

If it Sounds too Good to Be True...

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

We all have heard that time honored saying, “If it sounds too good to be true, it probably is.” The saying has been around a long time and while it’s not always correct, it tends to be quite accurate when dealing with science and nature, especially crop production. We have seen the problem of “alternative products”, especially for crop nutrition for years. But every time we see a spike in input costs we see a whole new wave of these products come out of the woodwork or at least a new wave of marketing. Snake oil is still snake oil so keep your guard up!

It is important to keep a few basics in mind when you are reviewing the claims of “new” or “alternative” products. Crops (plants) still need nutrients in amounts ranging from fractions of an ounce per acre to hundreds of pounds per acre depending on the nutrient and the crop. The only “miracle” product that I know of, that works, is bacterial inoculants which make sure that legume crops (soybeans) have the proper bacteria living on their roots which can take nitrogen out of the air and make it plant available.

Be careful of products that you are applying at a gallon or two per acre that claim to replace hundreds of pounds nitrogen fertilizer in non-legume crops like corn, wheat and sorghum. A corn crop still needs about 1.6 pounds of nitrogen to produce every bushel of corn. If an alternative product seems to work one year, it’s likely because there was adequate residual nitrogen in the soil from previous crops. The second year you may not be quite so lucky as the previous year’s crop used up all the residual out of the soil.

Many of these products are liquid. Liquid fertilizers, at most, are going to weigh about 11 pounds per gallon. A typical liquid nitrogen product is going to be 28% nitrogen which means a gallon will have 3 pounds of nitrogen. A gallon or two of some alternative product is not going to replace 200 pounds of nitrogen. There are no magic elixirs that release nitrogen from the soil or cause the nitrogen that’s present in the soil to “work better”. Plants need nutrients in very specific chemical forms. It doesn’t matter if that nitrogen is coming from chemical fertilizer, left over nitrogen from a legume crop, manure or seaweed, it will have to go through certain processes in the soil before it can be plant available.

I’ve been talking mainly about nitrogen but the same holds for other nutrients including phosphorus, potassium, sulfur and all the micronutrients. All the nutrients the plants need simply have to be present in the soil at the concentrations needed for proper plant growth. There is no magical elixir that when applied at ounces or even a couple of gallons per acre are going to cure the problem.

You have to be cautious when reading the literature as well. Often the yield trials mentioned are not replicated. Non replicated trials do not allow you to perform analysis to make sure that yield differences are being caused by the product applied. Or they may pick one study where there was a significant yield improvement, but don’t mention the other 23 where there was no difference. If you are tempted to try a new product, only try it on a couple of acres and then talk with me about how to set up an in-field evaluation so you can really see if there is a difference (pretty sure there won’t be!) Ask for third party university test results. If all the research is being done by the company, or person, trying to sell it to you, be suspicious. And if you are still tempted, bring me the literature and let’s look into it deeper before you waste a bunch of your hard earned money!