

DON'T GET BITTEN BY SNAKE OILS!

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Each year about 75 new products appear on the market that are suppose to enhance crop production. About one quarter of these new materials are legitimate; however, most materials have marginal or no value. These materials that have minimal value are often referred to as snake oils or wonder products. These wonder products are seldom worthless – but provide very little value in relation to their cost. There are several categories of these products but the most common ones include: soil amendments, soil additives, supplemental organic materials, microbial inoculants, and growth regulators.

Soil amendments improve physical properties of soils. Soil additives replace or supplement conventional fertilizers. Supplemental organic materials increase levels and activities of soil organic matter. Microbial products increase numbers and activity of beneficial organisms already in the soil. Growth regulators stimulate plant growth processes. There are some legitimate products in the above categories. ...farmers have been applying nitrogen fixing bacteria to soils for years and successfully enhancing legume growth.

Examples of claims that have been attributed to snake oil products include:

- increased soil water holding capacity
- increased soil aeration
- increased nutrient holding capacity AND nutrient availability
- improved soil structure
- increased microbial populations and activity
- improved organic matter behavior
- increased water penetration
- increased seed germination and root growth
- increased water use efficiency
- decreased need for commercial fertilizers

It is actually very easy to develop and market a snake oil product. I could go out to a local gravel pit and obtain some basalt rock. This basalt contains high levels of iron and magnesium. I can crush the rock into gravel and sell it as a magnesium-iron fertilizer with nutrients in their natural form! Natural does not equate to plant available. I'll call my product FOOLS GOLD. After adding FOOLS GOLD to a soil I would have to wait several thousand years for the iron and magnesium to be transformed into forms that plant roots can take up. What I would sell would be a virtually worthless product...but similar to many other items on the market today. As an added bonus the gravel-sized material would improve aeration and drainage of my soil!

I often get calls about the value of adding humic and fulvic acid products to soils. Humic and fulvic acids do improve soil properties, enhance plant uptake of nutrients and contain some nutrients. Humic and fulvic acids do have some value. However, when you look at

the overall picture - the value of an application of a quart or two of humic and/or fulvic acids should be closely scrutinized. Humic and fulvic acids are components of soil organic matter. A typical soil in north-central Idaho already has about 2% organic matter in the surface foot of an acre of soil. Two percent organic matter works out to about 80,000 pounds of organic material per acre. The one or two quart application of humic acid basically has a miniscule impact on the soil compared to the 80,000 pounds already there!

Snake oils are usually marketed using testimonials by “successful” users instead of by data generated in legitimate scientific trials. I feel that if a product were that good – a small-time business owner would have sold the rights to their magnificent miracle product to a large company and be retired in some tropical paradise. Products with amazing results sold by a small company just don’t add up!

If you have the urge to try a product that you might suspect to be a snake oil - practice restraint or do your own experiment. You can try out a product on a small piece of land (3 acres) that you consider to have an average yield on your farm. Buy the product, apply it as directed – but do not tell the sales person where your experiment is on your land. A few days before harvest, have the product seller out to your farm and ask him or her to find where you applied the product. If the product is so good, it should be easy to find the location without help. If it cannot be found, the product simply did not do its job and consequently has very little or no value.