

SOILS

‘Law of the Minimum’ prioritizes action

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Justus von Liebig’s Law of the Minimum is an agronomic theory that states yield is proportional to the amount of the most limiting nutrient – whichever

nutrient it may be. As a soils and crops consultant, it means I am going to tell you to collect and analyze soil samples so we can identify the limiting nutrients and recommend the appropriate fertilizers to correct those limitations. As Noble Foundation agricultural consultants have said many times, “unless you test, it’s just a guess.” But I want to encourage you to expand the Law of the Minimum to more than just soil fertility and include all facets of your operation.

Start by identifying the factors that have prevented you from fully reaching your goals. Once you list these limiting factors, rank them according to significance. Next, separate the items by those that you can control and those you cannot. Make plans to correct the most limiting factor that you can control first, then continue

through the list of items you can reasonably accomplish. The list may be long, so concentrate on those you can expect to complete in one year.

For example, if poor forage production is your most limiting factor, then identify why it is limiting. If it is because of low fertility or pH, then collecting good soil samples during the winter will allow you to develop a fertilizer program that meets your budget and goals before the growing season arrives. You may even be able to pre-book fertilizer for later delivery and lock in lower prices. If it is because of weed management issues, you can identify the most troublesome weeds and make plans to manage them before they cause problems next growing season. If the reason for the problem is herbicide application timing, identifying that now gives you the opportunity to get your equipment ready to go, find a reliable custom applicator or, if necessary, shop for equipment. It may be that production is limiting because the wrong forage species are present in the mix. Identifying that limitation early gives you the opportunity to

research what forages fit your system better and prepare to establish them at the correct time.

While we cannot control factors like weather, markets and input prices, we can develop strategies to manage their negative impacts. It is always a good idea to have three weather plans: one to take advantage of ideal weather conditions; one for a “normal” year; and one to limit the negative impacts of an adverse year. There are numerous risk management tools to reduce marketing and input price risks. The middle of winter is a good time to review those with your economic advisor and determine which ones fit your operation and goals.

The long and the short of this philosophical article is that December is a good time to take an honest look back at the previous year, determine your mistakes or limitations, and make plans to correct them for the next year. Do not expect to fix everything at once – concentrate on those items that will have the most positive impact during the coming year.

Have a wonderful holiday season and a happy, prosperous new year. ■