33 Benefits of Activating Carbon Sequestration

By Paul Schneider Jr., AG-USA

What is the best way to greatly improve poor soil? What is the best way to turn good soil into great soil? The answer is: Carbon Sequestration.

When soil conditions are right, it signals the plant to sequester huge amounts of sugars (liquid carbon) down into the soil. The plant feeds the soil, and then the soil feeds the plant.

The ability of GroPal Balance to activate carbon sequestration in the soil can result in numerous benefits, as this article points out.

1. Removes salts and their sterilizing effect

Manure is high in salt. Fertilizers are high in salt. A lot of irrigation water is high in salt.

Good news! Using GroPal Balance to activate the carbon sequestration switch fills the soil with salt remediating microbes, which help to quickly flush salts from the soil.

2. Breaks down plant toxins

Every plant releases toxins as a way of competing with other plants for soil space. When carbon sequestration is working well, bacteria break down these toxins. This can result in:

- Better yields and better profits
- Less time required to rotate a crop back in

3. Breaks down chemicals in the soil

Herbicides, pesticides, nematicides and insecticides are all harmful to soil life and soil balance.

As plants sequester sugars, beneficial microbes multiply. These microbes get right to work, gobbling up harmful chemicals.

4. Digests old weed seed

What happens to old weed seeds when carbon sequestration explodes beneficial microbes in the soil? Those bacteria work to consume weed seeds.

I have spoken with farmers who have experienced this first-hand. They have been surprised that in the spring they have far fewer weeds!

5. Balances soil for fewer weeds, easier kills

Weeds are a witness of man's failure to master the soil. Various weeds thrive in dry soil, acidic soil, salty soil, soil that is compacted or has a lack of humus, poorly drained soil, mineral deficient soil, or soil where minerals are out of balance. (see "Weeds and What They Tell" by Ehrenfried Pfeiffer)

Crops don't do as well in poor soil and find it hard to compete with the weeds.

In many cases, weeds are there to help correct a problem in the soil. Activating carbon sequestration can help to correct poor soil conditions that weeds thrive in. As soil is transformed into healthy soil, weeds should become less and less of a problem.

Sometimes it may take two or three years before you will see the full effect of weed suppression by restoring the soil, but keep sequestering that carbon, be patient, and you will be rewarded.

6. Flocculates the soil

When the soil doesn't have air spaces, it is easily over saturated with moisture. When weather turns dry, soil that lacks structure tends to try out more quickly.

Activating carbon sequestration helps beneficial aerobic bacteria to highly structure the soil resulting in trillions of air spaces. In flocculated, aerated soil, aerobic bacteria displace disease-causing anaerobic pathogens.

In oxygen rich, highly structured soil, root-destroying nematodes are also displaced by beneficial nematodes.

7. Better moisture retention

As the soil becomes highly structured due to carbon sequestration, there is less and less standing water in the field. Soil becomes a "moisture bank".

For those with irrigation, it can take about 70% of the water to grow the same crop, since available moisture is handled so much more efficiently by the soil.

GroPal Balance customers note that when they get a hard rain, there is much less water standing in the field, and each year the absorption of water into the soil improves.

8. Nitrogen fixing bacteria produce lots of nitrogen

As carbon sequestration is activated, air flows down into the soil. If there are nitrogen fixing bacteria in the soil (GroPal Balance contains these), this nitrogen in the air is converted into a urea that will not leach or wick off.

Once the nitrogen fixing process is well established, plants should have no lack of nitrogen.

9. GPB bacteria may actually manufacture moisture

When human beings breathe, we exhale moisture. This is why we can breathe out and fog our eyeglasses in order to clean them.

In much the same way, as the anionically charged bacteria in GPB respirate, they apparently leave a trail of water as they move through the soil.

This could, in fact, help to explain why some of our customers report good soil moisture that can't be accounted for by rain. If you have a scientific mind and would like a more in-depth explanation of how our bacteria convert oxygen and ammonia into H_20, just call and I will be glad to explain it to you.

10. Mycorrhizal fungi networks fill the soil

Mycorrhizal fungi need to thrive if carbon sequestration is to function properly.

GroPal Balance helps to establish mycorrhizal fungi in the soil, which in turn helps to activate carbon sequestration. Once carbon sequestration is activated, mycorrhizal fungi networks greatly expand and help to supply nutrients and water to the plant.

11. Less attacks by insects and disease

Most soils today have a severe shortage of trace minerals. This negatively affects the soil's ability to trigger carbon sequestration by the plant.

Therefore, supplying needed trace minerals is an intrinsic part of activating carbon sequestration. Trace minerals are a big part of GroPal Balance's success in triggering massive amounts of sequestered sugars (liquid carbon).

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- These trace minerals help to produce healthy plants and healthy livestock.
- They can also result in less insect pressure. As plants are more nutritionally balanced, they become less of a target for sapping insects.

12. Balanced soil pH

Carbon sequestration and restoring balance to the soil always go hand in hand. Balancing the soil is a means of getting plants to sequester carbon, which in turn helps to bring greater balance to the soil. Why? Because plants feed the microbes, which can then do their job.

Restoring a balance to nutrients in the soil in the best and most cost effective way to balance soil pH. Although lime is typically used to bring up pH, it costs more and is less effective. Also, sulfur gets tied up when lime is applied.

GroPal Balance is the best way we know of to both activate carbon sequestration and restore soil balance (resulting in near neutral soil pH).

13. A bounty of available plant food

When plants sequester sugars to feed soil microbes, these "chemists of the soil" respond by turning nutrients that have been tied up in the soil into available plant food.

Plants feed the soil, and the soil feeds the plant. This is a system that our Creator put in place, and it is a good one.

When we choose to bypass soil microbes and feed the plant directly with soluble fertilizers, we really mess things up. Carbon sequestration can solve a lot of problems, if we only allow it to.

14. A huge increase in organic matter

Organic matter IS carbon, and carbon IS organic matter. The best way to build organic matter in the soil is through activating carbon sequestration. Period.

This can build organic matter in the soil up to 10 times faster than green manure, crop residue, mulch, compost, and any other method. One farmer, whose only means to build topsoil was Soil Balance, saw his organic matter go from 0.4% to 4.7% in just 8 years.

However, when too much nitrogen is applied, it will burn up organic matter.

15. Cation Exchange Capacity that keeps increasing

As organic matter increases, so does CEC. Increased CEC means more nutrients will be available to grow a larger plant, resulting in a more abundant harvest.

16. New dark, rich topsoil production

One of the things produced in the soil by carbon sequestration is humus. Dark, rich topsoil is built so much quicker through activating carbon sequestration than any other method.

Crop residue, green manure, mulch and compost are broken down by bacteria and within a short time disappear from the soil. But carbon sequestration causes bacteria to produce humus and organic matter that is not easily broken down. It rather turns into dark, rich, new topsoil.

17. Nutrient dense crops, high in protein

The best way to create protein rich, nutrient dense crops is to activate carbon sequestration.

The resulting sugars feed microbes in the soil, which then make a vast array of nutrients available to the plant. This increases nutrients in the plant AND protein.

To see the 16 remaining Benefits of Activating Carbon Sequestration, please go to:

www.ag-usa.net/33benefits.php,

or call (678) 378-2911 and request an information packet.