

Estimating Forage Production

Northeast Area Wyoming (Campbell-Crook-Weston Cntys)
Northern Rolling High Plains - 10 to 14" Precipitation Zone

| Range Site | Plant Community | Unfavorable Year | | Average Year | | Favorable Year | | Average Year | |
|-------------|------------------------------------|------------------|-------|--------------|------|----------------|------|--------------|---------|
| | | Year | Year | Year | Year | Year | Year | AUM's/lac | aci/AUM |
| Clayey (CY) | Rhiz. Wheatgrass-Green Needlegrass | 600 | 1,100 | 1,400 | 0.40 | 2.50 | | | |
| | Heavy sagebrush | 600 | 900 | 1,200 | 0.30 | 3.33 | | | |
| | Greasewood-Wheatgrass | 500 | 700 | 900 | 0.20 | 5.00 | | | |
| | Mixed sagebrush-Grass | 600 | 900 | 1,200 | 0.33 | 3.03 | | | |
| | Blue grama-Pricklypear cactus | 400 | 650 | 900 | 0.20 | 5.00 | | | |
| | Go-back | 500 | 700 | 900 | 0.20 | 5.00 | | | |
| | Introduced grasses | 800 | 1,600 | 1,200 | 0.75 | 1.33 | | | |

Calculate your stocking rate.

Once you know your animals requirements, and your land's production, it is easy to determine how much forage you have available for your livestock.

You will need the following numbers:

Pasture Size _____acres
Pasture Production _____lbs/acre
Animal Requirements _____lb/day

Example

Assumptions:
30 acres Northern Great Plains native range
11-14 inch precip zone
Loamy range site
Low-Good range condition

Predicted plant production:

Favorable precip year = 1300 lbs/acre

Average precip year = 975lbs/acre

Poor precip year = 360lbs/acre

1,200lb horse will eat 36lbs of dry matter/day

In an average year this pasture will produce 29,250lbs of forage. (975lbs/acre x 30acres)

Half of this must be left to keep the plants healthy, and 15% will be lost to other grazers (deer, rabbits, mice). So only 35% of this is available to domestic animals.

This pasture has 10,238 lbs of available forage (29,250lbs x .35) and can support one 1,200lb horse for 284 days (10,238lbs / 36lbs/day) or three 1,200lb horses for 95 days

Contact Information

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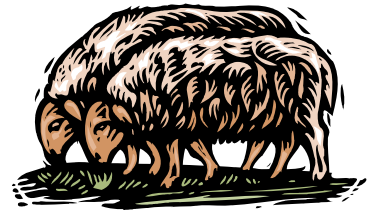
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Grazing Livestock on Small Acreages



Small Acreage Grazing

As Wyoming county populations grow, more and more people are purchasing and building homes on land parcels ranging in size from one to 40 acres. Many of these buyers desire to own livestock for hobby, pleasure, or 4-H agricultural projects. Animals grazing on small acreages can create a large number of resource problems that people may not be aware of. These problems include a shortage of grass cover resulting in soil erosion, reduced soil quality, reduced plant palatability, and increased weed species. This brochure is designed to help landowners properly care for livestock on small acreages and still conserve soil, protect palatable forages, and preserve water quality.



Which side do you think is more likely to absorb water from rainfall? Which side will let water run off?

What is Overgrazing?

Overgrazing is the term used to indicate poor/unsatisfactory condition and composition of the available forage. It often indicates or leads to: lack of vegetation, or a shift in types of plants, weed infestations, compacted soil, stunted plants, reduced plant vigor and palatability, excess runoff and erosion, barren soil, and lack of organic matter.

Natural Resource Problems with Overgrazing

Soil: Overgrazing causes soil compaction, reduced soil fertility rates, and low soil infiltration rates. These problems are indicated by excess runoff, erosion, hard, dry soil, and soil surface crusting.

Water: Overgrazing can contribute to water pollution because of increased runoff, and an increased concentration of animals time spent in higher forage producing areas near streams and reservoirs.

Air: Overgrazing reduces plant cover which can cause air pollution in the form of dust storms.

Plants: Desirable Plants in an overgrazed pasture will be negatively impacted. Plants with a higher relative forage value, or those that are palatable to livestock will be grazed more intensely. This will make them less competitive against low quality forage plants and noxious weeds.

How much does your livestock eat every day?

- One mature pleasure horse will eat approximately 35 lbs of grass or hay per day.
- A 1,000 lb cow not lactating will require approximately 25 pounds of grass or hay per day.
- A mature ewe or doe goat will eat 4-5 pounds of grass or hay per day.
- Alpaca requirements are similar to those of sheep.

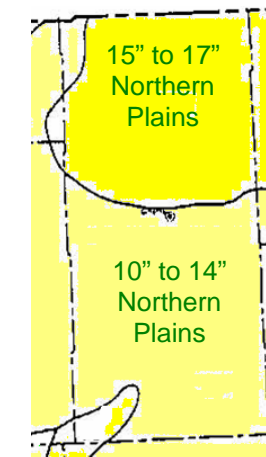
During winter months, or whenever forage quality is decreased, supplemental feed is required. This may be in the form of a complete feed, a grain, or a protein supplement.

| Animal | Weight | AU equivalent | # Animals per AU |
|----------------|--------|---------------|------------------|
| Cow | 1,000 | 1.000 | 1.000 |
| Cow | 1,500 | 1.500 | 0.667 |
| Heifer | 700 | 0.800 | 1.250 |
| Steer | 700 | 0.850 | 1.176 |
| Mature Bull | 1,700 | 1.500 | 0.667 |
| Milking Cows | | 1.500 | 0.667 |
| Working Horse | Mature | 2.000 | 0.500 |
| Saddle Horse | Mature | 1.250 | 0.800 |
| Colt <2 yrs | | 0.500 | 2.000 |
| Sheep | 120 | 0.200 | 5.000 |
| Goat | Mature | 0.170 | 5.882 |
| Elk | 600 | 0.660 | 1.515 |
| Mule Deer | 125 | 0.220 | 4.545 |
| Pronghorn | 90 | 0.170 | 5.882 |
| Breeding Hogs | | 0.370 | 2.703 |
| Slaughter Hogs | | 0.110 | 9.091 |
| Layer Chickens | | 0.002 | 454.545 |
| Rooster | | 0.004 | 250.000 |

How much does your land produce every year?

In order to determine the amount of forage your land will produce in a year there are 4 things you need to know; ecological site, annual precipitation zone, soil type, and condition. With these 4 things you can look at references from the Natural Resources Conservation District (NRCS) and find an estimate of the forage production capacity of your land. *This resource is available at either the Campbell County Conservation District or the UW Cooperative Extension Service Office.*

Campbell County has 2 zones. These are



Northern High Plains with 10-14 inches of annual precip and Northern High Plains with 15-17 inches of annual precip.

The next page has an example of what a production table looks like for the Northern High Plains 10"-14" annual precipitation.