

How to get Better Production - without Fertilizer

By Paul Schneider Jr.,
AG-USA

Bert, a grass farmer in South Carolina, grows and sells grass hay. In 2015 he decided to give GroPal Balance a try. Although he was told that GroPal Balance works better without his NPK blend, it seemed too risky not to use it.

Bert chose 2 fields across the road from each other for a test and control. He applied GroPal Balance and some N to one field and just nitrogen to the other.

On all the rest of his fields Bert put out GroPal Balance, nitrogen and his usual NPK blend. Here are the results:

Burt harvested 3 cuttings for the year, and averaged 42% more grass hay where he put the GroPal Balance and N, as compared to where he just put N.

Bert told me that where he put the GroPal Balance and N, it out-yielded every field where he put GroPal Balance, nitrogen, plus his NPK blend.

Help the soil feed the plant

Bert saw first-hand that when you use GroPal Balance to heal the land, putting out water soluble phosphorus and potassium hinders the microbes in the soil from feeding the plant.

God established a symbiotic relationship between soil and plant. When this relationship is working, the microbes digest soil nutrients and make them available to the plant. The plant uses photosynthesis to manufacture sugars, then secretes them through the roots to feed the microbes in the soil.

Empowering the Soil Food Web

Richard Fish in northern Florida took me to a field where he had applied GroPal Balance. The field was covered with earthworm castings, which is almost unheard of in northern Florida sugar sand. Most of us know that what comes out of the back end of an earthworm is 7 times richer in nutrients than what goes in the front!

Richard then said that when he went out to scrape the manure from his pasture, he was surprised to find that there wasn't any to scrape. He surmised

that the dung beetles had carried it all down into the soil.

When balance is restored to the soil, health is restored to the soil food web, which then benefits the soil.

The nutrients are already there

Please take a look at the soil test below. Note that in the "before" soil test, Phosphorus and Potassium are about half way up. In the "after" soil test, they are all the way to the top. What made the difference?

Elaine did not apply any fertilizer to her field in 2015 or 2016 - none. But in July of 2016 she did put out a \$20 application of GroPal Balance.

A friend of mine who owned a laboratory in McCook, Nebraska told my dad, "In an acre of good farm ground there is 4,500 pounds of phosphorus and 3,000 to 4,000 pounds of calcium. It is there, but it is tied up and unavailable to the plant."

It only takes 20 pounds of phosphorus to make 200 bushels of corn. As seen in the soil test below, the bacteria in GroPal Balance bring balance to all the nutrients in the soil, including phosphorus, calcium and potassium.

My friend also said that 97% of the nutrients in the soil are tied up. So do we really need to keep loading our soil with more nutrients, or would it work better just to cooperate with nature and free up what is already there?

No fertilizer, better yields

Mark, a customer in Nebraska, put out 10 gallons of fish per acre on his corn and sunflowers in 2015, but nothing but a quart of GroPal Balance in 2016. His corn yielded 20% better, and his flowers yielded 25% more. The microbes in his soil freed up nutrients, and he made a lot more money!

Greatly increased organic matter

A farmer in Oregon has used Soil Balance, the soil building component of GroPal Balance, for 8 years in a row. When he started, his organic matter was just 0.4%. Each year his organic matter

went up around 0.5%, and after 8 years his organic matter AVERAGED 4.7% over all his fields. He did nothing else besides the Soil Balance application to increase his organic matter.

Increasing Cation Exchange

Cation Exchange is used to measure the potential fertility of the soil. CEC is tied directly to organic matter; when organic matter goes up, so does Cation Exchange.

The soil of this Oregon farmer improved year after year and CEC went up with it, so much so that a seed company has asked him to grow seed for them. Better soil produces better seed!

The cause of increased organic matter

When balance is restored to the soil, including nutrient balance, pH balance and microbial balance (including mycorrhizal fungi and other fungi), and when you don't bypass the soil by feeding the plant with water soluble fertilizers, the plant will see the soil as a good investment and sequester huge amounts of sugars to feed the microbes.

The plant literally "farms" these microbes in the soil, and the microbes, in turn, do a wonderful job of feeding the plant. The sugars sequestered by the plant are liquid carbon, and carbon is organic matter. The more that organic matter increases, the better the yields, and the more money in your pocket!

Increasing production in good soil

Mike is a skilled farmer/gardener in Newnan, Georgia. Over the years he has adopted good soil management practices like those you read about in each issue of Graze magazine.

Mike's beef cattle are on land where for the past 10 years he has done rotational grazing. Also, he moves his cattle before they are able to graze the grass too far down. Mike felt that his pastures were in pretty good shape.

In 2015 Mike agreed to put out a \$40 application of GroPal Balance on a portion of his pasture, with a control on each side. After 2 months we cut the test

and control, and there was no difference in yields. But later that fall when we cut it again, the GroPal Balance portion of the field yielded 73% better than the 2 control areas.

Mike was quite surprised, since he knew that his soil was already in pretty good shape.

This year Mike put GroPal Balance on his 5 acres of garden and on all his pastures, both for beef and dairy cows. I was quite happy about this, since I get my raw milk from Mike. GroPal Balance produces a much more nutrient dense milk - what a gift for me and my wife, and for the rest of Mike's customers.

Greater germination

John and his wife farm 1,100 acres in southern Georgia. In February they invited me to come speak to their cattleman's association.

As we waited for the meeting to start, John turned to a friend and said, "You know that field that you sold me, the one you said wouldn't grow anything? For three years I tried to improve that field, and sowed seed each year. But only a patch here and a patch there came up."

"Well, we moved the cows off it in June and in July we put out some GroPal Balance. Towards the end of August we moved the cows back onto this land, and was surprised to see a nice carpet of green grass, about 8" tall."

"It was still pretty dry, but that GroPal Balance germinated the seed".

John was right. GroPal Balance is a terrific germinator.

In fact, just this evening a corn farmer asked me 3 times whether it might not work better to put GroPal Balance a few inches under the seed instead of in the row, on the seed.

Three times I tried to explain to him that, although that might be a good strategy for fertilizer, it is not a good strategy for GroPal Balance.

Not only is GroPal Balance a good germinator, but young plants become much more robust. The yield of the plant

is determined within the first 22 days of growth.

Considering that, can you see why it is helpful to put GroPal Balance either above, where it can soak down to the seed, or put it on the seed, and not under the seed?

Guarding against sapping insects

Bruce Tainio of Tainio Technologies in Washington State was usually a speaker at AcresUSA conferences. He had such a wonderful understanding of soil and plant.

Bruce explained that Base Saturation (see chart on left) refers to the percentage of a soil's CEC occupied by base elements. The desired ratio is potassium 5 to 7.5%, magnesium 10 to 15%, and calcium 65 to 70%. No more than 12% of the soil's CEC should be occupied by hydrogen ions. Calcium is what is used to remove excess hydrogen ions.

When the base saturation is balanced, the plant generates a frequency of 7.5 to 32 hertz, "which is the "healthy" frequency of all living cells". When there is excessive hydrogen in the base saturation, the frequency goes up. This higher frequency is like a dinner bell to sapping insects.

To demonstrate this, Bruce took a potato field that was out of balance and used foliar applications to balance half of the field. Then he released 2,000 potato bugs on each half of the field.

On the balanced half, the potato bugs didn't even recognize the plants as food, but tore into the other half. Next, foliar applications were used to bring the out of balance portion of the field into balance. After this, the potato bugs just walked away. The proper frequency was restored, so the plants were no longer recognized as food.

On the diagram on the left, notice the before and after Base Saturation. Even though calcium was high in the May 17 test, Base Saturation was way off. GroPal Balance brought Base Saturation back into balance without the need for more lime. A soil balanced by GroPal Balance produces plants that are less prone to insect attacks!

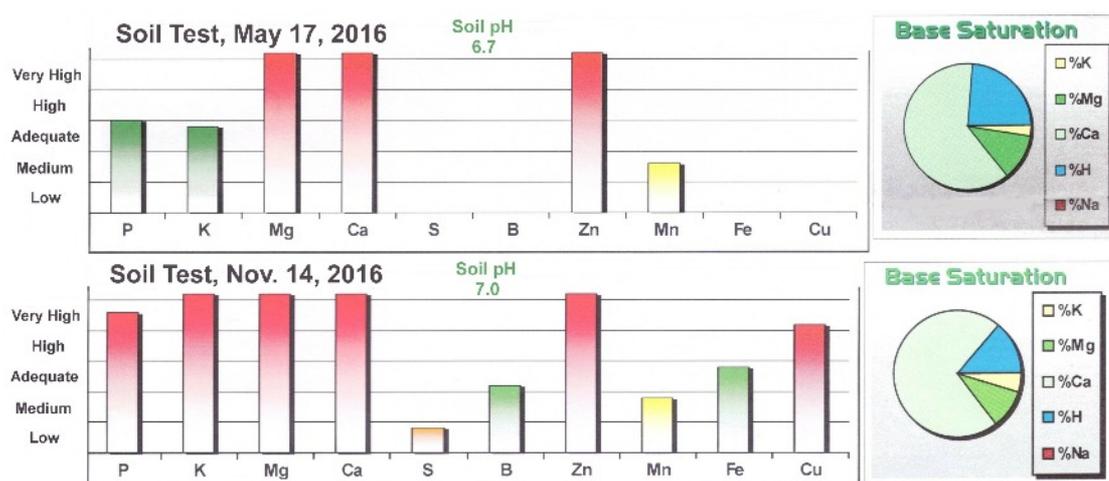
GroPAL Balance



GroPal Balance is like a center pivot for dryland farmers!

Replaces LIME and other fertilizers

The following before and after lab tests show how GPB makes soil nutrients available. Even though nothing else was applied this year but GPB, within only 5 months the NPK and trace minerals had gone way up. The nutrients are already in the soil. GroPal Balance simply works to free them up.



Call AG-USA now at 678-378-2911 for more information, or go to: www.AG-USA.net. OMRI and WSDA listed.

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