



Stewardship

Providing Leadership for the stewardship of rangelands based on sound ecological principles

Vol. 2, No. 3 – June 2014



(Photo by Jim Thorpe)

Inside this Issue

- 2 A Word from the President: SRM recognition of Out on the Land
- 2 Step by Step Method to Visually Assess Cow Body Condition Score (BCS) for the Novice
- 5 Monitoring Range Cattle Body Condition: It's "In Your Pocket"

The Editor's Corner

This issue of *Stewardship* provides a couple of short articles featuring simple "hands on" techniques for tracking cow body conditions. It is a relatively short issue, and is hopefully something you can print out and stick in your pocket to show your neighbor (or client) the type of information that is available in *Stewardship* and other Society for Range Management (SRM) publications, *Rangelands*, and *Rangeland Ecology and Management (REM)*, as well as the SRM website, www.rangelands.org.

Along these lines I am still waiting for your articles. Don't be shy. They only need to be a couple pages long (maximum) with a couple of good pictures or figures. You can send draft versions and we will offer editorial assistance and do the rest. There are a lot of good stories that need to be told. Summer is coming on and with summer comes various SRM sponsored rangeland workshops and tours. Take a few minutes and tell us about them. A good tour often has only 20-40 people but there are many more people that may be interested in the information.

Send me your thoughts and what you want to see in *Stewardship*.

Gary Frasier
 Editor, SRM *Stewardship*
stewardship@rangelands.org

Society for Range Management

6901 S. Pierce St. Suite 225

Littleton, CO 80128

(303) 986-3309

A Word from the President



The Society for Range Management proudly recognized Larry Butler and his television show *Out on the Land* for the outstanding work in promoting sound rangeland stewardship. Filming is well underway for the fourth season and many shows feature rangeland topics. More than a million people have watched *Out on the Land* and the audience has grown each season. Larry is doing an amazing job telling folks about rangeland stewardship. Watch for the SRM Trail Boss and recognition at the beginning of each episode.

Thanks, Larry for spreading the good word!

Out on the Land Host Dr. Larry Butler with SRM President Jenny Pluhar

Don't forget to tune into *Stewardship's* sponsor program *Out on the Land* hosted by Larry Butler. Larry presents a lot of good information for managing our natural resources. Watch *Out on the Land* Tuesdays on RFD-TV, 7pm ET, 6pm CT, 5pm MT, and 4pm PT. Check your local listings for RFD channel information. Past episodes can also be seen at www.outontheland.com/category/episodes.

Contact Larry at www.outontheland.com if you have an idea for a show feature.

Step by Step Method to Visually Assess Cow Body Condition Score (BCS) for the Novice

*Dr. Doug Tolleson and Dr. Dave Schafer
University of Arizona, V Bar V Ranch Experiment Station*

For those in the range profession who did not grow up around livestock, visually determining animal body condition can be intimidating. It is not that difficult to tell a fat cow from a skinny one, but when the cowboys start talking about that black baldy being a 5 and the motley faced brindles is a 4; you may or may not see what they are seeing. Body condition is really just the amount of fat and thus, energy storage. So it is a very important indicator of the overall health and well-being of herbivores, wild and domestic. Body condition is often related to reproductive performance. Thin cows do not breed back as effectively as cows in better condition.

Calves from thin cows have less immunoglobulins than calves from dams in better shape. Body condition is also an indicator of range conditions and management. But I still have not told you how to tell the difference between a 4 and a 5, or even what those numbers mean?

Figure 1. Thin (top) and Fat (bottom) Body Condition Cows



In the US, we use a 1 to 9 scale for BCS, based on numerical amounts of body fat. Generally BCS 1 to 3 are thin, 4 to 6 are moderate, and 7 to 9 are fat (**Figure 1**). As I said earlier, most of us will recognize the difference between BCS 3 versus 7, but we may not be able to assign a score. No problem, it just takes practice and fortunately there are quite a few good extension publications and photo guides to help you. If you Google “cow body condition score” for instance you will get about 200,000 results. There are even “apps for that”.

So, if there is a lot of information out there and it is so easy to get, why am I writing this article?

Good question. The answer is that I wanted to share a few quick and easy pointers for the non-cowboys among us; sort of a “BCS in 3 easy steps” using a graph and terminology developed by the late Dr. Jerry Stuth specifically for novices back when he was doing a lot of NUTBAL (Nutrition Balance Analyzer) clinics (**Figure 2**). I’ve simplified it just a bit but here we go; let’s look at Table 1.

Figure 2. BCS 4 (top), BCS 5 (middle) and BCS 6 (bottom) Cows

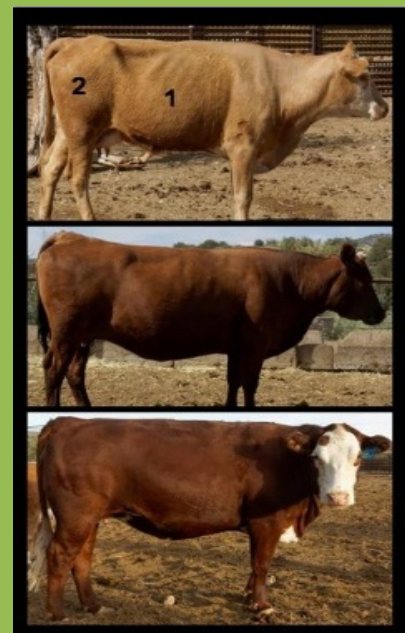


Table 1. Step by step method to visually assess cow body condition.

Step 1. Look at the cow's ribs (Figure 2).

If you can easily see the last 2 ribs the cow is \leq BCS 5, if you can't see ribs she is \geq BCS 5.

This is the "rib effect".

Step 2. Look just in front of the cow's tail along and below her backbone, in the area of the pelvis (Figure 2). This area will vary in overall indentation or fullness depending on fatness.

If the area has a flattened or shallow "U" shape the cow is \geq BCS 6. A slightly deeper "U" will be BCS 5, a deep "U" is 4, and a prominent "V" is \leq BCS 3.

This is the "U-V effect".

Step 3. From behind, look at the cow's backbone (Figure 3).

If the overall profile is flat she is \geq BCS 6, if there is a slight point along the backbone, i.e. like a teepee, she is BCS 5, if the point is prominent, she is \leq BCS 4.

This is the "T-P" effect.

Now of course there is a lot more to it than that. A given animal may have 2 out of 3 indicators that she is a "5" and one that says "4". Experienced cow people will probably get on me for not talking about short ribs, the brisket, etc., or age and breed differences; but if you don't know the difference between a Hereford and a heifer, this will get you started. In my experience, most of the biologically and economically important change in cow body condition occurs between scores of 4, 5, and 6. If you get good at consistently seeing those scores, you will be on your way to using BCS as a range and animal management tool.

Now if there was just some easy practical way to record that information...

Figure 3. BCS 4 (right), BCS 5 (middle) and BCS 6 (left) Cows.



Monitoring Range Cattle Body Condition: It's "In Your Pocket"

Doug Tolleson, University of Arizona, V Bar V Ranch Experiment Station

One of my favorite jobs is collecting *body condition scores* (BCS) on range cattle. These excursions are not only fun, they are an important part of our overall rangeland research and management program. Body condition is one of the key animal performance indicators used to evaluate grazing, stocking rate, or supplemental feeding decisions. Armed with little more than a Red Book*, a pencil, and knowledge of how to visually assess BCS, one can collect a great deal of management information relatively easily.

Body condition is both reflective of past nutrition and a predictor of future performance. Plotted throughout a production year, BCS provides a record of animal performance which can be interpreted in the context of precipitation, range improvements, or other management practices. Such information is obviously important for current management, but may be equally important to provide a historical record for future managers. Often, individual BCS is collected for an entire herd and used to sort them into feeding groups. Animals in lower BCS can be fed to improve condition without spending time and money feeding animals in adequate BCS. In extensive range management scenarios, such a practice may not always be practical. In this case, one can collect BCS on a subset of animals in the pasture to infer condition of the herd and inform grazing management. Practical experience indicates that for BCS in large (~500) to smaller (~50) herds, sampling from 10 to 25% of the animals respectively is adequate. Monthly sampling is usually frequent enough for cow/calf production, but more frequent observation may be called for during animal transitional periods such as calving, or environmental changes such as spring green-up or around the first frost.

Figure 1. Collection of cattle body condition scores (BCS) to illustrate distribution of BCS in the herd. Herd average = 5.2; approximately 20% of the herd is BCS 4 or less.

BCS	Field Observions	Count	%
3	IIII	4	7
4	IIII II	7	13
5	IIII IIII IIII IIII	22	41
6	IIII IIII IIII IIII	18	33
7	II	2	4
8	I	1	2
		54	100

If you record 50 BCS from a herd of 500 cows, sum and divide by 50, you will get a herd average. In extensive scenarios where a herd is the management unit instead of individual animals, this average may be all you can practically use.

Alternatively, **Figure 1** illustrates collection of BCS in single score categories using "tick marks" to illustrate the herd's BCS distribution. It is easy to see how many animals are below a performance threshold of BCS 4, for instance. You may not be able to separate and manage those animals differently, but you will at least

be able to plan for subsequent performance (e.g. breed-back, culling rate, etc...).

So, where does the “in your pocket” statement come in? I have noticed that some people out on the range have these little round bubble gum cans that fit in the shirt pocket or maybe the hip pocket of your blue jeans. It just so happens that you can make BCS charts that fit right into those cans

(**Figure 2**). They can be stored on the dash of the pickup until used for management decisions and record keeping. Your book keeper will love them... trust me, I'm a doctor. For information on “pocket” monitoring forms go to:

<https://cals.arizona.edu/vbarv/rangeprogram/content/pocket-range-and-animal-monitoring-forms>

**A pocket-sized record book that contains more than 100 pages to record calving activity, herd health, pasture usage and cattle inventory, plus a date book and notes/address section. The book also includes Beef Quality Assurance national guidelines and proper injection technique information.*

See more at: <http://www.beefusa.org/redbook.aspx#sthash.vVO25eul.dpuf>

Figure 2. Body condition scores recorded on “in your pocket” data sheets.



Photo's by Steve Moody, Yavapai County Master Gardeners.