

If your operation is forage-dependent,

This 'Top 10' Is for You

Story & photo by **Troy Smith**

Who knows when it started? Some say it was in 1950, when the Federal Bureau of Investigation (FBI) established its "10 Most Wanted Fugitives" list. Regardless of how or when it began, we have become inundated with "Top 10" lists. Be it music, movies or mustaches on hockey players, we must rank the 10 best or worst. (By the way, hockey bloggers voted former Calgary Flame and hall-of-famer Lanny McDonald's cookie duster as most memorable.)

Television comic David Letterman even bases a running gag on our apparent obsession with lists of 10. Of course, most lists are offered in all seriousness. You don't have to look far to find somebody's top 10 tips for shedding weight, managing money, nurturing passion, raising children or filing for divorce. You could find 10 easy steps to mastering country line dancing or the 10 best ways to waste time on the Internet.

Of course, there may be a cost involved. Selling success-by-the-numbers ranks high on the list of 10 most popular money-making schemes.

But what "top 10" list might be most useful in helping cow-calf producers and stocker operators make money? According to Texas AgriLife Extension Forage Specialist Larry Redmon, it would have to be 10 strategies for optimizing forage production. Arguably, forage is *the* most critical resource to a ranch or stock farm. It has been called the beef industry's single most important leverage point.

It so happens that Larry Redmon really does advocate 10 fundamental steps to managing forage for optimal production. However, he says producers often overlook, or ignore, one or more of them, thus endangering the profitability and sustainability of their operations.

"Fuel and fertilizer prices have pushed production costs through the roof," Redmon states. "Therefore, livestock producers have to carefully consider their management decisions to ensure they optimize every input

dollar spent on the operation, and reduce potential for waste."

Warning that inefficiencies cannot be tolerated in the current economic climate, Redmon suggests producers consider adopting the following 10 strategies for improved forage management:



Have a plan

"Regardless of the size of the operation, a written plan describing the goals and objectives is critical to success,"

Redmon states. "Each year the plan should be evaluated to determine if goals are being achieved. If not, then the plan should be modified, following careful analysis of production records. Remember, you cannot manage what you don't measure."



Test soil

Given the aforementioned high cost of fertilizer, Redmon says applications should always

be based on soil-test recommendations. Otherwise, producers are likely to over-apply nutrients, which is expensive and wasteful. Or, they are apt to under-apply nutrients, which can result in reduced production. Never apply fertilizer on the basis of a guess or some old rule of thumb.

"No one, and I mean no one," Redmon says, "can tell you how to fertilize without a soil test."



Manage weeds, insects

Your planned goals and objectives won't be met if weeds rob the nutrients needed

by forage, or if insect pests grow fat on forage meant for cattle. Therefore, Redmon recommends strategic pest management to maintain healthy, vigorous forage stands.

"One good thing," Redmon says, "is that pest control costs haven't increased as much as fertilizer. And herbicide, applied at the appropriate time, will provide better weed control than mowing. Mowing isn't very effective at all, except maybe during a

drought. Herbicides work best when there is adequate moisture."



Consider alternatives to inorganic fertilizer

Introduced forages usually require fertilization to optimize

production and, unfortunately, many producers have little choice but to purchase commercial inorganic fertilizer. However, producers located near chicken or turkey operations should be aware that poultry manure may be an economical source of nitrogen, phosphorus and potassium. An analysis of the manure, along with a soil test, will allow producers to determine proper application rates.

"But watch phosphorus accumulation over time," Redmon warns. "Poultry manure generally contains equivalent amounts of nitrogen and phosphorus, and because forage plants generally use approximately three to four times the amount of nitrogen as they do phosphorus, care must be taken that phosphorus does not accumulate at the site beyond a threshold level."

Redmon says another alternative to inorganic fertilizer is the Class A biosolid (wastewater treatment sludge) offered by some large municipalities. These products also may provide nitrogen and phosphorus at a competitive cost, compared with commercial fertilizer. However, they contain little to no potassium.



Include forage legumes in pastures

According to Redmon, one of the best methods of

providing nitrogen to pastures dominated by warm-season grasses is to incorporate a forage legume. The "nitrogen fixing" ability of legumes may provide up to 100 pounds of nitrogen per acre per year. So adding a legume can eliminate the need for nitrogen fertilization, or at least reduce it.

Other potential benefits cited by Redmon include improved nutrient availability to grazing cattle, a related improvement in animal performance, opportunity to extend





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the grazing season and reduced winter-feeding costs. The presence of forage legumes benefits wildlife, too, and may also help suppress weeds.

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Evaluate stocking rate

Redmon says a combination of things may have whittled away at the carrying capacities of many properties. Cattle size has increased over the last few decades, and forage intake increases with body size. Brush or cedar encroachment, over time, also decreases the amount of forage available for grazing. Also, due to the high costs involved, many producers have cut back on fertilization or weed control measures. Consequently, many properties are overstocked. Throw in periodic periods of drought and the problem worsens.

“Think about what is sustainable and apply a moderate stocking rate for your environment,” Redmon advises. “Realize that adjustments have to be made as conditions change, like during a drought.”

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Purchase, don't raise, hay

In many regions of the country it is the custom of both farmers and ranchers to harvest hay for winter feed. It's what they do, like their fathers did, and their fathers before them. In many instances, harvested forages

provide the bulk of winter rations for cattle. However, Redmon says making hay isn't necessarily a requirement for being in the cow business.

“Most producers cannot justify the expense of owning hay-harvesting and baling equipment,” Redmon states. “And if you can't justify it, you don't need it.”

The most common argument for owning hay-making equipment is that it is difficult to hire and schedule custom harvesters to put up quality hay in timely fashion. Redmon's answer is to stop being concerned about harvesting hay and buy it from a reputable supplier. He insists buying hay is usually cheaper, in the long run, and acreage that would be hayed could be grazed instead.

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Forage analysis

“Whether a producer purchases or produces hay for feeding to livestock during the winter, a forage analysis should be conducted to determine the hay's nutritive value,” Redmon insists. “It can't be determined by looking, feeling or smelling the hay. And underestimating nutritive value can be as costly as overestimating it. You want to know if animal requirements are being met, but you don't want to waste money on additional supplements if nutrition provided by the hay is adequate.”

Certainly, producers need to know the protein content of hay. In the case of warm-season annuals harvested for hay, like sorghum-Sudan or millets, Redmon recommends a separate test for nitrate content, to make sure the hay does not contain toxic levels.

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Consider alternatives to feeding hay

The use of forage legumes has already been mentioned as a tool for extending periods of grazing and for lessening the need to feed hay during late winter and early spring. Other cool-season annual forages — such as ryegrass, wheat, oats, rye and triticale — may also be used to provide forage for grazing in lieu of feeding hay.

“Another alternative is stockpiled grass,” Redmon adds, referring to deferring the use of certain pastures and saving them for use after the traditional grazing season. “Essentially, it's a standing hay crop that is saved for use when you otherwise would feed hay.”

Stockpiled warm-season grass, for example, may meet the nutritional requirements for dry, pregnant cows during fall and early

winter — perhaps through January — with little or no supplemental protein.

“Crude protein in stockpiled grass declines over time, but not all at once. You might be surprised how high the protein is,” Redmon says.

To optimize use of stockpiled grass and minimize waste, he recommends limiting herd access to an area providing one or two days of grazing. Portable electric fencing is useful for dividing larger pastures into smaller paddocks. Allow cattle to graze the top 65% of available forage in each paddock, which will be mostly leafy material and provide the most nutrition. Then move the herd through other paddocks, in rotation.

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Consider your forage base

Rising costs of production inputs are forcing more and more producers to rethink many production practices. Producers accustomed to using fertilization or irrigation, or both, to increase yields of introduced forages may be particularly hard-pressed to justify high production costs. In many cases, Redmon says, it just isn't working anymore.

He cites reliance on Bermuda grass by many graziers in Texas and other parts of the South as an example. It has its advantages — particularly the volume of forage it can yield, compared to many other grass species. However, the advantages don't come without cost.

“Development of Bermuda grass varieties has been based on selection for response to fertilizer. It needs fertilizer to maintain production. Without fertilizer, the composition of your forage base will change,” Redmon explains. “Unless your fertilizer costs are under \$40 per acre, annually, maintaining Bermuda grass for grazing may not work.”

In situations where the costs of maintaining acceptable levels of production from introduced forages cannot be justified, Redmon advises producers to consider returning to native forages that do not require fertilizer to provide adequate nutrition to grazing livestock. Of course, there are trade-offs associated with the transition. Native plant species may be expensive to establish, and they won't yield as much total forage as do most well-fertilized introduced forages.

“Producers relying on a forage base comprised of native species generally have to use lower stocking rates,” Redmon says. “But inputs are much less, and native forages can offer better wildlife habitat, compared to monocultures consisting of introduced forages.”

