

PHOTO BY SHAUNA ROSE HERMEL

# PASTURE PREPARATION

Ten steps to renewing your pasture after a drought.

by Kasey Miller

**I**n the last 10 to 15 years, the vast majority of cattle producers have been affected by drought. It's an issue we can't ignore; it won't go away," says Jerry Volesky, range and forage specialist from the University of Nebraska–Lincoln (UNL).

By definition, a drought occurs when rainfall is 75% below average. Pastures in the Southern Plains have been severely affected by the drought of 2011. However, the whole country has been affected to some extent rather recently. No matter your location, here are 10 things to consider when managing post-drought pastures.

## 1. Plan ahead

To combat weather changes, Volesky urges producers to plan ahead.

"Producers with a drought plan actively monitor resources; build ecological, financial and social resilience in their operations; and are proactive during drought in order to minimize short- and long-term damages," he says.

## 2. Evaluate resources

Many factors go into the productivity of

pastureland. Chuck Coffey, senior agricultural consultant at The Samuel Roberts Noble Foundation, typically asks producers if the pastureland was previously used as cropland, how long it has been in its current state, and the current and past stocking rates and grazing management practices. All of these facts are key to developing a plan to improve one's pastures and can be the difference between success and failure.

Even though several areas in the Southern Plains did receive some rain this winter, it wasn't enough for significant forage growth for the year. Because of this, John Walker, professor and director of research at Texas AgriLife Research, says most usable forage was grown in 2010. This widespread usage of old forage means that nutritional value was lessened — about 3%-4% in crude protein — and few Texas winter grasses and forages produced enough biomass.

Fortunately, perennial grasses are resilient, says Daren Redfearn, associate professor and Extension forage and pasture management specialist at Oklahoma State University. "All perennial grasses have growth mechanisms that contribute to recovery of previously

established stands. Bermuda grass is unique in that it has stolons, in addition to rhizomes. Although most of the stolons are likely dead, there are many rhizomes in the plant crown that can produce new growth. . . . Much of the seed produced in the Old World bluestems and weeping lovegrass will be viable and capable of germinating and producing new plants if adequate moisture is present."

## 3. Reduce stocking rate

Stocking rate is incredibly important. "When our stocking rate is too high, we are destined to fail in the long run," says Coffey. "The longer we have overgrazed a pasture, the longer it will take to recover."

Walker says that in Texas, producers have sold a lot of livestock. Though it is never easy to sell a large percentage of your herd, it can be necessary to allow the grass to recuperate enough to sustain the herd.

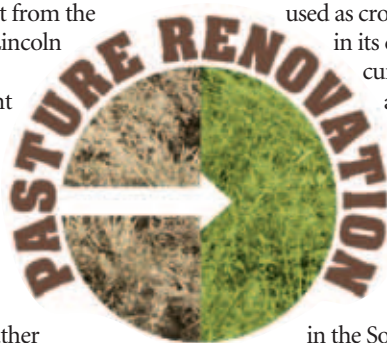
Walker adds that it is very common for producers to hold on too long and get back in too quickly, which is twice as bad for the pastures.

## 4. Rest pastures

Pastures need to experience rest to fully recover. Walker suggests giving the pastures a full growing season to rest.

"The infiltration of rain," Walker says, "is

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directly related to the amount of grass out in the pasture.” Having grass in the pasture reduces the amount of moisture lost to runoff and helps capture more of the rain on the ranch. Rain is used to its full extent on resting pastures, and thus will help them recover as quickly as possible.

Rotational grazing should also be used, Walker suggests, though it doesn’t have to be fancy. Instead of scattering your herd, he says, put the cattle in one group so they are easier to manage and to allow more pasture to rest.

Redfearn recommends three main strategies for resting pasture:

- ▶ **Save the best pastures for last.** Because these pastures will recover the quickest, it is important that they be allowed to have unrestricted growth when the probability of moisture is greatest.
- ▶ **Pay special attention first to phosphorus fertility needs** to increase root growth of drought-damaged pastures.
- ▶ **Don’t graze or harvest too early.** Following a drought, plants that appear healthy may still have a short root system.

## **5. Reduce grazed forage intake**

Distillers’ wet grains mixed with low-quality forage and fed to cow-calf pairs while grazing summer pasture will reduce grazed forage intake. Volesky recommends using seeded annuals or perennials, both for warm- and cool-season grasses. Obviously, irrigation can help, too, and he says a little goes a long way.

He estimates that hundreds of tons of hay have been heading south daily since July. If ranchers decide to buy hay, he urges them to forage test, because “you’re not sure what you’re getting.”

## **6. Wean early**

To aid in reducing grazed forage intake, earlier weaning can be used. By weaning early, Volesky says, the cow’s nutrient requirements decrease, and it’s estimated that 10 pounds (lb.) of forage are conserved per day that the calf is weaned.

By decreasing the cows’ nutrient requirements, Coffey adds, the cow has a greater chance of rebreeding.

## **7. Monitor rainfall**

Volesky says there is much variability in

herbage production, but in the Nebraska Sandhills, a good indicator is the amount and distribution of rainfall in May, June and July. That rainfall is critical for forage production. Knowing the relationship between rain amounts and timing, ranchers can plan and estimate herbage production before the end of the growing season and adjust stocking rates as needed. Additionally, in a drought, plants reach maturity much earlier in the season, which is directly related to their nutritional value.

Rainfall also affects available water sources for cattle. Coffey suggests grazing pastures with limited water reserves first.

## **8. Manage weeds and brush**

When the ground is bare, something will grow to fill the void. The challenge is to ensure weeds don’t do the filling. Walker says that in West Texas, brush encroachment, mainly mesquite and juniper, can cause canopy cover of about 20%-30%, which lowers grass growth. Be sure to remove brush so that it doesn’t compete with grass. Fill in the holes left by brush with grass seeds to help ensure that the brush doesn’t come back.

In Texas, previous droughts in the past decade had enough fall precipitation for weeds such as broomweed and bitterweed to germinate. These cool-season weeds were able to use what little soil moisture was available before the weather warmed up enough for warm-season grasses to grow. Walker suggests that if this situation occurs during this drought, using low quantities of selective herbicides, like 2,4-D, could be beneficial to forage production. When selecting an herbicide, talk with your local Extension agent about the best product for your situation.

Coffey warns that since many in the Southern Plains are importing hay, be sure to watch where you feed that hay and spot-treat for new weed species.

### **9. Reseed only when necessary**

Pasture recovery following drought is difficult to predict, Redfearn says, and so is determining whether reseeding is necessary. With inadequate precipitation, pasture recovery may show slow progress, even with proper management. Good growing conditions added to proper management practices may result in complete recovery for

slightly to moderately damaged pastures within one year. However, severely damaged pastures may take longer than a year for recovery, even with adequate moisture.

The key to successful pasture recovery following a drought is patience, he emphasizes. The best approach to managing pastures that were overgrazed due to the drought is to manage them as new plantings. This includes aggressive weed control, fertility based on a proper soil test and grazing deferment. The obvious question is, which should a producer choose if only one practice is manageable?

The answer is weed control, he says. However, it is important to recognize that all three management practices will result in quicker recovery.

If reseeding is deemed necessary, Coffey says, consider the forage type to which you want to return — native or Bermuda grass. He suggests preparing a smooth and firm seedbed prior to February. Depending on the seed and area, drill and broadcast seeding methods work well.

### **10. Use outside resources**

There are many resources available to

producers. Many websites are available to develop a plan, development of resource inventories, decision-support tools for grazing and livestock management, evaluation drought response options and financial decision-support tools.

Two drought management resources from Oklahoma State University can be found at <http://extensionnews.okstate.edu> and <http://beefextension.com>.

Coffey recommends the Noble Foundation's drought management website, [www.noble.org/drought/](http://www.noble.org/drought/).

Volesky recommends the "Managing Drought Risk on the Ranch" website designed by UNL National Drought Mitigation Center (NDMC), <http://drought.unl.edu/Default.aspx?alias=drought.unl.edu/ranchplan>.

All of these resources and others can be found in Angus Productions Inc.'s (API's) "Dealing with Drought" website, [www.angusjournal.com/drought/](http://www.angusjournal.com/drought/).

Drought isn't restricted to one area of the country, so it is nice to know that there are resources available to producers nationwide.

