

# The Fenceline

August 10, 2020

## Understanding your soil test report

*Matt Booher, VCE*

I wanted to provide some background on how the Virginia Tech soil analyses report nutrient levels. The “Lab Test Results” section shows the relative availability of nutrients numerically and if appropriate, as a rating. The rating may be interpreted as follows: L=Low, M=Medium, H=High, VH=Very High, DEF=Deficient, or SUFF=Sufficient, and sometimes a “+” or “-.” When soils test Low, plants almost always respond to fertilizer. When soils test Medium, plants sometimes respond to fertilizer and a moderate amount of fertilizer is typically recommended to maintain fertility. When soils test High to Very High, plants usually do not respond to fertilizer. Thinking about soil fertility and fertilizing in relation to this concept of yield response may help provide some clarity next time you look at a soil test report. For more information about interpreting soil test reports,

visit: [https://warren.ext.vt.edu/content/dam/warren\\_ext\\_vt\\_edu/files/soil\\_testing\\_files/Soil\\_test\\_notes\\_no1\\_452\\_701\\_pdf.pdf](https://warren.ext.vt.edu/content/dam/warren_ext_vt_edu/files/soil_testing_files/Soil_test_notes_no1_452_701_pdf.pdf)



## Forage seeding rates

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If you're like me, its nice to have a reminder of forage seeding rates close at hand. Here is a list compiled mainly from the Virginia Cooperative Extension *Agronomy Handbook*.

<b>Seeding rates when seeding alone</b>	
<b>Crop</b>	<b>Seeding rate (lbs./acre)</b>
Kentucky bluegrass	10-14
Smooth brome	12-16
Tall fescue	15-20
Matua brome	30-40
Orchardgrass	8-12
Reed canarygrass	12-14
Perennial ryegrass	20-30
Timothy	8-10
White/ladino clover	2-3
Red clover	8-10
Alfalfa	15-25
Turnip/radish/brassica hybrid	2
Annual ryegrass	20-30
Rape	4
Crimson Clover	20-30
	<b><i>For grain or mechanical harvest</i></b>
Cereal rye	84 (1.5 bu)
Wheat/triticale	150 (2.5 bu)
Spring oats	80 (2.5 bu)
Barley	120 (2.5 bu)
	<b><i>For grazing</i></b>
Cereal rye	112 (2 bu)
Wheat/triticale	180 (3 bu)
Spring oats	96 (3 bu)
Barley	144 (3 bu)

- Seeding rates are calculated using a "standard" desired final plant population. If you desire a heavier plant population, you may wish to be at the higher end of the seeding range listed.
- Seeding rates assume typical establishment losses of 10-20%. If you are seeding outside the optimum seeding window or if you have specific site challenges, you'll want to be at the higher end of the seeding range listed.

You may notice some of the seeding rates in the chart are significantly lower than what is being planted by many farmers in Virginia; some of that is in response to the marginal soils we sometimes deal with, but also with the challenges encountered in trying to no-till seed.

- If you are broadcasting seed, you should be at the higher end of the seeding range listed.
- When seeding in a mixture, the seeding rates listed should be cut in half for a 2-way mix, cut to 1/3 for a 3-way mix, etc.
- Factors like coated seed (e.g. clover, alfalfa), low germination, or fluffy seed (e.g. brome) will mean each pound contains less actual seed than the weight implies. Use the information on the seed tag to increase seeding rates accordingly.
- The seed of cereal grains varies greatly in size from year to year and from one source to another. The seeds/lb can be found on the seed tag and can be used to fine tune the seeding rate (ensuring you don't put down too much or too little seed). A good rule of thumb is to shoot for 1.25 million seeds/acre (or roughly 1.6 million seeds/acre if grazing) .

## **My Ideal Cow**

*John Benner, Animal Science Agent  
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I have read many articles and seen many presentations from esteemed industry experts on the subject of the "ideal" cow. Just as importantly, I have had conversations with producers on the subject. These experiences have helped to formulate the following thesis. I strove to address issues as they affect the commercial cattlemen, and the

commercial cow. Please overlook that I deliberately avoided the notable differences found between breeds and in various crossbred cows. Irrespective of breed and pedigree, here are a few traits I would include in my “ideal cow”.

1. **She gets bred early and calves early and weans a large calf.** Age of calf is typically the number one factor affecting weaning weight. If we are disciplined in breeding season length and culling open cows, we should have a herd of cows that fit this description. I remember a discussion I had with my Dad about what bull to select based on our herd data of 205 day adjusted weaning weights. “We don’t sell adjusted weaning weights, son.” Point taken, Dad.

2. **She has a calf every year for 9 to 10 years.** Industry and research articles argue that it takes up to 6 years (5 calves) for a cow to pay for the investment we made in her as a heifer, and for her yearly cow maintenance costs. Naturally, most heifers developed will not make this objective. If 40% to 60% of your herd is 6 years or older and has produced 1 live calf each year, I would consider this goal met. Cull the ornery, the opens, and the older cows that are twelve years and older that don’t look able to raise another calf. That being said, I am as guilty as the next producer for keeping a cow too long every once in a while. I just try to not make it a habit. It is also important to bring in new and improved genetics on a routine basis. A replacement rate of 20% is a good goal. Be prepared to expose double the number of heifers you need to accomplish this. For example, if you need 20 heifers to replace your cull cows, be prepared to expose 40. Keep the early-bred ones.

3. **She is phenotypically, genetically, and behavior type problem free.** She is sound on her feet and legs and has a problem free udder. She has a calf and claims it with no assistance or supervision. She does not have a wholly unacceptable disposition. The calf she raises weighs in the upper 1/2 to 1/3 of the calf crop (because it was born early, and she had the appropriate amount of milk).

**4. She weighs between 1100 and 1400 lbs and maintains her body condition throughout the production cycle on pasture and hay with minimal supplementation.** Feed is the greatest single expense for beef cattle operations, and feed costs along with reproduction are the number one factors determining profitability (excluding price of course). Larger cows eat more and cost more to maintain. Data from North Dakota State University, Texas A & M, Wyoming and Virginia Tech show that more moderate cows (1100-1300) wean a higher percentage of their body weight (40-50%), compared to heavier cows (1400-1500+; 35%) respectively.

Any comments? Did I leave anything out? I am sure that I did. It is hard to sum up a perfect animal in only 4 points. Feel free to drop me a line at [benner89@vt.edu](mailto:benner89@vt.edu).

Questions? Feel free to contact me.

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