

■ Range Condition

Range condition is the present state of vegetation of an ecological site in relation to the potential natural plant community for the site based on kind, proportion, and amounts of plants present; suggests current productivity relative to natural productivity potential. Range condition is a reflection of past land use and environmental conditions. In the past, range condition has been expressed in terms of “Poor,” “Fair,” “Good,” or “Excellent.” The term “similarity index” will be used in the future to indicate how similar the present plant community is to the potential plant community for a particular site.

Tip: Long-term heavy grazing by domestic livestock or native ungulates tends to reduce range condition by decreasing the higher producing desirable plants and increasing low producing, often less desirable plants.

Tip: Long-term heavy grazing results in shallow rooted plants, lower herbage production, reduced water infiltration, and increased soil surface temperatures. This results in decreased forage production and subsequent stocking rates.

Tip: Long-term non-use results in lower plant vigor and less plant diversity, often creating opportunities for invasive exotic plant species (i.e., smooth brome grass, Kentucky bluegrass, and crested wheatgrass). Less plant diversity resulting from this invasion may reduce forage quality and production.

Example: a loamy ecological site in Burleigh County, North Dakota.



Loamy site - "good" condition



Loamy site - "fair" condition

Both photos show a loamy (silty) ecological site in central North Dakota. Neither site had been grazed prior to being photographed.

The loamy site on the top was rated at 65 to 75 percent of the site potential. The site is dominated by mid-statured grasses such as green needlegrass and western wheatgrass with lesser amounts of needle-and-thread, prairie junegrass, blue grama and upland sedges. A

good diversity of forbs, including several species of native legumes. Also present are shrubs such as lead plant and western snowberry (buckbrush).

Total annual production for this site was estimated at 2900 lbs/ac air dry weight. Of this total production, about 70 percent (approximately 2000 lbs) was produced by grasses and sedges while the remaining 30 percent was produced by forbs and shrubs.

The loamy site on the bottom was rated at 35 to 45 percent of the site potential. This site is dominated by shorter-statured grasses and forbs. The main grass species include blue grama, needle-and-thread and upland sedges. Fringed and green sagewort were the dominant forbs with few native legumes present in the plant community.

Total annual production for this site was estimated at 2300 lbs/ac air dry weight. Of this 2300 lbs/ac, about half was grasses or sedges while the remainder was produced by forbs.