Range Health: Economics of Maintaining Plant/Grass roots through Soil Health.

“Root biomass and health is a direct reflection of above ground biomass and health and critical for healthy soil biology.”

Rangeland Principle: “Take half / leave half”

Management: Continuous summer grazing

Management: Short-duration, high intensity, low impact use

Rangeland ecological processes will exude fertility as long as there is rest and recovery to allow for nutrient cycling, allowing for the adequate production (self-maintenance) of vegetation.

“Management must be your goal.”

About 50% of the total volume of plant growth is available for the production of livestock and livestock product. The rest belongs to the land and the plant for insurance against drought.

Increased soil moisture (infiltration)

Quicker plant development and reproduction

Erosion control by holding the soil in place

Biological

Chemical

Physical

Compacted soil

Good aggregated soil

Shallow Loamy

Shallow Loamy

Increased forage for domestic and not-domestic animals

Improved soil fertility for plant maintenance

Higher real estate values

Water conservation

Long term income $$$

Rangeland Principle: “Take half / leave half”

Invasive/undesirable plants likely to occur

Soil loss by wind/water erosion

Higher real estate values

Lowered water storage; more runoff

Long term loss of income $$

Decreased forage for domestic and not-domestic animals

Grass recovery is slow to very slow

Loss of plant vigor

Loss of future range production

Suppressed rangeland ecological processes will diminish physiological and biological returns of nutrient cycling i.e. loss in soil nutrients decreases the amount of above and below ground biomass for future maintenance and sustainability.

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Clarence Chavez: 7/2014

Agronomy Tech Note 76: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/nm/technical/?cid=nrcs144p2_068965