

APRIL
2020

DROUGHT PLANNING 101

Bonus Content for Subscribers

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Preparation Creates Resilience

Making it through a drought means planning for it long before it happens. Proactive, smart grazing management will provide healthy soil and plant cover, establish water systems that work when things go wrong, and ensure livestock that fits your environment. Smart management also means having a plan and implementing it when drought arrives. All this preparation creates resilience you need to see you through hard times.

Drought Planning 101 is your guide to planning for resilience. From our community comes Dave Pratt of Ranch Management Consultants who starts us off with the steps for success. We add to the details with destocking and leasing tips. Then farmers and ranchers

from all parts of the country provide examples of how they managed and adapted. Greg Judy brings it all together showing how he grazed through two years of drought. We hope this helps you become a drought-proof, resilient grazer.



What is Bonus Content?

Bonus Content is a service to our paid subscribers. Each publication is a curated collection of articles from the On Pasture archives giving you information and examples you can adapt to your operation to be more sustainable and profitable **[Let us know](#)** your suggestions for a future piece!

Planning For and Managing Through Drought

Dave Pratt, Ranch Management Consultants – 7/31/2017

Drought eventually comes to us all. With these steps, you can prepare your operation to be resilient, and you can take the necessary steps to not only survive, but thrive.

Drought Proof Your Business

For Land

1. Develop and maintain a desirable, drought resistant, ecological state.

Soils with a high proportion of plant cover are more resistant to capping than soils with low cover. Soils with high organic matter absorb and hold more water than soils low in organic matter. Broad-leafed grasses require less water per pound of growth than narrow-leafed grasses or weeds. Through good management we can increase cover, increase the organic matter and shift species composition to a more desirable, more drought resistant state.

2. Crossfence to control where and when livestock graze, and increase density.

Plants grow more slowly during drought. That means paddocks need more rest. To get longer rests without

increasing the graze period you'll need to increase the number of paddocks available per herd. We can accomplish this by combining herds or subdividing existing paddocks. Both of these strategies increase stock density. Increasing density will generally increase the distribution of livestock in the paddocks and improve the uniformity of grazing.

Combining herds has the added advantage of creating a larger herd which will make it easier to achieve herd effect. Herd effect can help break capping and increase the effectiveness of whatever rain does fall.

3. Develop a long-term secure water supply.

Fencing to control the grass isn't much use if there's no water for livestock to drink. With less rain it's inevitable that stock ponds will dry up. The muddy holes that are left are hardly a good place for healthy animals to drink. (Whether or not in drought, getting livestock out of the ponds is good policy. Research by Alberta Agriculture

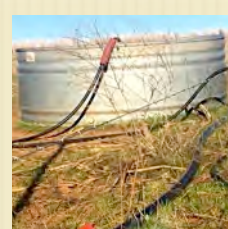
Are you ready for drought? Here's a quick self-exam.

Ranch Management Consultants Drought Preparedness Self-Exam	Yes	No
Desirable potential ecological states identified for the ranch		
Desirable, healthy states dominate the ranch or are increasing		
Range sub-divided into paddocks (possible to have >30 pastures per herd in drought)		
Adequate water storage & deliver (4 x 1 week's requirement)		
Enterprise mix compatible with drought risk		
Debt & liquidity compatible with drought risk		
Stock flow/cash flow calculated for the year ahead, updated monthly		
Gross margins known for all enterprises		
Critical dates known and communicated to all		
Grazing chart kept up to date & stock days per acre per inch of rainfall monitored		
Written destocking plan		
Written policy for managing capital from drought induced sales		
Written plan for low cost drought production methods		
Adequate financial reserves		
Appropriate off-farm investments		
Drought people plan in place		
Banker informed and kept current on drought plan		

Planning For and Managing Through Drought cont.

shows a 5-30% weight advantage in calves and yearlings that had access to troughs as opposed to ponds.)

Adequate water storage is essential drought insurance. It helps you sleep at night and it's tax deductible. We recommend four times one week's requirement for the herd. Since you are likely to combine herds in drought, adequate delivery rate from the tank to the trough is important.



See [“Drought Helps a Texas Rancher Turn the Corner to More Water and Forage”](#) for ideas for increasing watering capacity and forage resilience.

For Livestock

1. Have enterprises that are compatible with drought risk.

The oldest rule of good range management is to adjust the stocking rate (forage demand) to match the carrying capacity (forage supply). In drought, when carrying capacity drops, you must drop the stocking rate as well. Overstocking can lead to the range shifting to an undesirable ecological state, poor animal performance, red ink, and depressed people.

The first step in drought proofing the herd is to have the right herd (correct species and classes of livestock) for your environment. Some classes (e.g. stocker cattle) are more easily disposed of (or increased in flush years) than others (e.g. registered cattle). In a drought prone environment, locking yourself into expensive breeding animals which you cannot, or will not, dispose of is inviting disaster.

2. Have a destocking plan in writing.

Don't wait until you are down to the last blade of grass to make destocking decisions. The dust and heat of the sorting gate is no place to formulate strategic plans or think through the economic and financial consequences of your decisions. Discuss and develop the policy now, and put it in writing.



[“Destocking in Droughts and Dry Spells”](#) has tips to help you write your plan. Then see how Greg Judy implemented his plan in [“Grazing Through a Drought.”](#)

3. Know and act on your critical dates

I'll bet there's a date on your ranch by which, if it hasn't rained, or if there isn't significant growth, you know you are in trouble. Even if it were to rain after that date, you'll still be short of feed.

Determine your critical date. Initiate your destocking plan on that date. Let everyone know what the date is and what will happen when it comes. Being caught with cattle on hand once everyone else has started selling leads to poor prices and overstocked ranches. The sooner you react, the better the prices and the more feed you'll have left.

For Money

1. Put yourself in Control.

Stay on top of the economic and financial numbers. Know the gross margin of each class of stock. Base the extent to which your business is leveraged on the risk of drought. Producers in drought prone areas need to operate with a higher proportion of equity.

Income is likely to increase early in the drought when you destock. Have a plan to manage the capital. Income will plummet later in the drought. Now is the time to develop low-cost strategies for production.



If you're leasing pasture, be sure that you think about what might happen during drought. See [“What Happens to Your Lease in Drought”](#) for tips.

2. Have Reserves

Use the good years to build equity and financial reserves. Consider diversification with off-farm investments. Make your banker a partner to your plans. Keep him/her informed.

Planning For and Managing Through Drought cont.

For People

1. Develop a positive attitude about drought

Accept it. Drought is a normal part of ranching. Become informed so you can drought proof your property and your business. No one else will do it for you and it won't happen on its own. Become one of the people who actually benefit during drought.

2. Have A People Plan

Stress kills people. You are not alone. Build associations so you can share your burdens. Put aside money for relief from the drought.

Managing During Drought

For Land

1. Increase rest periods

In drought, grass grows slowly when it ought to be growing fast. When it should be growing slowly, it grows even slower. That means pastures need more rest - at least 80-120 days on arid rangelands.

2. Decrease graze periods

Longer rest periods mean longer graze periods. Long graze periods cause overgrazing which weakens plants and causes range deterioration. Additionally, the longer the graze period the lower the plane of nutrition because livestock select the best feed first.

Shorten the graze by increasing the number of paddocks available to the herd. You can increase the paddocks available per herd by fencing, but money may be tight in times of drought. Another way of increasing the number of paddocks per herd is to combine herds. As mentioned earlier, this also increases stock density and makes it easier to create herd effect, both critical in drought.

For Livestock

1. Decrease stock numbers early.

Early reduction in stock numbers means you get higher prices and have more feed left for the remaining animals. Consider early weaning.

There are two ways to reduce stocking rate: get rid of animals or reduce the requirements of the animals you have.

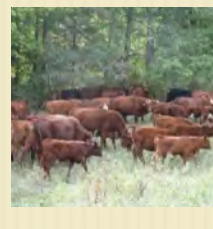
Of course some times we make the wrong call. Founder Stan Parsons wrote about a Ranch Management Consultants client in Kansas whose critical date had come and gone with no rain. As a result he sold 3,000 steers. A week later it rained, and rained, and rained. There are two types of regret he said: regret that you did and regret that you didn't. It was frustrating to discover he had sold too early. But he also said that it was an easier mistake to live with than it would have been if he'd had to keep the cattle too long into a drought.

2. Never, ever drought feed.

Drought feeding is expensive and since you don't know how long the drought will last, you could be paying for the animals several times over. Drought feeding leads to overstocking, deteriorated pastures, and bankrupt ranchers. One Ranching for Profit alumnus, recently repeating the school, told the class, "Trying to feed your way out of drought is like trying to borrow your way out of debt."

Remember!

In drought, the negative effects of poor management are intensified. But so are the positive effects of good management!



Greg Judy provides an excellent example of the importance of early destocking in his article "[Grazing Through Drought - The First Two Years.](#)"

Planning For, and Managing Through Drought cont.

For Money

1. Beware of “free” money.

Government subsidies, supposedly intended for the good of the people on the land, are a major handicap. Subsidies to maintain stocking rates, purchase feed, and keep people going for one more year are a major disincentive for many to develop effective alternatives. These policies have encouraged overstocking and desertification, economic peril, and financial disaster.

2. Replan your stock flow & cash flow.

Conditions have changed. You have probably destocked, which means the stock flow has changed. Sales will probably increase and occur earlier than anticipated. That means fewer stock at year’s end in the stock flow, and less cash in the cash flow. You’ll need strategies to preserve capital and cut costs as you hunker down to get through what could be some lean times. Plan ahead. Your banker needs to know what your new plan is and your accountant needs to know how you will handle the tax burden.

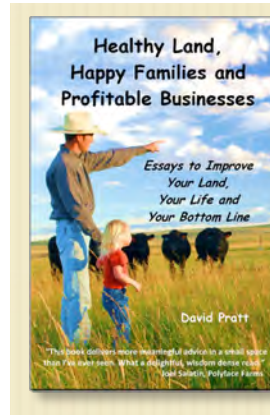
For People

Put your contingency plan into effect.

Hauling water, feeding livestock, and crying in your beer won’t ensure survival. They tend to reinforce the feeling of panic and deplete your bank account. Get out of the trenches and into the command post. This is a time when you need to make critical decisions on selling stock and managing the land so it doesn’t deteriorate.

Thanks to Ranch Management Consultants for sharing this article with us!

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Get Dave's book to learn more!

- Work less and make more by working with nature.
- Apply grazing strategies Ranching for Profit alumni use to double productivity while reducing labor costs.
- Use the three “secrets: for increasing profit, set a profit target and build a plan to achieve it.
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Billings, MT - Jan 10 - 16, 2021

Cheyenne, WY - Jan 17 - 23, 2021

Rapid City, SC - Jan 24 - 30, 2021



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Making Destocking Decisions During Dry Spells and Drought

Kathy Voth, On Pasture – 8/1/2016

Drought brings on a lot of stress, and when you're stressed decision making is harder. You question yourself and everything you do. Having a written destocking plan on hand makes these hard decisions easier. Use these suggestions to make putting that plan together a little easier.

Imagine it's the end of June and it hasn't rained in awhile. Your region is well below the average annual rainfall and it's hard to say when the skies might open and give your pasture a little relief. Your livestock are grazing along, not a worry in the world, because it's your job to figure out what comes next. Prices are still up, and you could reduce your herd. But you've spent years, maybe even a lifetime putting a herd together that fits you and the environment you work in. As Lynn Meyers, a Nebraska rancher who faced this scenario, says, destocking part of the herd is "like losing one of the family." How will you decide what to do?



Look at your herd and divide the animals into three groups on paper.

- Group A is made up of your most profitable cows and yearling heifers that have a lot of potential value.
- Group B includes your replacement heifers and steers that need a few more pounds so they can hit a good market niche.
- Group C is all the remaining animals that could be sold tomorrow if forage gets short: early weaned calves, yearling steers, older cows and cows with poorer genetics.

It's important to put this on paper now when you have time to think and reflect. Later, if you're stressed about what's happening in pasture, you may not have time or think as clearly. Your paper plan will help prevent knee-jerk reactions you may regret later.

Should the time come that you need to begin removing animals from pasture, you've already thought through the very first cattle to take off. Of course, you don't need to send all the animals in any group to market. The amount of destocking you do depends on monitoring the forage you have in your pastures. You might find you only need to ship out a percentage. Then, once you've sent that first group to market, repeat step one again, dividing the remaining animals into Groups A, B, and C. This ensures that you're sending off those animals you can most afford to remove from your herd. As Greg Judy says, your herd will get prettier and prettier as drought goes on.

Reducing your herd is a hard thing to face but drought may not give you an alternative. If you plan ahead, you'll have a better shot at doing it in a way that ensures your sustainability and profitability.

This article is drawn from a webinar sponsored by Dr. Cody Knutson of the [National Drought Mitigation Center](#) at the University of Nebraska, Lincoln. Thanks to Dewayne Rice, Area Rangeland Management Specialist for the Natural Resources Conservation Service in Lincoln, Kansas, for breaking down the destocking process for us.

Drought Helps a Texas Rancher Turn the Corner to More Water and Forage

Kathy Voth, On Pasture – 6/25/2018

Here's an example of how one rancher worked on his water and forage resources to drought-proof his operation. We've added links to other examples at the end of this article to give you more options. Notice in each example that there was a two prong approach – a solution for watering the herd and solutions for improving forage availability.

In the drought of 2009, Kregg and Diana McKenny's well ran dry. They had to haul water, and ultimately sell all their livestock except for 2 retired horses. The well that had served his family's ranch since the 1940s, and that got them through drought in the 1950s, just couldn't keep up any longer. Even the new, deeper well they drilled in 2011 couldn't provide all the water the operation needed.

It was then that Kregg went to his local USDA Natural Resources Conservation Service (NRCS) office to find out what kind of alternatives were available. NRCS Rangeland Management Specialist Derrick Fuchs suggested a multi-prong approach as part of a Conservation Plan:

“Our initial plan was to reduce his mesquite canopy through brush management, along with installing a rain water catchment utilizing the surface area of his barn, and adding storage to increase his water source capabilities,” explains Fuchs. “The NRCS has a diverse staff and we were able to use an NRCS agriculture engineer to design the gutters and storage facilities. The 3,500-gallon storage tank ended up being filled in three rainfall events and hasn't gone dry since.”

Now the McKennys have three water sources for their livestock: two wells and the rainwater they collect. And they're working to use the precipitation that hits the ground to grow more forage. With the help of the Environmental Quality Incentives Program (EQIP), the McKenny's were able to clear the dense canopy of mesquite that had taken over their property and reestablish pastures to native grasses. Instead of growing mesquite, now they grow grass and forage plants, and even recharge their aquifer.

The Conservation Plan came with a new grazing plan too. With cross fencing and temporary electric fences, McKenny can rotate animals through pastures, and take advantage of his new forage base, while still providing plenty of rest and recovery time.

McKenny has learned a lot from his experience. “I look at my management from different facets including brush control, water distribution and storage, with proper stocking rates and a drought plan in place. This means you have to know if you can reduce livestock once the rain stops,” he says. “I had waist-high grass this past year and I still get



Kregg McKenny and Derrick Fuchs next to the new 3,500 gallon water storage tank.



Looking down the property fence line, it is clear the grass plants, forbs, and beneficial browse plants dominate McKenny's landscape, providing quality habitat for wildlife and forage for cattle.

Drought Helps a Texas Rancher....cont.

worried about overstocking. My main concern always goes back to 2011 and having to destock because I had no water for my cattle.”

McKenny also appreciates how Derrick Fuchs and the NRCS helped him work through changes on his ranch. “Working with the NRCS was very easy, with Derrick getting a plan in place while giving me ideas to think about for the long term that I hadn’t really thought about before,” said Kregg McKenney. “After the funding was secured, I was able to implement some of the action items in my conservation plan. Now I am thinking of the next step with my cattle, even though I still get leery of stocking too heavily and tend to be more conservative because I don’t ever want to have to destock like I did in 2009.”

What Can You Do With This?

Be like Kregg!

We can all benefit from having more sets of eyes and brains looking at our operations and figuring out potential solutions, whether it's becoming more resilient to drought or grazing for soil health and increased profits.

Head over to your local NRCS office and ask the staff there to work with you on a Conservation Plan for your place. They'll look at your resources, ask you what your goals are, and give you multiple suggestions for things you can do to improve your soil, water and forage resources, and meet your farming and ranching goals. They might even be able to find funding assistance to help you get started down the new path. You'll benefit, and so will local wildlife, as well as your neighbors, who want you to be successful.

[Click to go to the website and find your nearest office.](#)

Or for more options...

Be like Chad!

Chad Fisher started his grazing operation the same year as a drought hit his area. In his most recent On Pasture article, he describes what it was like, the lessons he learned, and the changes he’s made. All are good examples of following Dave Pratt’s instructions for preparing for drought.

Be like Luke!

When drought hit, Luke Jessup's well couldn't keep up with livestock needs and his grazing operation was in danger of grinding to a halt. Here's how he solved his problem. It's also a great example of how to think through a problem clearly and creatively.

This booklet also includes an example from Greg Judy describing how he grazed through two years of drought.



Kregg sits with his dog looking over his herd that he is about to move into a new grazing cell utilizing electric fencing in his high intensity low frequency grazing system.



What Happens to Your Pasture Lease in Drought?

Bruce Anderson, Professor of Agronomy and Extension Forage Specialist, University of Nebraska, Lincoln – 4/2/2018

Kathy Voth, On Pasture 4/27/2020 additions

Do you rent pasture? What happens if drought lowers pasture production below expectations? Does your lease cover drought events? If not, here are the questions to consider to prevent future problems.

It's hard to think about drought in at the beginning of spring, but drought can play havoc on pasture leases. All too often, pasture leases fail to include an appropriate plan to adjust to this problem.

Without a plan, both the landowner and the tenant are at risk. Landowners risk having the pasture become overgrazed, resulting in future weed problems, reduced long-term production, and lowered value. Tenants risk poor performance or health of the livestock due to less forage and lower quality feed. This can lead to higher supplemental feed costs or being forced to sell the cattle.

Here are some questions for landowners and tenants to discuss:

Who decides when drought has lowered pasture production low enough to remove the cattle?

Having a mutually agreed upon goal for pasture and soil health included in your lease package will make this decision a little easier. Make sure that stocking rates are specified in the lease and that these stocking levels are adjusted for bigger cow sizes if necessary.

Should the rent payment be adjusted and how?

Who gets insurance or government payments?

Usually, it is best to design the lease so both landowner and tenant share in the opportunity and risk associated with drought by adding an answers to these questions. Talk about how a drought adjustment will be made and how that will affect rent payments. Keep in mind that both parties will be affected by the loss due to drought, but if you work together, you can also both benefit from future leasing arrangements.

Unfortunately, I can't give you a specific answers to these questions. Each situation is different and will depend on the property and the landlord and tenant. Work together to develop something that will work for you both, and put it in writing to avoid any misunderstandings later.

Drought can cause a lot of headaches. But if you've planned ahead, making sudden adjustments to your pasture leases won't be one of them.



Photo by Troy Walz

More Bonus Content Coming Soon!

If you're new to agriculture, planning to expand, or have limited financial resources, leasing land is a good option.

Farm & Ranch Leasing Tips

Building your Farm Business on Leased Pasture

Selling and Signing: Connecting with Landowners to Secure a Pasture Lease

Evaluating Potential Pasture Land

How Much Should You Pay?

Writing a Pasture Lease Contract

Stay tuned for all this and more!



Grazing Through a Drought: The First Two Years

Greg Judy - 04/01/2013

Greg Judy is well known for his ability to graze profitably while managing to improve the soil and his pastures. In this article he describes how he grazed through two years of drought in 2011 and 2012 while others in his area are looking at dried out, desert-like pastures.

One of the toughest situations to endure as a livestock grazer is a drought that seems to have no end in sight. It is humbling, frustrating, depressing and can bring on financial hardship. It seems that once your farm is in the drought area, all rains go around you or the moisture is inhaled by the dry air as it approaches. It really can work on you mentally to have a huge rain cloud with lightning bolts busting out of the sky, accompanied by thunder shaking the ground and not have a drop of moisture hit the ground! Our farm in central Missouri has been getting a lot of this particular treatment for the last two years.

Drought is normal and we need to manage for it. The worst thing we can do is hunker down and hope we get rain. Hope is not a strategy for surviving a prolonged drought. We have no control over the weather, so we do not focus on the weather forecast. What I have learned to focus on is what I can control. Calculating animal days of forage, water, stocking rates, and culling will keep you ranching.

Year One

The spring of 2011 started great, we had great rains every week which had all the pond spillways overflowing. It took a great deal of grazing management to keep the mob of cattle from pugging our clay base pastures. Being 100% committed to grazing, even in the spring mud season, demands very close monitoring of pastures. I remember there was one day that I mentioned that I wished it would stop raining for a couple days. Be careful of what you wish for.

Beginning in late June of 2011, the rain stopped. From late June of 2011 to March of 2012 we received 5" of rain. Our normal average yearly rainfall is 38." Once the rains stopped, the heat in July and August was almost unbearable. It would reach the upper 90's and topped 100 degrees almost every day. The humidity was brutal; you simply could not breathe well if you were exerting yourself in any way.

We started moving our cattle mob before it got light and right at dusk. The cattle sure seemed to appreciate it. This allowed our cattle to graze at the coolest times of the day which helped with their animal performance.

Year One Animal Management – Don't Buy Hay

We immediately combined the two herds of cattle into one mob. We had a grass finishing herd and the cow/calf yearling heifer mob that now made one large mob. **I am convinced that combining your multiple herds is one of the most powerful tools we have when in a drought.**

Next we focused on reducing the number of animals we were grazing. We processed every grass-fed beef that was finished that we had orders for. Any beef or sheep that we could find flaws in were immediately sorted out. If they were not performing up to my expectations, we sold them.



Full drought in July 2011. Good management meant plenty of grass for the remaining herd.

Grazing Through a Drought....cont.

Sheep and cattle prices were very good because we sold early in the drought, so the pain of culling was not bad. Our cow herd and sheep flock got prettier each month as well! I will admit it got tougher to cull each month, because the lower quality animals were gone. We took a tough situation of having limited forage and no re-growth and turned it into a cash positive situation by selling animals.

The alternative response would have been to buy hay. This response would have taken money out of our pocket to buy the hay. But worse yet, we did not know when the drought would end. Any time you make the fatal flaw of feeding through a drought, the consequences are not good. In most cases, the purchased feed will exceed the value of the livestock that you are feeding. You are putting the future of your farm and your family resources at risk.

It is tough to sell animals that you have worked on improving for many years. Something that is even tougher than selling your animals is feeding them purchased hay through a drought, especially when you don't know when it will end. **Don't get emotional about your livestock.** Sell them. You can always buy more livestock after the drought is over with the money that you have in your savings account from the animals that you sold during the drought. **If you try and keep all your animals through the drought, you may lose the farm. The risk is just too great!**

Your purchased livestock may not be the quality of what you previously owned. That can be fixed with time and the selection of animals that perform best in your environment. By keeping your base cow herd and a few good bulls, your replacements will be heavily influenced by your retained herd bull genetics. **You will have the luxury of paying cash for your replacement livestock** when the drought ends because you did not burn all your savings up on purchased hay. **This keeps you from not going into debt restocking your farm.**

Simply hoping for the drought to end is not a management tool. Attack it head on and attack it early. **The earlier you start to destock, the less animals you will have to sell.** You are preserving precious forage for the remaining animals on your farm. By combining the two different mobs, processing all finished beeves and culling inferior animals, this took a lot of grazing pressure off our pastures that were no longer growing by the end of August. Our recovery period between grazings increased from 60 days to 150 days. This drastically reduced our hay feeding bill last winter.

Destocking Allows Pastures to Take Advantage of Minimal Precip

The rain we did get in 2011 came in late November and December. By having a late killing frost date in the fall, our pastures actually had a chance to grow some very high quality fescue winter stockpile once the rain came. Three of the 5" of rain came in November and December 2011. The other 2" came in January 2012. Those 3" of rain actually allowed us to grow about 40% of the amount of winter stockpile that we normally grow. We were very thankful for the stockpile growth that we got due to the late killing frosts.

I am convinced that the only reason we grew any late stockpile in the severe drought was due to our previous management. The last five years of building up huge amounts of carbon in the soil with



Trucking cattle.



Fall grazing.

Grazing Through a Drought....cont.

mob grazing and keeping an effective working litter bank on the soil surface paid huge dividends. The plants were not severely stressed when we finally got our precious 3" of rain in the late fall. Every drop of rain was trapped and held in place by the litter bank. There was no bare soil exposed to encourage runoff.

We have noticed with pastures where there is no grazing management focused on trampling forage, the litter bank is missing. These particular farms really suffer during a drought. When plants are severely grazed off during a prolonged drought it's usually because the owner did not act soon enough to destock.

There is nothing wrong with hoping or praying for a rain, but you also need to be proactive and implement a plan. Once you have grazed all your paddocks on the farm with the first grazing rotation in a major drought, it is too late to plan.

Heading Into Year Two

The winter of 2012 was very dry and balmy. There was never any mud, just dry pastures. This saved us a ton of forage because the cow body temperatures were not challenged by any cold weather. The cows required less forage to stay warm.

Finally in March we received enough rain to green up the plants and soak the top 4 inches of surface soil. The soil below 4 inches was barren of moisture from the 2011 drought. We also got a couple rains in April that encouraged our grass to shoot up to around 16 inches. But the subsoil moisture never had an opportunity to get recharged with moisture. In mid May the water spigots shut off and the heat returned. Never have we seen the extreme heat that was witnessed in early May.







By June 1st, I knew we were in trouble with our pasture re-growth. The temperatures had hovered around 100F for 20 days of May with zero moisture. There was re-growth taking place on our farms after being grazed, but it was significantly slower. Usually in June, our plants build tons of forage for our animals for the coming summer season. This particular June seemed to feel more like our typical brutal hot August weather. Growing conditions were disappearing quickly.

Year Two Herd Management

I decided to implement our drought plan immediately. **We combined our two herds into one mob to concentrate the animals into one area which gave us much more control over our recovery periods.** Next we treated every bite of grass that we had grown on our farms like it was our last. **We sold enough animals to ensure that we had 180 days of forage left in front of us to feed our remaining animals in case it did not rain.**

First we sold all two year old steers to a fellow up north who had been getting rain. These steers were closing in on 900 pounds and were doing well on the high energy forage in front of them. Next we sold all of our yearling steers from

DROUGHT STAGES

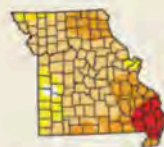
 None	 D0 Abnormally dry	 D1 Moderate drought
 D2 Severe drought	 D3 Extreme drought	 D4 Exceptional drought

FROM YELLOW TO RUST

On Jan. 3, 2012, only 5 percent of Missouri was abnormally dry. By June 19, 99 percent of the state was abnormally dry or drier. At the start of 2013, the entire state had abnormally dry to severe drought conditions.



JAN. 3, 2012



JUNE 19



JULY 24



AUG. 21



SEPT. 4

From hurricane remnants



JAN. 1, 2013

These were the conditions in Missouri as they entered the worst drought in over 60 years.

Grazing Through a Drought....cont.

last season. This took a huge amount of grazing pressure off our farms. Next we culled older cows. The yearling heifers and bred heifers were also sorted out and sold to folks wanting to start their own grass genetic herds. We were left with 1/3rd of our animals that we started the spring with.

Grazing Management for Drought Year Two

The 2012 drought continued with unrelenting daily temperatures hovering over 100 F every day. By having all of our remaining animals in one mob, we could concentrate on one section of our farms. We went to daily moves with temporary poly reels. This gave us maximum control over our remaining precious forage to meter out to the remaining herd. **We focused on making sure that the mob of cattle only grazed the upper parts of the plant.** With each grazing pass, we wanted to ensure that we left at least one half of the plant to cover the ground surface from the baking sun. This longer residual would also aid us in plant recovery assuming we got a rain in the future. The taller plants left would also help slow down the winds that were trying to turn our pastures into barren deserts.

It was really surprising how little of the high quality grass the cattle ate each day. We check our cattle daily for gut fill on the left side of each animal as it passes through into the new fresh grass strip. If the animals are hungry, there will be an area in front of the hip bone that is sunken in. These cattle were not limited and were putting weight on. Their calves were packing on tremendous weight by getting milk and high-energy plant tips.

Finishing the 2012 Summer

We reached the end of August with no rain expected until the end of October. The temperatures fell out of the 100's which was a plus. At this stage we had gone 110 days without any rain and the experts were calling Missouri the epicenter of the drought. **Due to our planning and the way we had managed our pastures and herd, we still had 120 days of grown forage in front of us that had not had its first grazing since recovering from the spring grazing.** Meanwhile, most folks in our area had mechanically mowed off their pastures to remove the seed heads in June. It was a very bad management decision that cost them their pastures. By the end of the summer, those pastures looked like deserts with nothing left but bare ground. They did accomplish their goal of not having any seed heads.

I will repeat once again, that by focusing on growing taller plants in the early spring before grazing them, you will be able to endure a drought. Armed with this stronger forage base, you must monitor your stocking rate at the first hint of drought. Act early and get rid of any animals that can be marketed. Focus on leaving as much forage as possible in each grazing pass to protect your soils. It will rain again and when it does, your farm will catch and hold the water. You will be rewarded with faster grass re-growth from dormancy simply because you did not graze off the pastures to a parking lot.



Interns Meg and Jake show pasture grass before grazing, and after a 12 hour grazing session.

**More Bonus Content
Coming Soon!**

Greg's grazing plan was a big part of why he made it through 2 tough years of drought.

Stay tuned for On Pasture's tips for creating your own plan using a free grazing chart.

How a Slinky Hovers - And Why We're Slow to Respond to Drought Indicators

Kathy Voth, On Pasture - 04/13/2013

What can a slinky tell us about the importance of planning for drought? More than you might think!

We all know about gravity and how it keeps things firmly attached to the earth. And we've all experienced what happens when we're climbing over a fence and somehow manage to trip and fall. When that happens to us, we wish we could hover for a moment so we could get our feet under us before gravity yanks us to the ground. But physics doesn't provide for hovering.

Or does it? In September of 2013, [RadioLab](#) posted a podcast about ["What A Slinky Knows"](#) describing what happens when you drop a slinky. Here's the experiment instructions from their blog post if you have a slinky and would like to try this at home:

- 1) Dangle a Slinky above the ground.
- 2) Let it extend to its full length.
- 3) Let go.

For a fraction of a second, something amazing happens: the bottom of slinky hovers in midair, seeming to defy the laws of physics, while the top collapses toward it.

This isn't a result of any magical properties the slinky has. The bottom just floats there because it hasn't gotten the information yet. As scientists explain, each collapsing ring of the slinky is a wave of information communicating to the next ring below "We're falling!" until it reaches the bottom ring which then falls to the ground. According to the scientists on the podcast, [Steve Strogatz](#) and [Neil deGrasse Tyson](#) "Information flows have a lot to do with how our physical world works." We can even imagine ourselves as the bottom of the slinky, making new choices as new information waves hit us.

This got me to thinking about the "Hydro-Illogical Cycle" described by I.R. Tannehill in 1947 in his book *Drought: Its Causes and Effects*:

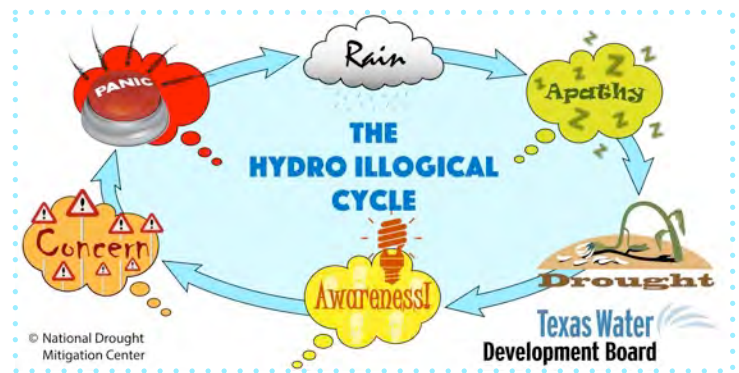
"We welcome the first clear day after a rainy spell. Rainless days continue for a time and we are pleased to have a long spell of such fine weather. It keeps on and we are a little worried. A few days more and we are really in trouble. The first rainless day in a spell of fine weather contributes as much to the drought as the last, but no one knows how serious it will be until the last dry day is gone and the rains have come again."

When it comes to drought, we're a little like the bottom of the slinky. We don't even know that the rings are collapsing above us until suddenly, there we are in the middle of a drought. Fortunately we have more power over our own future than the slinky does. We can develop and maintain a desirable, drought resistant, ecological state so that our pastures and water sources are more resilient. And we can have plans in our back pocket to follow should the worst happen - plans that can reduce stress, and that can protect and even improve our financial situation.

Don't be a slinky. Have a plan!



Photo courtesy of Geekologie.com.
[Click to see a video.](#)



Links to Resources

If you read this as a PDF on your computer, you'll be able to click on links and go directly to them. But if you're reading it in print, you'll have to enter these links to read more.

Planning For and Managing Through Drought

Dave Pratt's Book: <https://bit.ly/DavePrattsBook>

Ranch Management Consultants: <https://ranchmanagement.com>

Making Destocking Decisions During Dry Spells and Drought

National Drought Mitigation Center: <https://drought.unl.edu/>

Drought Helps a Texas Rancher Turn the Corner to More Water and Forage

Find your local office: <http://bit.ly/myncrcoffice>

Be like Chad: <https://bit.ly/likechadf>

Be like Luke: <https://bit.ly/likelukej>

How a Slinky Hovers - And Why We're Slow to Respond to Drought Indicators

Radiolab: <https://www.wnycstudios.org/podcasts/radiolab/about>

What a slinky knows: <https://bit.ly/slinkyodcast>

Steve Strogatz: <http://www.stevenstrogatz.com/>

Neal DeGrasse Tyson: <https://www.haydenplanetarium.org/tyson/>

See the slinky video: <https://bit.ly/slinkyvideo>

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