

The Regenerative Soil Primer

Resource Guide & Grower Results



Advancing Eco Agriculture

Helping growers make more money with regenerative agriculture since 2006.

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The Regenerative Soil Primer

Our unique system for rebuilding soil health and biological populations



The Regenerative Soil Primer is a simple, powerful program consisting of Rejuvenate™, Spectrum™, and SeaShield™ applied together as a soil application.

This program is meant to:

- Increase porosity and soil tilth
- Digest crop residue rapidly
- Improve organic matter
- Decrease chance of overwintering disease
- Boost microbial population
- Increase bioavailability of macro and micronutrients in the soil
- Build natural resistance to disease and insect pests



Kelly K's Winter Wheat in Lubbock, TX | 2020



Bacterial Food & Shelter

Rejuvenate™ is a blend of carbohydrates, enzyme cofactors, and humic substances designed to provide the commonly missing resources needed to support the bacterial populations which are the base of your soil's ecosystem. Rejuvenate ensures a successful inoculation event by getting microbes established in all manner of conditions.

Microbial Inoculant

Spectrum™ contains a multiple species blend of plant growth promoting rhizobacteria (PGPR) and other beneficial plant growth promoting microorganisms (PGPMs). This specially formulated soil inoculant enhances and restores beneficial soil microbe populations. to augment the natural mineralization processes that occur in healthy soils.

Fungal Food

SeaShield™ is a combination of biologically active organic compounds from fish, crab, and shrimp. SeaShield is an available source of nutrients for microbes and plants. The amino acid nitrogen supports the growth of beneficial fungal populations, which are often seriously lacking in farmed soils and contribute greatly to the fertility cycling of a crop.

How does it add value to your operation?

The Regenerative Soil Primer uses both native and inoculated microbes to digest crop residues, speed mineralization, and improve soil structure.

This program provides the food, shelter, bio-active catalysts, and enzyme cofactors required for a rapid and sustained microbial population increase.

After application, bacterial and fungal colonies grow and continue to release minerals, digest disease harboring crop residues and invigorate the microbial ecosystem, especially through dormant periods when microbes are least likely to be damaged by tillage, drought or chemical applications.

Decreased Nitrogen Use

Conversation with John Kempf and Dennis Paschovitz,
a canola grower in Saskatchewan, Canada



Increased Residue

Digestive



J: Dennis, can you tell us a little bit about what you did, treated and untreated?

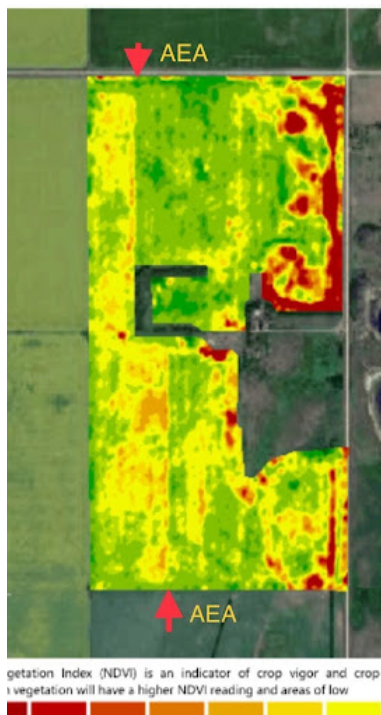
D: On the left is the way I conventionally farm with high inputs. I put 160 lbs of nitrogen on last fall and top dressed this spring with another 60, phosphorus around 50 lbs, 30 lbs of sulfur, and sprayed with fungicide. On the other side we used the AEA program. We put down 100 lbs of nitrogen in the fall, but no additional top dressing, so this has 60 lbs less nitrogen than the other side. As well, I did not put any fungicide on the right hand side. It looks quite healthy at this point.

J: It's obviously still too early to tell yield, but are there any observable plant differences at this point?

D: Yeah, one of the big things that a guy looks for is the color, the darker green the better. The AEA product side is a darker green, which is surprising because usually we use nitrogen to get it as dark green as we can. Where I put more nitrogen it's actually not quite as green which was a surprise to me. On the AEA side, if you look it's probably at least 8 to 10 in taller. It flowered longer, which will produce more buds and more yield. As well, I get NDVI reports every week and you can see a distinct difference on the NDVI between the two sides.

J: What do the differences look like on the NDVI?

D: You can see the distinct line in the color in the field. I do have a weigh wagon, I can weigh the two sides [at harvest] and find out exactly what it is and I'll have yield maps too.



Treated with Rejuvenate

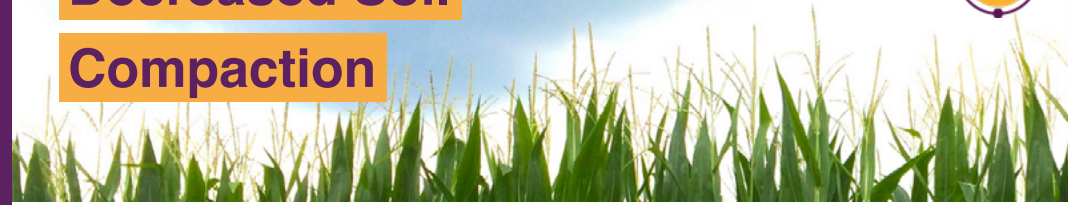
Untreated

Cornstalk digestion treated vs. untreated
Image credit: Gordon Smiley

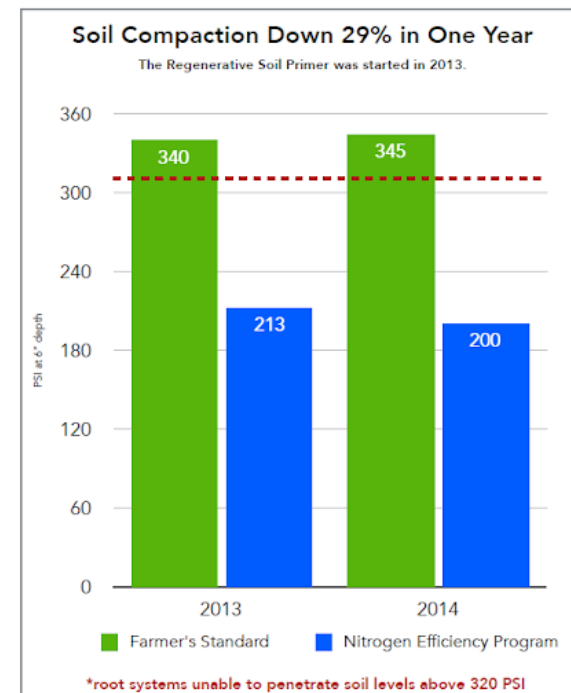
When crop residue isn't properly broken down and assimilated into the ground, it can harbor diseases that will carry over to next year's crop. This year, make sure you are keeping that valuable nutrition and carbon on your farm in the form of stable humic substances by developing microbial populations to digest the residue and convert it to stable organic matter.

Some growers apply soluble nitrogen products to help break down crop residue by addressing the carbon-to-nitrogen ratio. However, without adequate levels of sulfur and proper microbial digestion, the carbon and minerals contained in the plant are oxidized and burned off into the atmosphere as CO₂.

Decreased Soil Compaction



Gordon Smiley - Greensbrug, Indiana



Compaction can cause problems for a crop that result in low vigor and yields. Contrary to popular belief, compaction does not always come from heavy equipment and tillage, but rather from an improper calcium-to-magnesium ratio, and from low levels of microbial activity. When these two points are addressed, the soil becomes crumbly and porous.



**Rejuvenate
applied on
residue in fall**

**No application
on residue**



Cover Crop of Triticale
Image credit: Toby Baldauf

“After applying the Regenerative Soil Primer, the soil structure on my heavy clay soil has changed to crumbly and mellow and forage quality and yield has drastically improved.”

- Toby Baldauf - Pennsylvania

“The solution to mineral deficiency is to solve the lack of microbial populations and increase their health and vigor.”
- John Kempf



To get started with the Regenerative Soil Primer, reach out to our Customer Care Team. Place your order for the Regenerative Soil Primer and learn more about how you can work with other Advancing Eco Agriculture products and our consulting services. This will help determine the biological inoculant best suited for your soil and product application ratios and frequency.

What's included in the Regenerative Soil Primer?

This program consists of one or more soil applications of Rejuvenate, SeaShield, and Spectrum or, if called for, another biological inoculant like Spectrum DS, Spectrum PSB, or OP8.

Will this program take the place of my current nutrient program?

No, this program enhances almost any fertility practice, but is not a stand-alone fertility program in most instances. The materials in this program are compatible with most agricultural inputs, though care should be taken to avoid practices that may diminish microbial activity.

How will I know if this is right for me?

This program is designed to improve the soil condition and nutrient efficiency of all soil types by increasing helpful microbial populations and vitality. It is especially beneficial on soil and crops experiencing compaction, soil-borne disease, poor mineral availability, and limited biology. Rates and timings will vary, talk to a member of the AEA team for more information.

How often do I apply?

For fall harvested commodity crops, one application in the fall is typical. For vegetable crops, an application before each succession planting is ideal. For high value specialty crops, multiple applications can lead to higher marketable yields and better quality. This could mean both spring and fall or making repeated applications through fertigation. The more challenges to biology or “steps back” your practices involve, the more likely you benefit from repeated applications.

How much does it cost?

Depending upon soil and market conditions, growers typically spend between \$50-\$85 per acre for an annual application. Remember, this decreases costs elsewhere, and the benefits are spread out over multiple years. It is not just an annual input, but is the basis of a long-term regenerative investment in your operation.

Call our Customer Care Center
800-495-6603, ext 344
 or email us at
hello@advancingecoag.com

Resources

Learn more about
the Regenerative
Soil Primer



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