Mob Grazing: 21st Century Grazing Management

A comprehensive guide to implementing and managing a grazing operation in the 21st century

by Chris Stelzer
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www.AgriculturalInsights.com
Thank you for reading my FREE eBook. I’ve recently written a greatly expanded and updated version of this eBook, called “The Grazing Book.” It’s 140 pages and packed with new information and visuals to take the concepts in this free version to the next level. I do also want to mention that my opinion has changed on many topics covered in this book and the newest information can be found in “The Grazing Book.”

You can purchase The Grazing Book by going here: [http://agriculturalinsights.com/tgb2](http://agriculturalinsights.com/tgb2)

Thank you,

**Chris Stelzer**
[http://www.agriculturalinsights.com](http://www.agriculturalinsights.com)
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# Table of Contents

1. Introduction  
2. Physical Livestock Management  
3. Fertilizer  
4. Monitoring Grass  
5. Monitoring Animal Performance  
6. Advanced Techniques  
7. Conclusion
Preface

You’ve probably found your way to this eBook through my blog or got it from a friend. Either way, I’d like to thank you for reading. Not too long ago I became passionate about sustainable agriculture. And more specifically sustainable cattle ranching. My name is Chris Stelzer and I’m a 27 year old Colorado native. I was fortunate enough to intern with Greg Judy in Missouri for five months in 2012. I then moved on to spend the summer at the James Ranch in Durango, Colorado. Shortly, my wife and I will be moving to South Africa to work with Ian Mitchell-Innes on his cattle ranch for 6 months.

My journey began with reading. I’ve read a lot of farming and ranching books over the years. Greg Judy’s books are practical and I feel they are the best ones out there. However, I wrote this eBook because there is a lack of information out there for people like myself who have no experience farming or ranching and want to start. There are also farmers and ranchers that want to make the transition to a more sustainable way of doing things. Regardless if you have no experience or thirty years under your belt, I invite you to read my eBook and take my point of view into consideration.

The purpose of this eBook is to help you transition into becoming a farmer/rancher or developing a more sustainable way of making a living from Agriculture. I’m not an expert and your success or failure is ultimately up to you.

First, I would like to thank Greg and Jan Judy. Without whom, none of this would be possible. Many of the techniques in this eBook come directly from them. Second, I want to thank my family and friends whose support and love is unconditional, thank you. Third, I want to take a moment to thank my subscribers, social media friends and blog readers. Your support of Agricultural Insights is humbling and it’s why I get out of bed ready to conquer the day.

If at any point during this eBook you have questions or comments, please don’t hesitate to contact me. The best place to reach me is e-mail, which you can do at: Chris@AgriculturalInsights.com. You can also connect with me on Twitter (@AglInsights) and on the Agricultural Insights Facebook Page. Even if you don’t have questions, I’d love for you to come by and say hello. www.AgriculturalInsights.com
Introduction

Welcome to *Mob Grazing: 21st Century Grazing Management* eBook. You might be reading this eBook because you are curious how grazing management has changed over time. A lot of things have changed, and boy, do we live in exciting times!

During the course of this eBook I will cover many topics and techniques. However, **this eBook doesn’t have all the answers**. When farming or ranching you are working within nature. As farmers and ranchers we do our best to be successful knowing that ultimately, nature has the final word. This eBook provides you with a way to work with and respect nature, which will make your life easier. There are no “get rich quick” or “silver bullet” answers in this eBook. If I had them, I would share them with you. Grazing management is an art form, and like most things in life it takes practice. As time goes on you will become a better grazing manager. This book was written to promote new ideas and provide you with a jumpstart to managing your livestock more effectively. Please remember to implement the ideas in this eBook slowly. Try them out on a small scale first, and then move on to bigger and better things.

First, I will describe what grass plants are, how they behave and rules you should follow when grazing them. The next topic will be physical livestock management. In this section I will explain how to use tools (electric fence) and techniques that have recently been developed specifically for livestock producers and small scale family farms. Additionally I will define why you need to get serious about grazing management. Third, I will briefly explain why you don’t need to buy commercial fertilizer. In the proceeding section I will talk about how and why you should monitor your grass. Next I provide three easy to use techniques for monitoring animal performance. In the last section I will give you three advanced techniques you can use to take your grazing management to the next level.

What is Mob Grazing? It can be defined as rotationally grazing or paddock shifting your livestock. Often times Mob Grazers have their animals grazing at high densities. The Mob part refers to the fact that all classes of animals are combined into one herd. This means that all of your bulls, heifers, cows,
yearlings, finishers and calves are in one herd. You will obviously want to take your bulls/rams out and put them back into the herd according to your breeding schedule!! Greg Judy was one of the pioneers of Mob Grazing in the United States and I learned about it from him.

I hope you enjoy my eBook, and please come by Agricultural Insights and let me know what you think of it!
Physical Livestock Management

If you are interested in increasing your quality of life, farm/ranch profitability, livestock health and fertility, daily weight gains and want to grow more grass then you need to get serious about how you manage your livestock. Whether you are managing five acres or 5,000, the principles are the same.

Many farmers/ranchers “set stock” or continually graze their livestock on one or two pastures all year long. Depending on weather conditions, many of them will start to feed hay in the summer. If this is you, don’t worry! I’m here to help.

To manage your livestock properly you need to control their grazing. Controlling the where and when will give you the upper hand. In order to obtain more control you will need a few tools and a new understanding of grazing management. Let’s start with the tools.

The tools available to us as farmers/ranchers today are incredible. We can control where, when and how long one dairy goat grazes. We also have the power to move 4,000 head of cattle to a new area of fresh grass as frequently as every twenty minutes. We can do this by using electric fence. The electric fencing of the 21st century is highly portable, lightweight, reliable and durable. While I don’t enjoy recommending things for you to buy, these items are absolutely necessarily. Let’s take a look at some of these tools:

- **Portable Fencing Reels** - These reels are made of high quality plastic and metal. The most common reels hold 1320’ of polybraid. ($49)
- **Polybraid** - Polybraid is a mixture of woven flexible plastic and metal. The result is a product that is as flexible as a rope, but can be electrified. I recommend polybraid and you can see my video comparing polywire and polybraid here. A very powerful tool indeed. ($49 for 1320 feet)
- **Portable Step-In Posts** - These are also made out of plastic with a metal spike on the end for stepping into the ground. Some are better than others. The high quality ones are UV protected plastic and will last many years. These are your fence posts that polybraid fits into. ($137.50 for 50 posts)

www.AgriculturalInsights.com
✓ Fence Energizer - All of the above mentioned tools will not work unless you have an energizer. There are lots of energizers out there that will work but I recommend Stafix brand energizers. ($300)

✓ 4 Wheeler/ATV - In my opinion an ATV is essential. You can attach your portable fencing reels to your ATV, run a line of polybraid and with a stack of posts on the back quickly and easily put up portable fencing. You could also use a horse, mule or some other vehicle. (Price depends on new vs used, I’d say $5,000)

The rule of thumb for buying a fence energizer is that each Joule will power 10 miles of electric fence. This depends. If there is a lot of brush and green material touching your fence, each Joule might only power 5 miles of fence. In this case, bigger is better! Please stay within your budget.
Polybraid (White) & Polywire (Orange)

Portable Step-In Posts

Fence Energizer

Photo: Powerflex Fence
All of these tools are used to create “paddocks.” Paddocks are areas of pasture that you fence, using your portable electric fencing to manage livestock grazing. For example, you might have a 100 acre section of pasture on your land. Many ranchers would turn their cattle into this area for 10 days. During this 10 day period, the cattle can go back to the same spot and graze it continuously for those 10 days. Livestock will always eat the “candy” or most succulent grass before anything else and if they have the option to keep going back to that grass, they will overgraze it. This hurts grass regrowth. By using paddocks to control the areas livestock are grazing you can prevent the grass from being overgrazed, giving it time to recover.

Let’s examine that 100 acres, and what creating paddocks would look like. The black lines represent the polywire/polybraid which can be dispensed or rolled up using your portable fencing reel. The red line is permanent fence, that you can attach your polybraid or reel to. The water source is also labeled. As you can see, we’ve turned the
100 acres into 12 temporary paddocks. We’ve also utilized 12 days of grazing, where previously we only got maybe 10 days.

*Attach your reel to an ATV to quickly dispense fence*

*Hang a reel on permanent electric fence*

*Tie off the other end, or use an insulated handle and hang on a fence*
This is all great in theory, but how do you actually create paddocks? Paddocks are created using the materials I’ve listed above. Here are a few tips and tricks explaining how paddocks are created.

Creating very small paddocks using temporary fencing

Keep portable posts organized!
If you do not have a permanent electric fencing setup at this time, don’t worry. You can still use portable electric fencing to control your livestock. This will require more work, but it’s cheaper and you can get started with a 100% portable electric fencing system for about $500. In order to have a 100% portable system you will need the following, in addition to the previous list:
✓ Fence Energizer - Stafix, 3 Joules ($200)
✓ Marine-grade Deep Cycle Battery ($100+)
✓ Solar Panel ($50)
✓ Charge Controller ($15)
✓ Portable Fencing Reels ($49 each)
✓ Alligator Clips ($5)

The 100% portable system is heavy and can be cumbersome. I used a heavy duty wagon to roll mine around the pasture. You also need to figure out a way to keep the charge controller and energizer dry. My battery was in a case with a lid and I put plastic over everything but the solar panel. I want to note that the solar panel and charge controller, which charge the marine-grade battery are optional. However, you will need to charge your battery more frequently, and probably need to buy two of them to always keep your fence energized. This is why I recommend the solar panel and charge controller. Your battery will not
need to be charged too often, depending on the amount of sunlight your area gets. I live in Colorado, we have 300 days of sunshine a year. I only charged my battery three times during the growing season.

Connecting the solar panel, charge controller, battery and energizer can seem intimidating. However, the charge controller will come with instructions on how to hook everything up. I can’t give you detailed examples of how to do that, because each charge controller is different. I can explain the basics of getting this system working.

1. Take out charge controller and read instructions.
2. You will notice that there are inputs for the solar panel, battery and the object you want to power.
3. Each object needs to have one positive connection and one negative. You’ll need to remove a 1” section of coating around the wire to make the connections, then push them into the charge controller. To secure these wires, screw them down.
4. Once all the connections are made, the challenging part is over!
5. Drive a ground rod 5+ feet into the ground and clip the green cord from your energizer to it.
6. Connect the red alligator clip to your polybraid.
7. Turn your energizer on and test it using a fence tester, or your hand. You will feel it! Don’t say I didn’t warn you! **Tip:** take a blade of grass, place the tip on the energized polybraid, while holding the grass, move your fingers closer to the polybraid keeping the grass in contact with the wire, you will feel a slight pulse if its electrified or “hot.”

This is a homemade system that I put together because I’m stubborn and I like to do things on my own. However, many companies now make high quality mobile fence chargers, that have a battery and solar panel all in one unit. They are more lightweight, probably will cost around the same and honestly are a lot easier to use. I wanted to mention my homemade system because you might have these things laying around. You can go [watch this video](https://www.AgriculturalInsights.com) I’ve made on my portable fencing system.

The last thing I want to mention in this section is be sure to have fun. You are going to make mistakes and shock yourself, believe me. I’ve been shocked so bad I don’t even want to tell you the story! Here is a tip, don’t touch the fence while you are standing in water, it hurts. If you are careful and have a positive attitude you will be well on your way to proper grazing management. Don’t be afraid to
try new things, and be patient while you learn how to easily setup and take down fence, it takes practice. In the next section I’d like to talk about fertilizer.
Many people believe that fertilizer is essential to keep grass growing year after year. They are correct. However the big difference is the type of fertilizer. I will show you how to naturally fertilize your pastures multiple times a year, for free, using your livestock. Petroleum-based fertilizers are unnecessary and expensive. Any type of fertilizer that you have to buy is unnecessary, unless it’s hay. The more you use fertilizer the more dependent you become on them. It’s similar to a drug addition because your pastures will start to fall apart if you don’t fertilize. So what do you do? Go buy more fertilizer. If this is you, I’m not trying to insult you. I’m here to show you a better and free way of adding fertility to your pastures. Industrial fertilizers are a bad idea because they:

✓ Require you to spend money
✓ Require equipment to apply
✓ Kill soil life
✓ Increase your dependency on them
✓ Pollute ground water, creeks, rivers and oceans
✓ Decrease biodiversity
✓ Kill wildlife

As you can see, the downsides of fertilizer use are serious. It’s just not worth it. In the next section I will talk about monitoring your grass so you know how much fertilizer or organic matter you’ve applied to your pastures. Lets get started.
Monitoring Grass

The first thing I’d like to talk about in this section is litter. What is litter? Litter is what will feed your soil life and add fertility to your pastures. More specifically it is organic matter, mostly in the form of trampled grass that is physically placed on the ground. Once grass has been trampled, or broken, it’s basically Carbon. This Carbon is the food source for worms and many other microorganisms that live in the soil. Worm castings or “worm poop” are very high in nitrogen and have a pH of 7. Litter can be placed on the ground by grazing livestock a high densities. Because there are so many cattle closely grazing together, a large portion of the grass is trampled into the ground by their hooves. The reason for placing litter on the ground is just like mulching your garden. It cuts down on weeds, retains moisture and adds fertility to the soil. Ian Mitchell-Innes likes to say that: “Placing litter on the ground will pay you back by a factor of 10.” Using his example, if you placed one ton of litter on the ground in a certain area, it will produce 10 tons of grass for you in the future. Litter is essential if you want to keep your pasture/range healthy! The benefits of placing litter on the ground are:

✓ Keeps the soil covered
✓ Helps retain moisture in the soil
✓ Provides a food source for soil microbes and critters
✓ Sequesters Carbon
✓ Provides drought resistance
✓ Builds organic matter
✓ Water can infiltrate into the soil easier
✓ Reduces erosion caused by wind and water
✓ Extends growing season in both spring and fall (see pictures below)
✓ Provides “flood insurance”
✓ Increases the amount of livestock you can run, AKA increased stocking rate
✓ Enables you to grow more grass in the future
✓ Heals the water cycle
✓ Heals the mineral cycle

Litter covering the soil
I could go on and on about the benefits of placing more litter on the ground but let's have a look at some examples of what litter looks like. These photos (above & left) were taken at Greg Judy’s farm in the winter. Notice the green coming up, in February 2012. You should also take note that **you can’t see any bare soil.**

**Grazing Tall**

Now that you’ve seen real world examples of what litter looks like, you might be saying to yourself “That’s great, but I can’t waste any grass! I can barely feed my own livestock.” In order to grow more grass you need to let it get taller, then graze it. In order to do that, you might need to use supplemental feed (hay) for the first year while your grass gets tall. We call this **grazing tall.** Grazing tall has many benefits. Some of them are:

✓ Provides shade for the soil
✓ Retains moisture
✓ Grass roots tap deeper into the soil to get access to more water and they bring up minerals
✓ Act as very small windbreaks
✓ Provides grasses the opportunity to go to seed. No more buying seed!
✓ When grass plants go to seed, there is a lot of energy in the seed heads - *leads to increased animal performance*
✓ Gives you the opportunity to trample grass onto the ground to feed the soil and enough for your livestock
✓ There is more energy (hydrogen) in tall grass plants
✓ Tall grass will naturally out compete weeds and over time will reduce or eliminate weeds

As you can see the benefits of having tall grass are many. Grazing tall grass will give a boost to your land, livestock, soil and wildlife. Oh, not to mention your wallet. It’s a no brainer.
Now let’s take a look at the difference between tall grass plants, short grass plants and their root systems.

*Tall Grass Plant*

*Short, Medium and Tall Grass Plants*

*Photos: Christine Jones*
As you can see, taller grass plants have a deeper and more intricate root system. The tall grass plant above is of an average size. Imagine what the root system would look like on a four foot tall grass plant. Now, imagine if you had your entire farm/ranch covered in plants of this size. That’s a lot of grass! Not to mention the root systems of all those plants. When livestock graze or trample these plants, the root system of those plants partially “dies off.” This might sound like a bad thing, but in reality is one of the best things you can do. Let’s take a look at an example.

*Grazed Plant and Growing Plant*

Looking at the picture above, imagine that the plant on the left was grazed by livestock. The plant on the right hasn’t been grazed. The root system of the plant on the left has been trimmed, or experienced “die off.” All of that dead root material will now be broken down by the soil life. They will turn it into organic matter! This will create a lighter, more fluffy soil that supports life and easily absorbs and holds water. Now you’ve learned about two ways to build organic matter in your soils, by *trampling litter* onto the ground, and *grazing tall* grass plants. However, please take note that it’s not desirable to graze grass plants as low as you can so more of the roots can die off to create more organic matter. The taller
the grass plant the better. Now I’d like to move on to a new subject, hay. More specifically how to feed less of it.

How to Feed Less Hay

Feeding less hay is often a dream many farmers and ranchers have. Truth be told it’s not easy, but it’s simple. There is a difference. If you want to feed less hay you are going to need to:

✓ Grow more grass - you learned how to do this by placing litter on the ground
✓ Graze tall
✓ Dramatically improve livestock management
✓ Use the “1/3 rule” - try to graze the top 1/3 of the plant, and leave the rest standing or trampled
✓ Don’t allow cattle to overgraze grass
✓ Allow an adequate recovery period for grass to regrow
✓ Build up a winter stockpile

How can you do all of the above? Do you remember the 1/3 rule mentioned earlier? When grazing tall your goal is to only take, at most, 1/3 of the grass plant. In order to do that, you need to monitor your grass before, during and after livestock grazing. This doesn’t mean you have to sit out in the pasture all day, although that would be great! You can assess the amount of grass your livestock ate before you move them to their next paddock. If they ate more than 1/3 of the grass plant, give a larger area. If you can’t even tell they grazed, consider reducing the size of the next paddock. I think a picture can illustrate this point.
The winter stockpile can be grazed, you guessed it, during the winter! Livestock will salivate at the chance to eat stockpiled grass. They prefer it over hay. While you are implementing these ideas, you can use your winter stockpile to supplement hay feeding. You will still create paddocks during the winter, just like you would during the growing season. The most effective way to feed hay is by unrolling it on the ground. To do this you will need to buy round bales. You are doing two things when you unroll hay on the

*Using the 1/3 rule, you could get 4 grazing sessions out of each paddock*
ground. Feeding the livestock and the soil life. You are also placing more litter on the ground, which will
grow you more grass in the future. Remember, you are not “wasting” his hay. Think of it as investing in
your land. The winter stockpile can also be used as an emergency drought reserve. Due to proper
grazing management, you basically have an insurance policy should a drought occur. Consider
destocking or grazing your winter stockpile during a drought. This can be the difference between a taking
home a profit or losing money.

You may now be thinking to yourself, “Ok I understand all of this so far. However, didn’t you tell me
to trample litter onto the ground? Where will all my grass plants go?” These are great questions.
Trampling litter on the ground will feed the soil, retain moisture and build organic matter. Because of this,
you will grow more grass. If you plan your grazing correctly, you won’t need to comeback to an area
you’ve grazed for 60,90,120 or even 365 days. This is all dependent on your climate. The grass needs to fully recovered before you can graze it again. How do you know if your grass is fully recovered?

Recovery Period

In order to graze tall, feed less hay and increase animal performance you need to allow the grass
an adequate recovery period. As you’ve already learned, when grass is grazed or trampled, parts of the
roots die off. When this occurs the grass plant is putting energy into growing more roots. Once the roots
have recovered, the grass can then send up leaves and eventually seed heads. When you see a seed
head, the grass is mature and ready for grazing. However, an easy way to tell if a grass plant is fully
recovered is by finding 4 leaves on the plant. Another indication is the tips of the leaves will begin to
turn brown. When you see brown tips, 4 leaves or seed heads, the grass is recovered and safe to graze.

Now that you know how to monitor your grass, we can move on to the next section. Monitoring for
animal performance.
Monitoring Animal Performance

While I just covered the importance on monitoring your grass, I want to note that monitoring for animal performance is equally important, if not more important. I’m assuming that your livestock are what pay the bills and put food on the table for you and your family. If you are not a serious farmer/rancher, you should pay more attention to how your livestock are performing. If you only raise a few animals, losing one could be catastrophic.

Most people can tell if an animal is sick. The signs are obvious. Lethargy, weakness and not eating are common examples. This section is not to address illness. Monitoring for animal performance is about keeping your animals as healthy as possible year-round. If you monitor effectively, you can prevent most illness, but not all.

You can monitor animal performance in many ways. I’m going to talk about three. If you effectively monitor and make adjustments according to these three things, you won’t have many problems. They are:
- Gut Fill
- Manure Quality
- pH Level

Gut Fill

Let’s start with monitoring gut fill. When cattle have a full gut, that means they’ve had enough to eat. When cattle have had enough to eat, they are less likely to have health and fertility problems. If you want to determine how much your cattle have had to eat, you need to look here:
When monitoring for gut fill, you need to look on the left side of the animal. Imagine you are riding it like a horse (wouldn't that be fun!), where your left leg would be is the side you need to be monitoring. Look just ahead of the “hooks” on your cattle. Your goal is to always, even in the winter, have the gut fill of all your cattle flush or slightly bulging. Proper gut fill not only enables the cow to produce high quality milk/beef, but ensures that you will not have any fertility or health problems down the road. If your cattle are limited for just five days, your chances of running into problems increase dramatically! Using the “gut fill technique” is an easy and effective way to determine if your cattle are getting proper nutrition. Try implementing this technique and you and your cattle will be happier. It doesn’t have to be bulging outward, but it sure is nice when you see that!

An easy way to monitor gut fill is by placing yourself on the left side of the cattle and they move into a new paddock. Just glance at a few of them as they pass by, and make a mental note of their gut fill. According to this information, you can adjust the paddock size, or the amount of hay you are feeding. Easy right? Now let’s move on to monitoring manure quality.

Manure Quality

This is where the fun really begins! After you have looked at the gut fill on your cattle, it’s time to observe their manure. A good manure pat should only be a few inches high, and have a nice pond in it. It shouldn’t be fibrous and tall. It also should not be runny. If the manure is too runny, the cow needs more roughage. This is common in the spring. Lush spring grass if full of protein! Try putting out some dry hay for them. This will fix the problem. Wait 12-24 hours and reassess their manure. Now, to the other extreme. If their manure is piling up and fibrous it’s an indication of too much roughage. Your cattle need more energy. One way to remedy this is to move your cattle through the paddocks faster, thus giving them more plant tips, which contain more energy (hydrogen). It’s common for your cattle to have cellulosic manure when you are feeding hay. One way to combat this is to give them stockpiled grass in the winter, along with hay. Not only will this enable them to have quality manure, but it will also significantly reduce your feed bill! If you live in a climate where, during the winter you have to feed hay,
like the pacific northwest or the northern mid-west, it will be hard to avoid manure that is cellulosic. Don’t concern yourself too much with it, and apply this principle during the growing season. If you are made of money then you have the option of feeding haylage or silage to get their manure pats to the desired consistency during the dormant season. Just ensure that your cattle are getting enough to eat (gut fill). To recap, the manure should be a few inches high, have a nice pond in it, and be the consistency of pumpkin pie. Take your boot and smear a few manure pats to determine consistency. You can also use your finger if you are feeling particularly courageous. See the picture below for the perfect manure pat.

*The Perfect Manure Pat*
Testing Urine pH

At the end of my internship with Greg Judy, there was a grazing school at his place, Green Pastures Farm. Greg was there and gave several presentations and pasture walks. Ian Mitchell-Innes was the “featured speaker”. In addition to these already great minds, Mark Bader was there. However, not too many people know about Mark Bader, but they should. He gave a few hour long presentations on the biology of cattle. He is a really, really smart guy. You can listen to my interview with Mark. So, what you are about to learn from me, actually came from Mark Bader.

The rumen in a cow needs to be the correct pH, so the micro-flora can flourish. The pH is determined by the protein to energy ratio. This is determined by the cow’s diet. The ideal pH level is 7. According to Mark; “Grasses and legumes contain high amounts of protein and insufficient amounts of energy to balance the ration making an animal with poor fill, poor health, and poor breeding”. To offset this excess protein, you have options. First, you can feed dry grass hay. This roughage will dilute the excess protein taken in by the cow, and will result in firmer manure piles, and a pH closer to 7. Your next option would be to feed grain. I’m not going to feed any of my animals grain, so I won’t go into detail about that. Your last option is to feed a supplement. A supplement of fermented grain, which will contain alcohol, amino acids and fatty acids. This will promote proper rumen function. These usually come in the form of a “lick tub”. Be sure that you are spending your money on a supplement that contains all of the ingredients I mentioned.
Now you may be asking yourself, how do I check for proper rumen pH? Easily. You obtain some pH testing strips from your local pharmacy or online. I would recommend increments of 1.0, so you can really get an accurate measurement of pH. After you’ve obtained pH testing strips, you go out to your cattle and wait for them to urinate. Take a urine sample. It’s best to find a drop of urine that has not been in contact with the soil. Find a drop on a blade of grass. Now, you will have an accurate pH reading. I like to get at least 3 different samples from 3 different animals. If your pH is above 8, your cattle are getting too much protein, and try one of the solutions mentioned above. Thank you Mark Bader for teaching me this valuable info!
Advanced Techniques

I’ll be covering three advanced techniques you can implement. They are:
✓ Inclusion Zones
✓ High Density Grazing
✓ Frequent Moves

Inclusion Zones

What the heck in an “Inclusion Zone?” Well, it's a nifty way to increase the amount of litter you trample on the ground with your livestock. You could do this with any livestock, however cattle will be the most effective due to their weight and size but never underestimate sheep!

I first heard about an inclusion zone from Greg Judy and Ian Mitchell-Innes. They are practicing high-density mob grazing. An Inclusion Zone is a small area of pasture where you "park" your livestock for a period of time. During this time they are expected to basically do one thing. Trample and foul the ground. You will be bunching them up relatively tightly, overnight is best, and your goal is to trample as much litter onto the ground as you can. They will also impact the ground severely with their hooves, and add their urine and manure in that area too. This is a good thing to do because:

✓ Increase the amount of soil that is covered by litter
✓ Increase the kinetic energy due to hoof action
✓ Concentrate the urine and manure to a small area
✓ Accustom your cattle to being handled regularly with limited spacing

All of these things will increase biological activity in the soil. The kinetic energy due to hoof action will "wake up" or stimulate soil microbes. The litter protecting the soil will keep it shaded, moist and
provide a hospitable environment for soil life. The urine and manure will bring moisture and fertility to the soil. Many of the microbes found in cattle manure are identical to those found in the soil. **There is a symbiotic relationship between large herds of herbivores and grasslands.** Without one, you don’t have the other.

An example of an inclusion zone might look something like this:
Here are some before and after pictures of an inclusion zone we did at Greg Judy’s farm.

Before

After

Here is the takeaway for Inclusion Zones:

✓ "Park" your livestock inside the inclusion zone for **8-10 hours**
✓ "Parking" them overnight is best, they don't need water
✓ Allow the inclusion zone **adequate time to recover** - this is very important, depending on your environment, this could be 90 days or 365 days
✓ Take before and after pictures, mark the inclusion zone site, and return when fully recovered and compare this site to surrounding areas

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**High Density Grazing**

High density grazing is a technique you can use to mimic the large herds of herbivores found in grassland ecosystems around the world. Predators like lions and wolves are common in these areas. Over thousands of years, herbivores learned that in order to survive they had to stay close together. It became natural for them to stay in herds. The fact that you can go anywhere in the United States and see cattle miles apart from one another is unnatural. The closer together cattle are the better.

When cattle are grazing in close quarters they trample more litter on the ground. Their manure, saliva and urine are also concentrated on a relatively small area of land. The cattle are also unable to be more selective for the types of grasses they are eating. This might seem like a bad thing, but it’s actually beneficial. Due to limited grass selection the livestock will eat almost anything. They are more competitive with each other, and they know when they are moved into a new paddock that they need to eat and eat quickly. Consequently your finishing animals will put on more weight and other animals classes will benefit by having access to an adequate amount of forage.

We calculate high density grazing in **pounds per acre**. To find out how many pounds per acre of animals you have grazing in a paddock you need to do some math. Lets say you have 200 animal units. These animal units are in a paddock that is 2 acres. The average weight for the 200 animal units is 900lbs (you can estimate this). You would then multiply 200 (animal units) by 900 (pounds) to get 180,000lbs. Now divide 180,000 by 2, because they are in a 2 acre paddock. The number you get is 90,000lbs. That means that you are grazing at a density of 90,000lbs per acre. This is a good starting point, try it!
Frequent Moves

High density grazing and frequent moves to new paddocks go hand-in-hand. You can implement each technique independently, but they won’t be as effective and you can run into problems. What are frequent moves and how can you implement them?

Frequent moves are just that, moving your livestock to new grass rapidly. How often? As frequently as every twenty minutes to once an hour or twice a day. Quality of life and access to labor are factors that you need to consider before you implement this technique. Setting up and taking down temporary fence is a lot of work when you are doing it every twenty. My recommendation to you is try to move your livestock twice a day. Once in the morning and once in the evening. When you are comfortable with this, you can move them as often as you are comfortable.

The main purpose of this grazing practice is to increase competition among livestock, concentrate urine and manure, and trample more litter onto the soil surface. The high density and frequent moves of livestock stimulate the soil microbes and once the grass has an adequate recovery period you will see some amazing regrowth.
Conclusion

Congratulations, you made it to the end! I hope you enjoyed the 21st Century Grazing Management eBook. I’m confident that you now posses some new tools and techniques that can help you become a better grazing manager. Please remember that the results from implementing these tools and techniques don’t come overnight. If you haven’t been managing your livestock’s grazing habits then be patient. The results after one year will be motivating and after year three you will be stunned at the how much grass you can grow!

For support and to make connections with other folks like yourself, head over to Agricultural Insights. Remember to follow me on Twitter (@AgInsights) and “like” the Agricultural Insights Facebook Page.
Thank you for reading my FREE eBook. I’ve recently written a greatly expanded and updated version of this eBook, called “The Grazing Book.” It’s 140 pages and packed with new information and visuals to take the concepts in this free version to the next level. I do also want to mention that my opinion has changed on many topics covered in this book and the newest information can be found in “The Grazing Book.”

You can purchase The Grazing Book by going here: http://agriculturalinsights.com/tgb2

Thank you,

Chris Stelzer
http://www.agriculturalinsights.com
Thank you so much for taking the time to read my eBook. I hope you enjoyed it as much as I did writing it. The only way I could write this eBook is because of you. Without you, Agricultural Insights would not exist!

I appreciate you taking time out of your day to read this eBook. If you have some extra time please go to Agricultural Insights and let me know what you think about it. If you would like to contact me in private, please email me: Chris@AgriculturalInsights.com. I read every single comment and email.

Thank you so much and I look forward to connecting with you!
Resources

Here are some resources that I highly recommend:

No Risk Ranching by Greg Judy

Comeback Farms by Greg Judy

Holistic Management by Allan Savory, Jody Butterfield and Sam Bingham

Moving ‘Em by Burt Smith

Power Flex Fence Company - Permanent and Portable Electric Fencing

Free Choice Enterprises - Mark Bader’s Free Choice Mineral Program