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The Growers Solution

EARLY FALL 2009

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Liming in the Early 1800s

By Jim Johns

Our friends Richard L. Mulvaney and Saeed A. Khan from the University of Illinois Agronomy Department who spoke to us at our December, 2008, Sales Meeting, forwarded us an article from the *Journal of the American Society of Agronomy*. It is a printed version of a speech given in 1938 by Emil Truog, Professor of Soils, University of Wisconsin, who praises Edmund Ruffin as “a successful farmer, father of soil chemistry,” etc. “and a foremost authority of his time on the liming of land.”

According to Truog, although he read everything he could find, it seems Edmund Ruffin (1794-1865) had little formal education before entering William and Mary College at the age of 16. His college career was cut short, too, as he soon returned home to marry Susan Travis and then enlist as a private in the War of 1812. After six months, in 1813, he was mustered out, and at the age of 19 immediately

assumed control and direction of his family’s Coggins Point farm located in the tide water area of Virginia. Even before his father died three years earlier, Edmund had had very little to do with the farm’s practical agricultural operation.

Professor Truog, in pointing out other serious dilemmas facing Ruffin, quotes at length from Avery Craven’s book, *Edmund Ruffin, Southerner*. We quote in part:

“— There could be but one result. Tobacco-growing meant soil exploitation, unit expansion, and ultimate abandonment of once fertile fields.

“Just what that implied is revealed in the comment of a second observer, three quarters of a century later. ‘The Virginians of the lower country are very easy and negligent husbandmen,’ he wrote. ‘New land is taken up, the best to be had, tobacco is grown on it for three or four years and then Indian corn as long

as any will come. And in the end, if the soil is thoroughly impoverished, they begin again with a new piece and go through the rotation.’ He pictured a world of widening fields and retreating forests; white servants, come to toil, giving way to negro slaves under pressure for economy; acres growing weary, falling from cultivation and returning again to forest; in time, planters frayed a bit at the cuffs, out at the elbows, down at the heels, bitter and complaining, as farmers are wont to be, of returns that did not pay the cost of production. And then, while some held on shifting crops and yielding standards, others, more easily discouraged or more quick to accept the inevitable, according to the point of view, turned west, leaving the bones of their ancestors to keep watch in old familiar neighborhoods while they begin over again where lands were fresh and cheap and debts were no disgrace.

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Raising and Processing Meat Products in Indiana

By Jennie Henry

Adam Moody of west-central Indiana was featured on the front cover of the May, 2009, *Indiana Prairie Farmer*. The article focused on his niche market which is the retailing of pasture-raised, drug-free meat.

<http://magissues.farmprogress.com/ipf/in05may09/ipf001.pdf>

By way of an e-mail dialogue, Adam explains to us how the Growers Program fits into his operation.

Dad and I started on the Growers program in 1984 and we currently use Growers primarily in the livestock feed. Owing our own

slaughter facility has given us a great opportunity to observe the “inner workings” of fat steers. We process others’ animals as well as our own. The largest difference I see in the ordinary dry lot animals is their livers are often scarred and the bile sacks are oversized. Our animals, on the other hand, are clean inside and out as attested by visiting vets often making complimentary comments.

Our feeders and cows are fed about 2 oz. of Growers a day and we use kelp in our program. I’m a big believer in both. The GMS is dribbled onto cow / calf feed which consists of ground ear corn, spelt, raw soybeans, and, in the winter, kelp.

Please turn to page 4

Where Are We With Prices and Supplies?

By Jim Halbeisen

While talking with farmers during our summer of 2009 travels, a very consistent conversational pattern emerged. After the usual pleasant discussion about the weather, every producer wanted to know what was going to happen with fertilizer prices in general and with the price of Growers Mineral Solutions (GMS) in particular.

GMS reached its highest price September 24, 2008, but since then it has dropped almost 40%. Predicting future prices of GMS is still almost impossible to do, because prices are so heavily dependent on such factors as raw material supplies, commodity prices, the value of the U.S. dollar, etc.

As of early September, 2009, it appears the U.S. is going to produce quite large corn and soybean crops which should pressure those commodity prices to stay at lower levels. If corn and soybean prices stay at current depressed levels and livestock prices continue to stay low, it is going to be very difficult for raw material suppliers to raise their prices. In fact, to encourage farmer buying, suppliers may be forced to lower their raw material prices.

Statistics for North America fertilizer usage for the 2009 crop year had nitrogen (N) use down 15%, phosphorus (P_2O_5) use down 31%, and potassium (K_2O) use down 45%. In June and July of 2009, this had raw material suppliers saying North American crops would suffer yield losses due to reduced fertilizer applications. Now, however, the U.S. Government is suggesting the 2009 U.S. corn and soybean crops are going to result in some of the largest production numbers ever seen in the United States.

Because of these contradicting yield predictions, here in early September, 2009, U.S. farmers are still dragging their feet about purchasing fertilizer, both for the remainder of the 2009 season, but mainly for the 2010 season.

Recently, we at Growers Chemical Corporation, by monitoring investment bank literature, have found the big chemical companies seem to be rather distant or removed from real production agriculture. From our reading, it appears the chemical supply companies are "pitching out the window" all economic common sense. For example, one publication from *Bank of America Merrill Lynch* stated that: "We disagree with the WSJ's (*The Wall Street Journal*) assertion that lower farm incomes in 2009 will reduce near-term fertilizer purchases..." In fact corporations such as Potash Corporation of Saskatchewan are saying they are prepared to reward their investors in the future. The following quote came from a financial out look reprinted in the *Eastern*

Edition: Country Guide of July 24, 2009, by Bill Doyle the CEO of Potash Corporation of Saskatchewan: "After almost a year of unprecedented global destocking, we are now beginning to experience the re-emergences of demand in our key markets. As farmers around the world respond to their noble calling of feeding the world, we expect this will trigger a multi-year process of nutrient replenishment, particularly potash. We will be ready to supply their growing needs and, at the same time, reward our shareholders."

Mr. Doyle and his like appear to be not acknowledging the obvious conflicting factors of predicted large or record yields being grown in 2009 with much reduced fertilizer inputs, but we expect many farmers will see the irony and will continue curtailing their inputs.

So, looking at 2010 where does this leave us? Unless the grain and livestock commodities either go into a tailspin or shoot off to the moon, it seems the nitrogen and phosphorus raw material people will likely follow the potash industry's lead and not drastically change their prices—either up or down. This should allow current GMS prices to remain fairly stable for the foreseeable future. However, there are no guarantees. We all need to watch and follow the major price controlling factors; commodity production and prices, raw material supplies and U.S. dollar values. Your local Growers Representative is being kept up-to-date on Growers Mineral Solution prices. ■

On The Road Again

EARLY FALL — 2009

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

September 22-24 Tues.-Wed.-Thurs.	Ohio Farm Science Review London, OH
October 14-15 Wed.-Thurs.	Pennsylvania Grazing Conference Coudersport, PA
October 20-22 Tues.-Wed.-Thurs.	Sunbelt Agricultural Exposition Moultrie, GA
November 20 Friday	Truck Patch Connection Homerville, OH

Hope To See You!

New Price Information

By Staff

During our conference call of Thursday evening, September 10, 2009, pricing changes for Growers Mineral Solutions were announced. These are changes we believe we can live with through the end of our current 2009 fiscal year and well into, if not all the way through, our 2010 fiscal year starting November 1, 2009.

For the remainder of the 2009 fiscal year, September through the end of October, 2009, we are offering a 6% cash discount for orders placed for immediate or prompt delivery. This should allow customers who placed orders earlier in the season the opportunity to increase their total volumes to where they will be into lower price brackets for the 2009 year. Importantly too, it will help the company obtain essential working capital.

For the upcoming 2010 fiscal year starting November 1, 2009, based on prices current at the time, we are planing to bring back our regular Cash In Advance of Delivery (CIAD) discounts, namely: 10% for November, 8% for December, 6% for January, 4% for February, and 2% for March. Orders placed from April on will be at the then current list price. We intend to deliver all orders by the "Date Wanted" as indicated on the purchase order, or earlier.

For reasons given in the companion article in this issue of TGS, *Where Are We With Prices and Supplies?*, we can not guarantee our list price will not change—either up or down.

For those who did order previously in 2009 and are unsure of their best option, buy now in 2009 or buy latter for the 2010 year, check with your Growers Sales Representative or Debbie in our office, 800-437-4769, for an explanation. ■

Liming in the Early 1800s

Continued from page 1

“Such a system, of necessity, ran its course in the older regions well before the American Revolution. Many planters turned farmer, dividing their lands and labor forces into smaller units, shifting production to wheat and corn, and seeking markets that lay outside the grip of the British merchant and his much despised Scotch agents. But the Revolution interrupted adjustments, adding its ruin to an already bad situation, which did not greatly improve for the masses until the French Revolution and its spread gave to the American farmers the profitable task of furnishing food to those whose efforts were absorbed by war. A few great planters, such as Washington, Jefferson, and Madison, led the way to changes for better conservation of the soil, while such specialists as John Binns and John Taylor of Caroline preached a new gospel of fertilizers and crop rotation which would have altered fundamentally the whole agricultural procedure. But uncertain profits checked wide change, and the Peace of Ghent threw the whole old Tobacco world back in ruins, sighing ‘for another Napoleon to restore to us by his wars the feeding of Europe.’

“Thus when Edmund Ruffin, just turned 19, took over the responsibilities of a planter on weary lands, the situation represented the accumulations of two centuries of bad methods. — Agriculture was steadily yielding ground in both a real and figurative sense.

“—With an enthusiasm born of youth and theories developed from childhood reading, Ruffin assumed his task. His lands at Coggin’s Point were extremely poor, ‘the larger part not averaging more than ten bushels of corn per acre, no more than six bushels of wheat, on the better half.’ From experiment to experiment he moved, failure dogging his steps. —Not the lure of verdant fields in Kentucky or Alabama stirred him, but benumbing pressure weighing heavily on one who thought of the future in terms of children and even slaves who must have the things that a gentleman gives to his dependents.”

Emil Truog continues, “In such a frame of mind Ruffin had the good fortune of having a copy of Davy’s *Agricultural Chemistry*, first published in 1813, fall into his hands. — Although Ruffin states that his limited knowledge of chemistry was obtained without aid or instruction, his keen, analytical mind apparently made it possible for him to master the contents of Davy’s book in short order. His attention was particularly attracted to a statement to the effect that a sterile soil containing ‘the salt of iron, or any acid matter...may be ameliorated by the application of quicklime.’

“In Davy’s book he found directions for

testing soils for soluble iron, calcium, and calcareous earth and also testing limestone and marl for their carbonate content. — He observed that sorrel and pine abounded on poor soil, he was led to the independent conclusion that ‘vegetable acids’ were the cause of sterility in his soils. Ruffin was thus probably the first man in the whole world to conclude that upland mineral soils are often acid due to the presence of free acids, made possible by the absence of calcareous earths. In defense of this conclusion, he presented arguments which were in advance of some presented by trained chemists nearly a century later. He observed for example, that drainage waters from non-calcareous soils are often darker in color than those from calcareous soils, due, he contended, to the solubility of the free organic acids and insolubility of the lime salts of these acids.”

Professor Truog quotes again from Avery, “On a February morning in 1818 his carts began to haul the marl that puzzled negro hands dug from pits hastily opened on his lower lands. They spread some 200 bushels over a few acres of newly-cleared, but poor, ridge land, and in the spring he planted the entire field to corn as a testing crop. Eagerly he waited. As the season advanced, he found reason for joy. From the very start the plants on marled ground showed marked superiority, and at harvest time they yielded an advantage of fully 40 percent. The carts went back to the pits. Fields took on fresh life. A new era in the agricultural history of the region had dawned.

“With all the ardor of a discoverer Ruffin immediately set about to widen his knowledge by extended experiments and to spread the information which offered so much to his fellow planters and to his section. In October of that year he presented to the agricultural society of his own county the first of what was to be a long list of valuable papers offered to the cause of agriculture. Stating his theories as ‘to the nature of soils and the action of calcareous manures’ on them, he adduced the slender sum of his experience to support what was, in fact, a revolutionary approach to the whole problem that vexed the farmers of the New World.

“—Three years later this paper, revised and enlarged, was published in the *American Farmer*, the new agricultural journal —. Eleven years later, grown into a volume of 242 pages, it appeared again under the title, *An Essay On Calcareous Manures*, —”

Truog goes on to say, “Some of you have read George Washington difficulties in the culture of alfalfa and, even, clover. —”

Then he quotes Craven 35 years after Washington’s death, “By 1834 a visitor to ‘Mount Vernon,’ where the great Washington had struggled for better methods, declared that ‘a more wide-spread and perfect agriculture ruin could not be imagined.’ Jefferson at ‘Monticello’ was closing his days in poverty as

his fields and markets failed him; everywhere the agricultural societies dwindled for lack of support as farmers lost heart; and even John Binns and his gypsum yielded ground.”

Ruffin discovered, with inspiration from Davy, calcareous manures (marl—liming) would rejuvenate his soils. He did this before litmus paper was invented, but, in effect, he deduced it was acid conditions causing his and other farmers’ problems.

Professor Truog gives deserving praise to Ruffin for discovering acid conditions, even in the virgin soils of the Virginia area, was the cause of farm failures. Truog encourages the use of soil chemistry to maintain productive soils and gives a lot of interesting quotes and agricultural history dating back to the Revolutionary War and earlier.

But Truog’s article also gives us some insight as to how the pH system was able to gain such a strong standing with today’s agricultural community. With only two rare exceptions, Albright and Tiedjens, it seems none of the agronomists since Ruffin, Truog included, have ever come to recognize the real savior of those Virginia farms.

Ruffin solved or helped correct acid conditions with about two tons of marl per acre. Marl, normally, just happens to be a very good source of calcium, so the two tons per acre could have been worth up to 4 tons/acre in our Growers’ eyes of today. Although he did correct an acid condition in soils, Ruffin, unknowingly, also corrected a calcium deficiency in his thin light soils.

Perhaps credit should be given to our Dr. Victor A. Tiedjens for explaining to us and having us better understand what actually corrected Ruffin’s problems. Dr. Tiedjens determined it is calcium that solves soil problems, improves pH, whether high or low, and pH readings, in themselves, do not consistently relate to healthier soils. Instead, Dr. Tiedjens advocated testing soils for calcium concentrations and correcting them accordingly is a way to better soil health, but the best and surest way is by way of test strips. Jim Halbeisen reminds us chemical testing of soils has its limitations, because soil is a biological media, not a chemical media, and test strips of varying amounts of liming additions on the farm prove to be much more accurate measures of calcium needs. To his credit, it appears Ruffin may have used test strips, 200 years ago and still ahead of his time. ■

CORRECTION: The “Lime Doubles Soybean Yield” article in the Spring 2009 issue of TGS should have had a quote attributed to the John Deere Agronomy Department’s book *Soil Culture and Modern Farming Methods* written in 1915. Thank you, Rick Loll, for catching our error.

Growers EARLY FALL MINERAL SOLUTIONS 2009

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Growers Customer Conference Calls

By Jim Johns

Unfortunately, most of our *The Growers Solution* readers have not been aware of the Telephone Conference Calls we have been conducting over the last few months. The reason being, the date, time and subject content has been sort of spontaneous and hurriedly planned. We were, and still are to a certain extent, trying out the idea. Meanwhile, we are looking for comments and suggestions to further improve the format.

Already we have found, however, the calls are definitely a popular and a welcome addition, so, to allow for advanced notice and to have more customers and prospective customers able to participate, we are putting the calls on a more regular schedule. The schedule starting in October 2009, will be the second Thursday of the month, October 8, November 12, etc., and the time will be 9:00 p.m. Eastern time. Our Conference Call program allows only 99 participants, which means additional callers beyond the initial 99 will hear a busy signal and will not be able to join into the call. At the time of the call we have no way of knowing this is happening, but if it does, please let us or your

sales representative know so we can make other arrangements for additional participation on future calls.

The Telephone Conference Calls are to last one hour and are hosted by our Director of Research, Jim Halbeisen. Jim leads off with an update of market conditions, pricing, other agriculturally related matters, current farming activities such as; liming, foliar spraying, planting procedures and dates, produce, dairy, etc. Shortly into the call, Jim encourages Call participants to ask questions and/or to contribute by way of commenting or offering answers to the questions being asked.

The way the Telephone Conference Call works, on the scheduled day and time all participants dial in on their telephone to 1 712 429 0690. After dialing in, a recorded voice will ask for a Conference Security number or a Participant PIN number. On the phone key pad

press in 637573 # (be sure to include the # after the last number) which puts you into the Call. But, so that everyone else on the Call cannot hear what is going on at your end of the telephone; dogs barking, televisions, door bells ringing, coughing, etc., you need to MUTE your phone by pressing the MUTE button if there is one, or, if not, *6 (Star Six) on your phone key pad.

One group of neighbors found they can gather at one place and, while in the MUTE mode, listen-in on the Speaker Phone.

When you want to ask a question or join in on the Conference Call, reverse the MUTE procedure so that you can be heard. Go back to MUTE or *6 when finished with your question.

The Conference Call is a great opportunity to find answers to questions you may have about using Growers Mineral Solutions and/or the Growers Program, so please join in. ■

Meat Products in Indiana

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This year on the farm we are beginning an intensive grazing program for the cows. The rest of the farm is on a 7 year crop rotation system, five of those years the ground is completely covered and four of those years it is in a grass/clover mixture.

Our grain operation is currently limited to raising feed for our free range layers, broilers, sheep, lambs, cow, calf, and purchased feeder steers. By far, our largest struggle in the production of grain is finding herbicides for non-GMO varieties of corn and beans. We do not use GMO grains mostly because I don't agree with it. But, unfortunately, it is becoming very difficult to find herbicides for non-GMO's that work, mainly because nearly all research on such products has been halted.

For farm producers to attain needed margins in today's business world, one must "farm" way beyond the boundaries of their ground and further process, deliver, and sell retail to a more discerning customer. There must be a difference in their product, their delivery, and they must retain an authenticity not obtainable by the industrial food systems. (This last statement cost me dearly to learn and develop.) Most of our customers purchase our products because we deliver their expectations both with the product and the delivery. i.e.: service.

I stick with Growers for the results. Producers very seldom really see how their husbandry practices truly affect the inner health of their animals, let alone compare with other practices, but I see the differences every week. It is the practices we employ in our operation, which includes GMS, that produce the anticipated and desired results for me and my customers. ■

The Growers Solution

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