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The Growers Solution

SPRING 2010

VOLUME 23 ISSUE 2

Soil Tests and Lime Aanalysis

By Henry J. Kauffman
Clarissa, MN 56440

Since our liming article in the January Plain Interests, we have gotten a lot of letters with soil test sheets, lime analysis sheets, etc. There seems to be a great misunderstanding on pH and calcium readings on these soil test reports.

If you have calcic soil, which is soil with undissolved calcium particles, "too large to even dissolve", or have applied lime that had too coarse a grind to dissolve, your soil test reports will show lots of calcium. In reality, your crops are starving for calcium, because it is not available.

Why does this soil test report show this unusable calcium? The soil test lab will grind you soil sample into fine powder. This will then also powder your undisolved calcium particles in your soil sample, thus showing lots of calcium, which will never be available to your plants because of the size of the calcium particles. This is why we recommended putting on high calcium lime in strips at varying amounts. This way you can see for yourself which amount works best for your soil's condition.

This also is part of the problem with your pH reading. If the calcium in the soil is not dissolved, your pH may be high. Adding a fine grind Hi-calcium lime should help bring down the pH. The above explanation on how soil tests are done is why I feel soil tests are merely a guess, as far as calcium needs are concerned.

We have five different lime analysis sheets here, with no two of them being alike in calcium percentages or fineness of the lime. I would like to show that there are great variations in lime qualities. In lime, the larger the sieve number your lime was put through, the finer the

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Inside The Solution

From Skeptic to Enthusiast

By Beth Burkholder

While once a skeptic of Growers, Jay Burkholder of Danville in Central Pennsylvania, is now an avid user of the product. Jay owns a small bulk food and produce store called Burkholder's Farm Market, where he markets his own fruits and vegetables. Since the early years of the market, Jay's business has increased and he no longer grows all of the produce he did at one time. Much of it now comes from another produce farmer who also uses Growers on his crops. Jay does, however, still grow all his own summer specialty, sweet corn, and gives much of the credit to its taste and popularity to Growers.

Along with Burkholder's Farm Market in nearby Washingtonville, Jay also has another farm consisting of seventy tillable acres. Along with that he and his brother Jim also raise crops on the 100 tillable acre farm where they grew up two miles down the road. Corn and soybeans are the main crops on these farms, although other crops are grown in smaller quantities.

For years Jay had been using Growers on vegetables such as tomatoes and peppers. When putting down plastic, he would directly apply Growers to the soil. Latter on, he would feed

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Ollie on the March Conference Call

By Jennie Henry

At a Growers Farmer meeting recently, Ollie Elwer of Fort Jennings, Ohio was asked to share his current farming experiences using Growers. It went real well with the attendees at the meeting, so well, in fact, Ollie was asked to speak during our March Growers Customer Conference Call. That, too, went well and a summary of his contribution follows:

"I started using Growers Mineral Solutions (GMS) here in Northwestern Ohio in 1993. I raise corn, beans and wheat. I plant the corn with 4 gallons of GMS in the row, then I foliar feed GMS two times, the second time with GNA. With the soybeans, I use 1 gallon of GMS in the row at planting and foliar feed one time. And with the wheat, I apply 2 gallons of GMS in the row at planting and in the spring I apply 60 pounds of actual N. It doesn't work out for me to spray GMS in the spring like I should.

"When I started using the Growers Program, I applied 15 tons of high calcium limestone to the acre. Guys ahead of me did all the work (determining the amount of tons required in his area). Now I maintain my fields with 5 tons of lime/acre after my wheat rotation. I don't work it in anymore, but disk and land level. Scatter 5 tons of lime and the rain water takes it down.

"Some of the things I've seen:

- You don't see yield jump.
- Quality of grain. When I dry down corn, it dries down easily.
- Had a little vomitoxin this year. Highest: 1.5 ppm. Allowed: up to 5 ppm., rejected at 7 ppm. I had loads they couldn't find any.

"I work real close with my neighbor. This year he had corn he couldn't get dry. The highest moisture I took off was 20% and I kept going. He had 27 - 28%. When I finished harvesting my corn, he tried again. His moisture was still 22 - 24% and his lowest was 19%. I had corn moisture down to 15%. It's the Growers and the calcium."

Questions from the telephone audience:

?: What is your total, maximum amount of calcium on your field since 1993?

Ollie: I have an alfalfa field that is a wetland. I can't farm it, so it stays in alfalfa. It probably has 40 to 60 tons of lime per acre. (Ollie has access to a high calcium liming material free for the transportation from a fairly close by city water softening facility. Eds.)

?: Any traces of mineral deficiencies?

Ollie: The plants last so much longer. I don't see anything as deficient. Every time I make a cutting, I spray with 1 gallon of Growers and in the fall, I put another spray on.

?: Have you seen a difference in the amount of replanting since you have put the lime on?

Ollie: Yes. It is a rare thing for me to have to replant. It just seems to come up.

?: What kind of soil do you have?

Ollie: It's heavier stuff—a lot of heavy clay.

?: We have that problem all the time. Depending on the spring, guys will have to replant twice, maybe three times.

Jim H.: We think the calcium will help that situation. Ollie is being honest. It's real tough dirt. As you aerate the soil and get the biological working, it helps to soften the surface. You don't get that asphalt after a heavy pounding rain—that kernal can germinate and push through.

[While many of you have participated in our monthly Conference Calls, we would like to encourage those of you who have not, to do so. Jim Halbeisen, Growers Director of Research, hosts the calls giving updates and predictions on farm commodities, weather, raw material prices and how they will affect Growers prices, feed back from customers from around the country, etc. Jim also encourages questions from call participants. The calls are an hour long, and, for now, start at 9:00 PM EST the second Thursday of each month. Dial 1-712-429-0690 and when asked for a PIN number, dial in 637573# (be sure to include the #). Eds.] ■

On The Road Again

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Growers Mineral Solutions is scheduled to set up and staff booths at the following upcoming farm shows and conventions this spring and summer. It's a great time to stop in and review your plant food and animal nutrition needs, hear about new developments at Growers or just chat with the folks who make it all happen — your friends and neighbors.

July 2-3	Horse Progress Days Topeka, IN
July 20-22	Wisconsin Farm Technology Days Waterloo, WI
July 20-22	Michigan Ag Expo Lansing, MI
Aug. 3-4	Farmfest 2010 Redwood Co, MN
Aug. 10-12	Empire Farm Days Seneca Falls, NY
Aug. 17-19	Pennsylvania Ag Progress Days Rock Springs, PA
Sept. 21-23	Ohio Farm Science Review London, OH

Hope To See You!

Pleased with Beans from Rented Ground

By Robert Greenfield

Mr. Harold Reekie of Clarksburg, Ontario Canada, was very pleased with the soybeans he planted on June 6, 2009. The rented farm previously had been in orchard for fifty years and is near the shores of Georgian Bay. It is really nice sandy loam soil with lots of warmth.

The preceding crop was winter wheat. The only fertility the soybeans received were 2 gallons per acre of Growers Mineral Solutions sprayed on the foliage. There was an aphid infestation, and Harold sprayed separately for that. The beans averaged approximately 50 bushels per acre.

Harold concluded, "I would like to add, because we had such an up and down growing season last year, GMS did make a difference. I was very pleased with the beans, I have used GMS on my apple crop for the last four years." ■

Real nice field of Canadian soybeans.

Skeptic to Enthusiast

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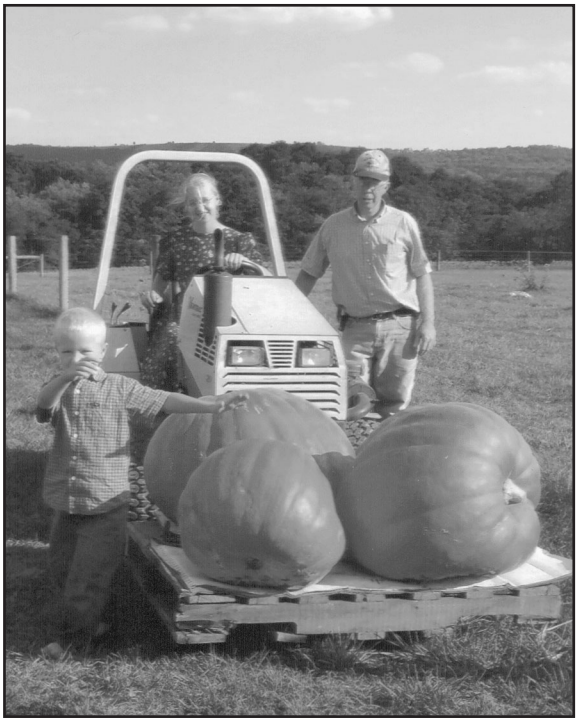
feed Growers to the seed bed through the drip line and make foliar applications. He was pleased with the way Growers helped produce a healthier plant with a longer shelf life.

Up to this point, Jay had been using conventional starter fertililzer on the sweet corn. In April of 1997, Jay tried a new venture with Growers which was later considered a fortunate accident. As he was getting ready to put in his first planting of sweet corn, Jay realized, to his dismay, he didn't have any conventional fertilizer with which to plant. Although wary of the effects, he decided to use Growers on the corn instead. He applied Growers at ten gallons to the acre, two inches below and two inches to the side as a conventional fertilizer is applied. When July arrived and the corn ripened, to Jay's pleasant surprise, he found this early corn far superior to the early corn of past years. Not only was it healthier, the plants handled stress better, the tips were fuller, and the flavor was great! After this, Jay decided it would more than pay to use Growers on all his sweet corn. But instead of ten gallons, he began to use Growers as recommended with five gallons to the acre directly on the seed, along with poultry litter, which he continues to do to this day.

Some of Jay's sweet corn even flies to Alaska.

Seeing his cost per bushel was favorable and his yields comparable to anyone else in the area, Jay knew it would be very profitable to use Growers on other crops as well as sweet corn. So in 2005, he began using it on the other farms' field corn and soybeans, which has proven successful and costs are low.



Burkholders' 150 to 190 lb. pumpkins go far and wide.

Jay and his wife, Esther, have five girls and one boy, and when it comes to sweet corn picking, almost everybody helps. This proves to be great family time, and brings satisfaction when they receive compliments on the corn. One man told Jay, "I don't know what you do to your sweet corn, but keep it up." Another man said, "On a scale from one to ten, your corn is a fifty-four." It can almost be said Jay Burkholder's corn is known nation-wide, for in the summer of 2009, a young woman came into the store and ordered two hundred ears of corn. She then explained she was going to ship it by plane to Alaska for a corn roasting party!

Another novelty crop Jay uses Growers on are his Prize Winner pumpkins. In the fall of the year, he sells these brilliant orange giants at his store, and people from all over the state come for them. The biggest pumpkins are normally anywhere from 150 to 190 pounds.

For his success in raising healthier, more marketable and stress-resistant crops, Jay Burkholder gives Growers just recognition. ■

Soil Tests

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the sieve number your lime was put through, the finer the lime, and the more available it will be in the soil. The sieve numbers go from 10 - 200, 10 being coarser, 200 very fine. Anything that doesn't go through a #60 sieve will take a long, long time to dissolve, so it is practically worthless to you.

In our analysis sheets we have, 4 of these have a 60 mesh sieve reading of 60% to 98% going through this size. So what is the value of these limes in comparison? If the calcium percentages were equal, which they usually aren't, my charts show the finer the lime the higher the calcium percentages. The lime with only 60% passing through a #60 sieve would be only worth about half as much as the one where 98% passed through the #60 sieve.

On the 5th analysis sheet, which came from Ontario, Canada, (This was a shocker to me, and what got me to do this article.) it did not have a reading for the 60 mesh sieve, but had one for the #48 sieve, which is courser than the #60 sieve. Only 27% passed through this #48 sieve, so what would the #60 sieve reading be? Even if #48 and #60 were the same, only about 25% of the calcium would be available. You would have to put on 12 tons of this lime to get the same amount of calcium as you would from the one where 98% passed through the #60 sieve, at 3 ton per acre.

We need to be sure we are buying a Hi-calcium lime with a fine enough grind that can be beneficial to our soil. If we don't, we will be getting reports that this liming protocol doesn't work. Who fault is it then? Our best lime has a 95% passing through the #60 sieve. We were not aware of the big variation in fineness of the Hi-calcium quarry lime at the time the January article was written. We would have mentioned it if we had known.

I am thinking most quarries will have the finer lime, but be cautious so you don't get taken. With the prices the way they are at present, we surely don't want to spend our money on something which will not do the job. ■

With permission from Plain Interests magazine and Henry J. Kauffman the above article is reprinted here as it appeared in Plain Interests October 2009 issue, Vol. 9, No. 10, page 15.

Growers MINERAL SOLUTIONS

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Inside:

Growers Success in the Garden

By Ginger Wieringa

My husband has been using Growers on our farm crops for more than 25 years. After recently moving from Michigan to Minnesota, I finally had time for a garden, so I decided to see what Growers could do for my vegetables. I planted my garden on May 12, 2009, and mixed 1 cup of lime in the soil under each plant, as well as on top.

I foliar sprayed everything May 20, the second time on June 17th, and the last foliar spray of Growers was on July 28.

The first tomatoes I planted, the big beef steak variety, started getting ripe on July 28. I had more than I could handle so I sold at 3 different markets. I had the biggest and nicest tomatoes. I know because lots of people would come up and tell me.

I couldn't believe how shiny the tomatoes and peppers were. I only used hose water to rinse them off.

I had many tomatoes that were 13 to 14 inches around. I entered a big tomato contest at a local grocery store. I didn't win because the biggest was 16 inches around and weighed 1.11 pounds. Mine was 14 3/4 inches around and weighed 1.22 pounds. Even though the winner was bigger around, mine weighed more. I'm not sure why? (That's because yours were full of nutritious great tasting meat and the winner's were full of bitter tasting water from too much nitrogen and potassium. Eds.)

Ginger needed to pick before a frost this not ripe 14 3/8" round red tomato.

I planted only yellow and red peppers which got ripe August 18. Each plant had from 6 to as many as 9 peppers and they got so big and heavy I had to tie them up. The biggest was almost 16 ½ inches around and it wasn't ripe yet, but we had to pick before frost.

The Kennebec variety potatoes I planted did very well, too. I didn't have that many really small ones, but had about the same amount of medium and really big ones. The biggest was 3 ½ pounds, 9 ½ inches around and 10 ¼ inches long.

The melons were normal size, but very sweet and excellent texture.

This was a first year garden and I thought the weeds would be worse than they were, because we don't use any herbicides or insecticides on our crops or garden, but thank Goodness it wasn't too bad. (Chances are the high calcium lime kept the weed pressure down and the sugars in your plants kept the insects at bay. Eds.)

Ginger's 3 1/4 lb. potato made the local newspaper with the caption: "Looks like this one potato will make a whole batch of potato soup."

We have a hay field just off the road and a neighbor has his hay on the other side. He fertilizes heavily with pig manure. We did a little comparison. We picked a few of our alfalfa stems and walked across and picked a few of his. Our stems were full, solid, in the middle and the stems across the road had a very hollow, "drinking straw like" appearance to them. (An obvious sign of soil and plant health on your side of the road. Eds.)

Along with her story Ginger sent the elevator's test showing their 100 bushel oats weighed in at 41 lb per bushel. (32 lb/bu is supposed to be the standard.) She also sent us a very nice picture album showing all their crops and garden. For more pictures see our Growers website under crops-field photos. ■

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