

# Plotting Pasture Progress

Set up a system to benchmark and track improvements in soil and pasture health.

Bare ground often offers significant opportunity to increase grazing area within existing pastures. In fact, Jim Johnson, Noble Research Institute product delivery manager, says it is common to find 30% bare ground in pastures.

“If you’re able to work toward management principles that will help cover that 30%, then you just earned 30% more acres to operate on for free,” Johnson says. He adds that most producers don’t realize they’re giving up so much production.

The good news is that you can reclaim bare-ground acres by putting a priority on soil health and using regenerative grazing. It starts with knowing where things stand currently and where you want to go. That’s why Johnson recommends adding a simple, five-minute task to your spring to-do list: setting up monitoring sites or transects to establish a consistent location to observe and measure your land management progress.

A monitoring transect is a line between two marked points, along which you measure or take samples up and down the length of a tape measure stretched between the points. Marking a single-point monitoring location will also work. You may also want to add a grazing enclosure, a small, fenced area inside a grazing unit that livestock cannot access (see *Five Ways to Use a Simple Grazing Enclosure*).

## Where and when to monitor

Whether you set up a transect or stationary point, spring is an ideal time to establish the site, Johnson says.

The most important part is selecting the site, which ideally represents the ranch or that particular pasture. More than one location might be required. For instance, if you have upland and bottom

ground or introduced and native forages or different soil types, you may want to select monitoring locations that represent those differences.

Make sure the location you select is not impacted by gates, fence lines, water tanks, livestock trails or other factors that would influence the area you’re monitoring. Consider other non-management impacts on the location. As an example, does it intermittently flood or have a pipeline running nearby?

“The key is to find a location where your management is the primary factor that has the ability to impact that land,” Johnson says.

Start by making some base observations and establish the frequency you’d like to monitor the location. Some producers want to record observations at the height of the cool growing season and the height of the warm growing season. Others may choose quarterly monitoring, with one for each season. Johnson says he’s satisfied with annual observations, “because a lot of these things we’re monitoring change very slowly.”

Set a reminder on your phone or note the monitoring dates on your calendar to keep you on track.

## What and how to monitor

Decide how you want to mark your monitoring location. You may set a t-post, drop a GPS pin on your smartphone or use a landmark as your reference point, such as starting at the gate and stepping off 100 paces due north to arrive at your monitoring point.

Determine what you want to monitor at each location. The possibilities are endless, but Johnson suggests keeping it realistic and practical as to how much data you’ll collect and put to good use.

Measuring bare ground is an easy place to start, and it’s one pasture characteristic you might be able to measurably impact within one growing season. A simple way to measure bare ground is the step method. Take either 10 or 100 steps (these numbers make the math easy). For each step, record if your foot is on covered soil or bare ground. Then, some simple math gives you the percentage of bare ground.

Other common measurements to make and record include plant species diversity, soil test results from soil samples, soil compaction or soil structure, soil color, animal diversity, root depth and brush encroachment.

Several smartphone apps can help identify plants at your monitoring location or evaluate soil coverage. Even just using a shovel to look at soil and root characteristics is a good place to start. For larger landscape monitoring,

Photo courtesy of Rob Mattson Noble Research Institute



Fencing off a small grazing enclosure in the spring can provide insights into forage health and potential.

such as evaluating brush encroachment over time, consider standing at your monitoring point and taking a photo toward the horizon in each cardinal direction or capturing drone footage or satellite imagery from the same height and location each time.

Next, determine your recording method. It may be simply a notebook where you record observations and insert data from testing results. Some ranchers find recording data points or notes on a calendar or day planner convenient, while others take photos on their cellphone to file into digital folders or print them out to insert into paper records.

### Using the information

Whatever you choose to monitor, use the information you gather as a place to start asking yourself, “If my overall goal is to improve my resources, how can I follow the soil health principles to get there?”

The measurements listed above may be observations otherwise easily overlooked during the daily ranching rush and to-do list.

“The fact that we’re out there monitoring, observing, intentionally thinking about these things is so powerful,” Johnson says. “It doesn’t have to be an overly scientific process. Whatever you choose to do has to be simple and repeatable, something you’ll stick with and actually do.”

The monitoring data becomes part of your land management legacy, leaving a record from which future generations can learn. In a business where many factors are beyond your control, monitoring may also add a sense of accomplishment as you branch out and try new management techniques.

“There is that little dopamine hit that comes with achieving a goal, having it in black and white on paper that says, ‘Here’s where we started, and here’s where we’ve gone, and I know for sure I’m making progress,’” Johnson says. “That encourages us to keep going.” **HW**

**Editor’s Note:** This is part of a continuing series of articles about regenerative ranching from Noble Research Institute, long trusted by beef cattle producers for supporting the industry with research, education and consultation. Follow the series in future issues of *Hereford World* and *Baldy Advantage*, as well as in special *1881* podcasts, at [Hereford.org](http://Hereford.org). Additional regenerative resources and past articles in the series are also at [Noble.org](http://Noble.org).

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## Five Ways to Use a Simple Grazing Enclosure

A grazing enclosure is perhaps the simplest method to help see the potential of our land’s production, according to Will Moseley, Noble Research Institute product delivery manager, and Steve Swaffar, Noble regenerative ranching advisor. They explain a grazing enclosure is a small, fenced area inside a grazing unit that livestock cannot access, which provides the rancher a direct view of what and how much was grazed outside of the enclosure.

“We get in our routine, we overlook things or don’t see what’s really out there,” Moseley says. “But once we stop and put up an enclosure and take a fresh look at what’s going on, we can learn a lot.”

He recommends fencing off an area between 3 feet by 3 feet and 6 feet by 6 feet. Build it with whatever you have available — four cattle panels work well or try a 16-foot hog panel bent into a square or circle, anchored by a t-post. Be sure it’s tall enough that your cattle can’t access the forage above, below or through the fencing. Sunlight also needs to penetrate the enclosure to allow photosynthesis.

Select a location in your pasture that is a good representation of the forage growing there — not the best, but not the worst — and near a regularly trafficked area. Avoid actual pathways to the water tank or gates or close to a fence line and set up the enclosure before you graze the surrounding pasture or paddock.

### Putting your enclosure to work

Swaffar and Moseley offer five ways to use an enclosure as a powerful assessment of your grazing potential.

**Potential forage production and animal consumption** — At the end of the grazing event, measure the amount of forage standing in the enclosure against what’s left outside to quickly assess what your animals consumed. This is the biggest reason for an enclosure, according to Swaffar: “You really want to know what the potential forage production was in that pasture and if you actually took the best advantage of it.”

**What your livestock actually eat** — Count and note the number and types of plant species within the grazing enclosure and compare that observation with what you see outside the enclosure after a grazing event. “If you’re seeing certain plants inside the enclosure not occurring outside, that’s probably telling you that your animals are selecting that species. They’re grazing it out,” Moseley says. “You may want to change when you graze that paddock or give it more recovery time.”

**Regrowth potential in grazing versus haying** — If one of your goals is to reduce fuel inputs and tractor time by allowing livestock to harvest more of what you grow versus baling it, a grazing enclosure can quantify varying regrowth rates. You could start with two enclosures and cut one down to a mowed height, then compare plant growth and recovery among three scenarios: no harvest, livestock harvest and mechanical harvest.

**Compare the grazing habits of different livestock** — Use an enclosure to help observe the differences in grazing patterns and preferences between species and classes of livestock in similar pasture conditions.

**Understand the role wildlife pressure plays in pasture potential** — If you’re having trouble growing a cover crop or reestablishing native grasses in a pasture, a grazing enclosure helps answer whether it failed because the seeds didn’t germinate or wildlife grazed it out before you had a chance to see it flourish.

### Keeping track of your observations

In each of these scenarios, record how many different species you see inside and outside the enclosure. Measure how much forage is growing inside the enclosure, either by visual assessment or by clipping and weighing, to know the potential. Keep notes and take photos of the enclosure from the same spot before, during and after the grazing event.

“What’s really fun about this is that once you set one up, you start to get curious and excited about it,” Swaffar says. “That’s why it’s such a powerful observational tool.” **HW**