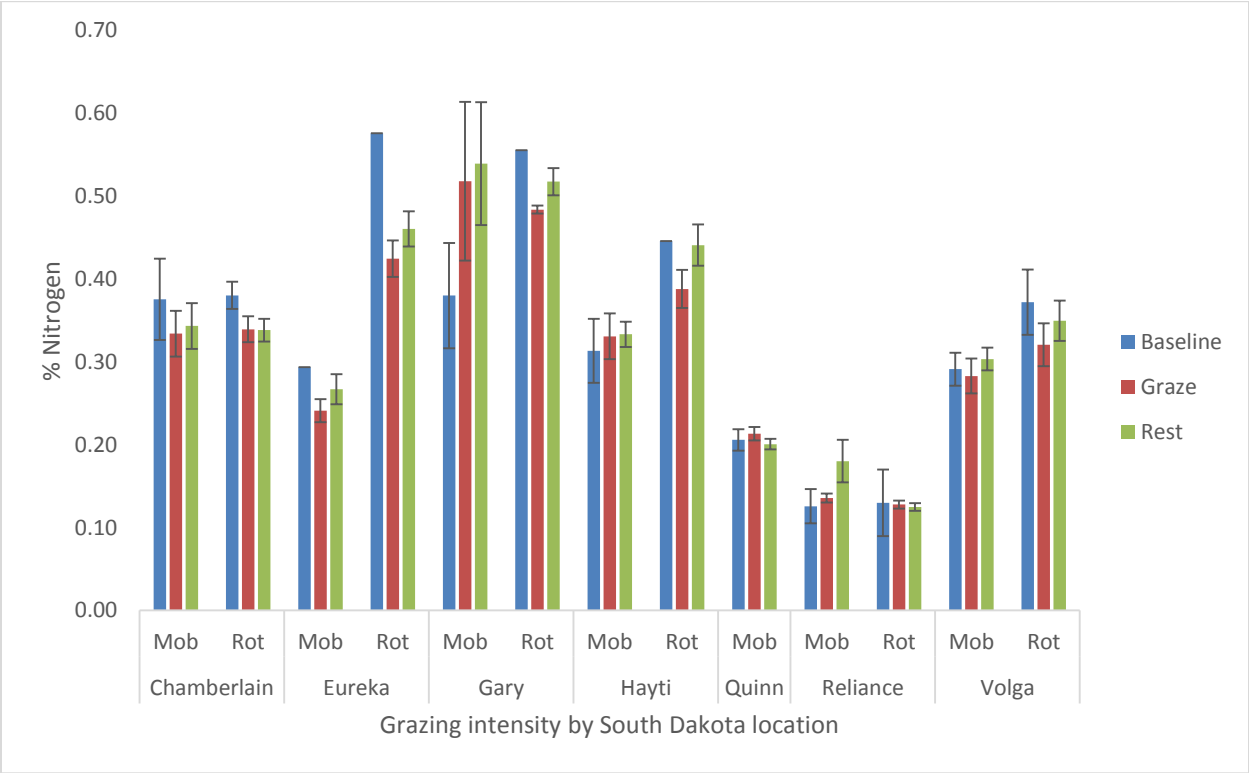
| Item                                      | Mob grazing (moved 3x/day)<br>200,000 lbs/acre live weight | Rotation (moved once per week)<br>4000 lbs/acre live weight |
|---|--|---|
| Number 1000 lb heifers                    | 15   | 5   |
| Paddock size (acres)                      | 0.083  | 1.25  |
| Forage biomass (lbs/acre)                 | 3205   | 3260  |
| Stocking rate (AUD/acre)                  | 60   | 28  |
| Grazing Pressure (AUD/Ton)                | 37   | 17  |
| Utilization (%)                           | 86   | 59  |
| Trampling (%)                             | 39   | 34  |
| Harvest Efficiency (%)                    | 47   | 24  |
| Harvest as % BW (%)                       | 3.0  | 2.8   |
| Lying time (minutes/day)                  | 549  | 716   |
| Lying bouts (number/day)                  | 13   | 23  |
| Number of steps (number/day)              | 6137   | 4215  |
| Distance traveled (mile/day) <sup>1</sup> | 1.52   | 1.05  |

<sup>1</sup> Assuming that a cow step is 40 cm.





**Figure 10.** Percent soil carbon measured in spring 2012 (“Baseline”), fall 2012, and spring and fall 2013 and 2014 at 7 South Dakota grazing locations. Pastures were exposed to mob or rotational grazing (i.e. “Graze”) or were not grazed (i.e. “Rest”) for one growing season.



**Figure 11.** Percent soil nitrogen measured in spring 2012 (“Baseline”), fall 2012, and spring and fall 2013 and 2014 at 7 South Dakota grazing locations. Pastures were exposed to mob or rotational grazing (i.e. “Graze”) or were not grazed (i.e. “Rest”) for one growing season.