Planning for Pasture Drought

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A dry fall and winter have many concerned with the possibility of drought conditions during the summer. Hopefully, this will not be the case, however, in the event dry conditions continue, this article will discuss ways in which the impact of drought on pastures can be minimized.

Grazing Management

When drought hits and pasture forage is in short supply it is tempting to graze until the forage is gone. While this will provide a few more grazing days short-term, it will delay regrowth and decrease forage yields when rain comes. Leaving green, living leaf area will provide for photosynthesis and more rapid regrowth than if the plants are completely defoliated. When possible, leave appropriate stubble height to allow for carbohydrate storage and regrowth. For short grasses, like bluegrass and ryegrass, the proper height is 2". For taller grasses such as orchardgrass, bromegrass, timothy, and tall fescue the height is 4". If all plant material is brown and dead, grazing this material will not harm the plants.

Another temptation is to remove cattle from pasture and put them back for a day or two each time there is a small amount of regrowth. Again, while this allows for some grazing in the short run, it has detrimental effects long-term. Continually removing regrowth removes root carbohydrates and will reduce the plants ability to regrow when rains resume. Long-term pasture yields will be reduced. A better strategy is to allow plants to regrow to appropriate heights before grazing. This allows replenishment of root reserves and will mean healthy plants and higher pasture yields. The appropriate regrowth height is 6" for bluegrass and ryegrass and 10" for orchardgrass, bromegrass, timothy, and tall fescue.

Animal Management

Animals will likely need to be removed from pastures and fed stored feed. For producers without adequate facilities, there are three options: 1) Establish a sacrifice paddock where feeding will take place. This limits the damage caused to a discreet area. Forage growth from this area will be minimal, but will likely recover with minimal inputs next year. 2) Rotate the pastures where feeding takes place. Leave the feed bunk or wagon in a paddock for only a day or two, then move to another. This limits the amount of plant damage in any one paddock. 3) Feed animals in alleyways and lanes. In all cases, make sure animals have adequate access to water.

Planning for Dry Weather

Unfortunately, dry weather happens nearly every year, to some extent. Planning ahead for dry weather can help minimize the impact. Below are a few ideas to consider in the future.

- **Rotational Grazing**. For those using continuous grazing, dividing pastures into smaller (5-10 acre) paddocks and moving animals frequently is the single best way to increase pasture yields. Employing rotational grazing and a good fertility program can easily double the available forage in a pasture, which would provide more grazing days and help reduce the impact of dry weather.
- **Nitrogen Management**. Applications of 50 units in early May and again in early August have shown to increase pastures dry matter yields by up to 2,000 lbs/acre. Mid-summer applications have not proven as effective. It is important to limit nitrogen application rates as applying too much at one time will result in leaching and volatility losses. Nitrogen applications in early May will provide additional pasture which can be mechanically harvested and fed during dry weather later in summer. August applications provide for increased late summer/early fall pasture yields.

Nitrogen sources such as ammonium nitrate, and ammonium sulfate will reduce volatilization losses from dry pastures after application. Volatility losses from urea, while greater than other sources, are still only about 20% and so urea is also an option.

Emergency Forage Crops

- **Warm Season Annual Grasses.** There are a number of warm-season annual grasses which can provide forage during dry weather. These include sorghum-sudan hybrids and several types of millets. These forages are typically planted in early June and provide forage within 60 days. Forage yields are in the 2–3 tons/acre range and provide multiple grazings. These species do better in hot, dry weather than cool-season species and are a good choice for managing drought.
- **Forage Brassicas**. Forage brassicas are another option to increase fall forage production. Brassicas, such as turnips and rape, can be seeded in August for fall grazing. These crops provide high quality pasture and can be grazed multiple times beginning within 60 days of seeding. As with nitrogen applications, the success of these crops will depend on late summer rains.
- **Grazing Corn.** Grazing standing corn is another option when short of pasture forage due to drought. Corn provides good quality forage and, for some fields where grain yields are low due to poor rainfall, grazing may be the most economical harvest method. Corn should be strip grazed using highly visible electric fence such a polytape.