



got drought?

Property owners can reduce some effects through land management

Managing land during a drought is a frequent and challenging task in Wyoming. Planning, stocking rate (number of animals grazing), grazing strategies, reseeding, weeds, and bare ground can all affect success in land management during droughts.

Droughts in Wyoming are normal; remember that average precipitation is just a statistic. Most years the actual received precipitation will fall below the average with a few wet years skewing the average higher. Having a plan ready when drought comes will go a long way toward mitigating problems.

A grazing plan should include a realistic number of animals the land can carry. An appropriate stocking rate will vary tremendously from one property to another (see “The Basics of Stocking Rate Calculations [Or how can I graze three horses year-round on five acres?]”) available online at www.barnyardsandbackyards.com/articles.htm. The article is under the heading Summer 2005.

Dry land acreages are frequently overstocked even during wet years, and drought will only worsen the problem. Most dry land small acreages will not support livestock year-round without supplemental feeds.

Simple rangeland monitoring techniques, such as photo point or cover-by-life form (contact a local University of Wyoming Cooperative Extension Service [UW CES] office for information on how to implement these – information later in story), can show trends on the land and determine how much use the forage can handle. If the land will support animals year-round during a normal year, do you have a plan for when drought returns?

The primary concern during a drought is forage production. To avoid overgrazing, this reduction in supply must be followed by a reduction in demand. The simplest answer is to remove the animals from the pasture and place them in a corral. This requires feeding harvested forage such as hay. Hay costs vary depending on the year, but during droughts good quality

hay may be \$120/ton or more. Cows consume about 2.5 percent of their body weight in dry matter per day. Horses consume about 1.5-2.5 percent per day of their body weight depending upon their condition, activity, and weather. While this may seem expensive, what would the cost of reclaiming the land from weeds and bare ground be? Would it even be possible?

A more efficient use of grazeable acres will help if in a drought or not. The most common mistake is allowing animals to access the entire acreage around the clock every day of the year. Dividing an acreage into smaller paddocks and implementing a rotational grazing system (see figure below) allows a more efficient use of forage and lengthens a grazing season.

Restricting animals to a small corral and feeding them harvested feeds for certain time periods can also work. For example, animals could be kept off the pasture during the time forage plants are elongating their seed stalks, usually in late spring, the most damaging time for grass to be grazed and re-grazed. Restricting animals to one small paddock at a time or a corral will take the pressure off forage plants.

Are you going to seed a pasture? Think about the first paragraph in this article. Consider what species will survive and thrive during droughts and not just during good years. Also consider the reason that it needs reseeded! If management practices brought you to the point where reseeding is necessary, then change that management strategy.

If an area is drought-prone with unreliable irrigation, planting species requiring frequent irrigation is not wise. There are native and non-native species available that can tolerate most Wyoming droughts. Indian ricegrass, bluebunch wheatgrass, Siberian wheatgrass, and thickspike wheatgrass can all survive in less than 8 inches of annual precipitation.

There are plants other than grasses that can survive, too. Forage kochia (not weedy kochia) is a long-lived, perennial shrub that can exist in very dry climates and makes a great fall-winter forage.

The species chosen depend upon water availability, soil type, objectives, and other resources specific to a site. A local UW CES, conservation district, or Natural Resources Conservation Service (NRCS) office can help determine these. County CES office information is available at <http://ces.uwyo.edu/Counties.asp>. Conservation district information is at www.conservewy.com/. A list of Wyoming

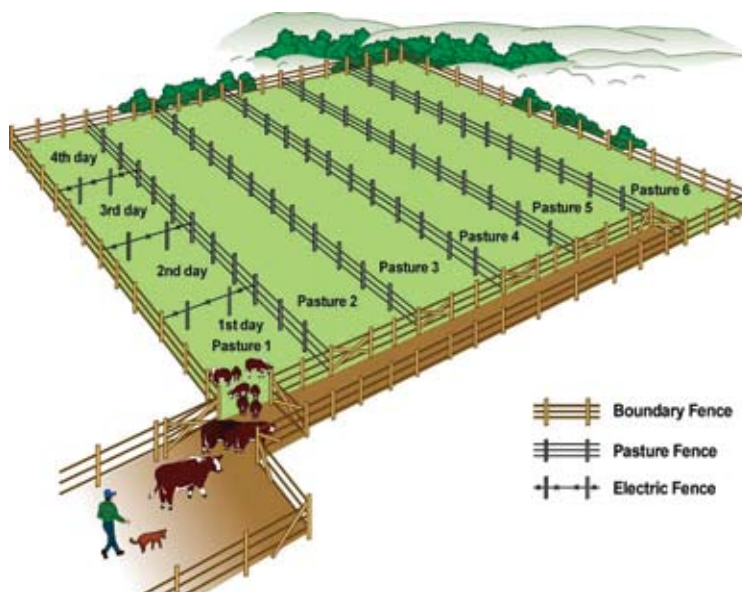
NRCS offices is at www.wy.nrcs.usda.gov; click on the Find a Service Center link in the lower left column.

It's important to remember even the most drought-tolerant species need some moisture to establish (see "Think native when restoring small-acreage rangelands" in the Spring 2007 *Barnyards & Backyards* magazine). Back issues of *Barnyards & Backyards* are available. See www.barnyardsandbackyards.com for more information.

Two conditions a drought may exacerbate are weeds and bare ground. Neither is wanted. Some bare ground (especially on dry land) is inevitable. If either is increasing, change something about your management. Bare ground will provide a foothold for weeds to establish and increase soil erosion and water loss from the soil profile. Bare ground will also decrease the amount of water soaking into the soil where it can do good. Rain water that falls on bare soil can move across the soil surface quickly, eroding topsoil and limiting the amount that infiltrates into the soil profile.

Prevention is the best treatment. Prevention usually means a stand of desirable perennial plants that uses the water and soil resources – not allowing weeds a place to compete. Some species are more competitive against weeds than others, such as thickspike wheatgrass, crested wheatgrass, and Russian wildrye, and can handle 9 or less inches of annual precipitation.

Remember drought is the norm for Wyoming. If you're not in one now, you will be in the future.



An acreage is divided into smaller paddocks to implement a rotational grazing system.

Barton Stam is a University of Wyoming Cooperative Extension Service educator serving Big Horn, Hot Springs, Park, and Washakie counties specializing in range management. He can be reached at (307) 864-3421 or brstam@uwyo.edu.