I don’t’ have to tell you it’s hot. Those of you who read this each week know that I have been touching on the subject of this year’s drought for a few months now. It’s not because I can predict the future or the weather, but because it didn’t really matter if there was one. I just wanted my readers with livestock to prepare for their summer season as if there would be one. Below is an excerpt from a Grass-Fed Cattle distributed by Storey Publishing, LLC. The reason I am so fond of this drought story is because it rings so true. The author, Julius Ruechel, compares the typical farmer’s reaction to drought to those of early explorers who are stranded. The chapter then provides recommendations to those who are faced with drought. You probably won’t be surprised by the fact that the most important recommendation is to plan ahead for the unexpected.

“One thing we can count on in agriculture is the unpredictability of the weather. Although we use weather trends for our planning, abnormal weather happens more often than average weather, despite the fact that most management plans hinge on the average year. Always plan for the unexpected!

The simplest solution is to have a reserve of stored feed, ideally enough to see you through a full winter. A drought reserve, however, does not necessarily have to include expensive stored feeds if you plan your grazing rotation to continually carry over excess grass as a reserve. The size of your drought reserve depends on how predictable the weather is in your area: The more arid the climate, the greater the weather fluctuations. In many arid and semiarid climates, it is wise to carry as much as a full year of grazing as a drought reserve at all times. This grass excess also helps to buffer the soil from flash flooding, excessive moisture loss, and sun baking.

When drought occurs, areas without a predetermined drought plan will become so seriously over-grazed that the first light rains will have no effect whatsoever on the grass and the soil. If the root reserves are decimated and the soil moisture completely depleted, the soil and grass will take much longer to recover after a drought. Usually, when farmers are caught without a drought plan, they fail to destock early, which leads to financial ruin as their starved cattle become worthless in the forced destocking frenzy that sends market values falling through the basement. Only a well-thought-out drought plan will protect the soil, the grass, the herd’s health and fertility, and the financial viability of the farmer.

A History Lesson
The typical response to a drought reads remarkably like a survival story from a nineteenth-century Arctic expedition. In the description of a typical drought below I have added parenthetical analogies to the typical disaster responses of those on such expeditions. It provides a remarkable insight into the predictability of human response to crises, in particular the optimism that we tend to harbor within ourselves that such terrible things won’t happen to us that we are smart enough and resourceful enough to successfully navigate through such situations when the time comes. Thus, it is a dire warning to us all that without preplanning our responses to a disaster/drought, all the best intentions and emergency measures invented after the onset of the disaster cannot prevent the wide range of terrible outcomes that result.

As the drought (disaster in the form of a shipwreck or of becoming icebound) begins, food supplies are rationed with a degree of optimism that the rains (supply ships or rescue ships) will soon arrive. As the drought (disaster) worsens, food rations are further reduced to becoming starvation rations. Still we hold on, hoping to pull through and save the herd (the crew).
When our luck holds out, the herd (crew) survives, rescued by expensive hay rations (expensive rescue attempts) brought in from afar, but the animals (crew) are emaciated and the land has been damaged by erosion and overgrazing. Herd (crew) productivity, health, and fertility have been severely compromised, sometimes beyond repair, and the farm (expedition) is financially destabilized.

In the worst-case scenario, the drought (disaster) does not end soon enough, and the herd (crew) starves or drastic measures are taken to sell emaciated animals at fire-sale prices (last-ditch survival strategies are attempted such as sending crew members on hopeless forays to reach help or resorting to cannibalism of deceased crew members). The financial, environmental, and emotional costs to the farm and family (expedition and crew) are irreparable. The business sinks and goes bankrupt (the expedition leader and the investors funding the expedition are bankrupt, the lives of those involved in the expedition are scarred, and the financial security of their families is severely or even permanently compromised).

We may shake our heads at the decisions early explorers made, but is our “buckle down and wait it out” response to drought really so different? I recommend reading about Sir John Franklin and his fatal Arctic expedition in search of the Northwest Passage and Sir Ernest Shackleton’s two-year ordeal to rescue his crew after his ship, the famous Endurance, was crushed in Antarctic pack ice. They are remarkable studies of the optimistic denial and subsequent delayed reaction to the possibility of disaster and the tragic suffering caused by failing to prepare a disaster contingency plan. There are countless farmers who have struggled just as valiantly in the jaws of a drought, with equally tragic results but without the international recognition afforded these polar explorers. So please, learn from history and don’t get caught without a preplanned drought strategy. Having said that, what should a drought plan look like beyond a predetermined grazing reserve carried over in the pastures at all times?

Preparing a Drought Plan
To survive drought, we must always take stock of our grass reserve and know how it is faring compared with our herd numbers; this is our point of reference. When our grass inventory starts looking inadequate — a warning sign — we need to be ready to start destocking.

A flexible herd size and knowing the size of your grazing reserve at all times are the keys to predicting and surviving a drought. Record your drought plan on paper or on your computer so that you can easily access it when you notice the first signs of trouble. In the stress and heat of the moment, it is easy to forget your plans and to be caught up in an instinctive wait-it-out attitude. Don’t expect a level head to take you through the early warning signs of a drought. Arctic explorers were no tinhorns at their business either, yet time and time again they were caught unprepared. Our optimism will guarantee that our response to drought will be too little and much too late. Write it down!

Selling Early
When you notice the first warning signs of an inadequate grass inventory based on your cow-grazing-day calculations, begin selling off animals early so your grass reserve always exceeds what is needed to take you through the next year. Your Cattle Grazing Days (CGD) calculations will warn you of feed shortages that could lead to a drought long before the easily recognizable signs of a drought become apparent, allowing you to sell before the market rush starts, before you start rationing your animals, and before they begin losing weight. You want a premium for them, and you will get it only by offering fat animals for sale before the emaciated animals begin flooding the market.

By selling your animals early, you’ll have money in the bank as a financial drought reserve, allowing you to restock your herd at the end of the drought, typically while prices are still low. Destocking early is the key to saving your land from overgrazing and abuse so it can recover quickly after the drought and so your financial situation can remain as stable as possible.

Culling the Herd
When your enterprise includes cow/calf pairs, stockers, and even grass-finishing animals, it is easy to start selling your nonbreeding classes without having to cut into your brood herd, especially because these animals will be seriously discounted later when the market rush begins, even if they are in good condition and at an ideal market weight. This is also the time to seriously cull from your herd the less-fertile, higher-maintenance animals; replacement stock will be cheap to buy at the end of the drought, particularly if your early intervention allows your land to recover quickly, before the drought-induced market collapse ends. By protecting your core brood herd and destocking primarily other livestock classes first, you ensure that you will continue to have an income at the end of the drought from the calves produced by your breeding animals. There is nothing more disheartening than to survive a drought but then suffer a cash-flow shortage afterward because the brood herd has been sold off or its conception rates have been affected by starvation. Businesses go bankrupt because of insufficient cash flow to pay the bills, not because of insufficient assets (see the discussion on building a financial reserve against drought for more on this concept). Determine in your drought plan which animal classes you will cull first and put it in writing, so sentiment and stress do not cloud your decisions in the heat of the moment.

**Avoiding Overgrazed Pastures**

Never allow your herd to overgraze your land in a drought situation; a good grass residual is the only guarantee that your land will recover quickly after the rain returns. Land that can be restocked quickly is far more valuable to your survival than are emaciated cattle and overgrazed land that remains depressed in its production years after the rain returns.

Be sure to leave a good grass residual when the drought begins, so the root reserve stays deep and the soil remains covered with plant stubble and debris; both guard against wind and flash-flood erosion at the end of a dusty drought. The debris also shades the soil from sun baking and provides a protective barrier that slows evaporation and allows the water table to replenish itself more quickly when the rain returns. Do not, under any circumstances, allow your cattle to eat plants into the ground. Destock early.

**Rotating Pastures Daily**

Daily pasture moves will allow you to ration your grass supply most efficiently so that you can protect the grass from overgrazing and maximize grass recovery periods between grazes. It will also minimize grass waste due to trampling and fecal contamination.

You must rely on your cow-grazing-days calculations, discussed in and, to determine if you are allowing adequate regrowth of pastures before re-grazing them. Only your CGD calculations will indicate whether your rotation is slow enough to account for grass shortages or your grazing rotation will catch up to itself, leading to depleted root reserves and overgrazing if you do not take preventive measures such as selling some cattle and finding additional pastures currently not included in the rotation. Thus “adequate regrowth” is not a quantitative measure of grass height, but rather a calculated indication (based on CGDs) of whether your herd’s current progression through your grazing reserve is sustainable or happening too quickly to keep up with grass regrowth. By the time it’s visually obvious that the grass is shorter than it ought to be when your herd moves to the next pasture, your grass reserve already will be seriously depleted and you will require considerably more-drastic measures to remedy the situation. During a drought it is tempting to re-graze sooner than usual because the regrowth is not fast enough to maintain your rotation; doing so will seriously harm grass growth. In reality, you need to slow down your rotation to compensate for the slow growth.

There are three ways to slow down your rotation without risking overgrazing:

1. **Destock early.** Start by selling your non-breeding-class animals first, such as your empty and cull cows, stockers, and grass-finishing animals, and by culling from the herd the least-fertile, higher-maintenance individuals. By reducing your herd size as soon as you calculate that your grazing reserve will be inadequate, you will keep your remaining animals well fed, protect your land from overgrazing, and protect your breeding herd’s fertility so it can provide you with a cash crop of calves as soon as the drought ends.
2. Combine your herds to increase grazing efficiency and lengthen the pasture recovery time.

3. Feed some hay. This is done in a worst-case scenario if you still insist on maintaining a hay reserve, to allow you to lengthen the grass recovery time. It is far better to feed hay in the middle of a summer drought in order to give the grass more time to recover than it is to deplete your grass reserves first, overgraze, and then feed hay later.

For example, in southern British Columbia, summer can sometimes be so dry that without irrigation, almost all grass growth stops. If cattle farmers in such dry-summer areas begin to run short of grass, it is far wiser for them to feed hay during July or August and reserve lots of grass in the field so that grass growth can catch up with their rotation than it is for them to use up all the grass reserves through overgrazing.

By feeding early, the grass is capable of recovering in time to benefit from fall rains and cooler weather. A single month of feeding during the summer drought may well give you an extra three months or more of grazing in the winter, which you would not have had if you had overgrazed your summer rotation.

Supplementing Grass Quality
As grass quality further deteriorates during a drought, plan to supplement it so that you can still make use of poor-quality grazing rather than using stored feed (supplementation is covered in detail in ). Extra protein fed along with the mineral supplement can make a difference in getting cattle to successfully digest a lower-quality grass without having to abandon it.

If you decide to keep stored feed in reserve, hay will keep much longer than silage. Silage will remain edible in a clamp or bunker for only two years, but if you don’t use your hay for ten years, it will still be perfectly edible. Furthermore, you can sell hay during years when prices are high, then replace it with fresh reserves when prices are low. Unused silage is not as easily transportable for sale and its shelf life is considerably shorter so it is much harder to resell and replace with fresh silage reserves.

Maintaining a Drought-Proof Water Site
Plan to have at least one drought-proof water site available in every corner of your grazing area so you do not have to abandon a valuable grazing reserve because you cannot provide your cattle with drinking water. A drought-proof water site is any water site that you can rely on to produce sufficient water to meet your cattle’s needs during even the most severe drought, when many other water sources may fail. An ideal drought-proof water site could be a reliable deep well, access to a reliable river or lake that will not dry up during a drought, a connection to a municipal water supply that guarantees livestock water needs even if irrigation restrictions are enforced, or any other water site that can weather the effects of a severe drought. Many surface water sources such as dugouts, streams, ponds, and even shallow surface wells will dry up. If they do, either you will lose access to many parts of your grazing land or your cattle will have to traverse large expanses of pasture to reach water. These water routes will become overgrazed and compacted. With various drought-proof water sites spread across the farm, you can build makeshift alleys with portable fences and protect as much of the land as possible while still keeping your cattle watered.

Building a Financial Reserve
Build a financial reserve during the good years that you can draw upon during a drought. Even in a drought, bills will need to be paid whether or not you have an income. Part of drought survival is being financially buoyant through the drought period. Having enough grass but no cash flow to pay mortgages, rental fees, and other essentials will cause the bank to foreclose just as quickly as it will on the neighbor who has emaciated cattle and no grass reserve.

Remember that during a drought you can no longer use your cattle as a financial reserve because their market value will have collapsed. Any remaining equipment will also become temporarily worthless as everyone else begins selling his excess equipment to keep his bankers at bay. Set aside a small part of your financial reserve as a vacation fund to use during the worst of the drought.
I remember phoning a friend during the middle of his normal grain harvest season in central Alberta during the drought of summer 2002. The drought on his farm was so severe that he had nothing whatsoever left to harvest, yet he had planned for it and had a financial reserve to survive the fiscal year. In fact, he was packing his bags to go on a fishing vacation. I was stunned! He told me that vacationing then was the best way to keep from becoming demoralized and to stay true to his drought plan. Sitting at home feeling powerless with absolutely nothing to do when he ought to be out harvesting his yearly income would have rubbed already raw nerves to the breaking point and would have sorely tested his ability to follow through on his drought plan.”

If we continue this pattern of little to no rain the DEC may declare a severe drought or worse which will trigger the USDA to provide compensation through their Livestock Forage Disaster Program (LFP). Below is a link to the website. It is always good to review these things to ensure that you are in compliance and have all your ducks in a row. One thing that they will always be interested in seeing is records. Keep good records and to be extra safe, documenting how the drought is effecting your particular property will go a long way in strengthening your case. Take some pictures where your pond used to be or how low the steam is compared to other years. I don’t know about you, but my grass has stalled and I am one of the few producers in my area not yet forced to feed hay. So review the protocols, update your records to reflect your current stock numbers, and don’t forget to document.

https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/livestock-forage/index

Below is an official rain dance that you can do in your yard or on your farm. I hope to see you all doing this and don’t forget to stretch first!
https://www.youtube.com/watch?v=R_0q mq2KxI

For the original article and more information from Cornell Cooperative Extension in Ulster County go to:
http://us7.campaign-archive1.com/?u=3063d3062ebec96de3033f237&id=da6b94dc82&e=aa2a570e6c