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The Growers Solution

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THE VALUE OF FEEDING GROWERS

By Aaron L. Widrick,
New York Representative

We've been a family farm since my grandfather purchased the home place in 1927. I am in a partnership with my father and brother in Valmont Dairy which is located near Lowville in northern New York State, about 90 miles north of Syracuse. We farm on 540 total acres, (56 are rented) 290 of which are tilled. We grow an alfalfa-grass mixture and small grains-wheat, oats, and barley. The barn has 94 tie stalls where we feed wet round bales, dry hay, and purchased custom formulated concentrate.

We were looking for an alternative to dry fertilizer and had tried several liquids, but we were not pleased with the results. In 1992 the then district manager introduced us to Growers and we tried a small amount on the hay fields. One of our biggest hang-ups was the cost of Growers compared to other liquid fertilizers, but I now realize you get what you pay for. In the spring of 1993 Larry Bixby, Jr. stopped by to introduce me to John Sensenig who had recently taken over as district manager. John went on to explain the quality, balance, and purity of Growers Nutritional Solutions. I was still reluctant to believe Growers could be that good, but I purchased a small amount again for foliar feeding.

In the spring of 1995 John approached me about becoming the Growers sales representative for the Lewis County, area and I reluctantly agreed, because by then Growers was starting to make sense to us.

Following a winter 1996 customer meeting we started feeding all the milking cows 2 oz. of Growers per day. At the same time we removed all the dry minerals except calcium, salt, selenium and vitamins A.D. and E. from the feed rations of all the milking cows, dry cows, and heifers. In December 1997 we increased to 3 oz. of Growers per head per day. All new born calves are started with 1/2 oz. of Growers per day. All heifers and dry

cows have free choice to Growers by using lick wheels. Dry cows receive no added salt; heifers receive 1/2 oz. salt per day.

We have used 3 methods of feeding Growers:

- 1) Currently we use a gallon jug with a dispenser pump.
- 2) TMR application - spray on 3 oz. of Growers per head per batch when loading the mixer with high moisture corn or other wet ingredient and thoroughly mix.
- 3) Metering into the watering line.

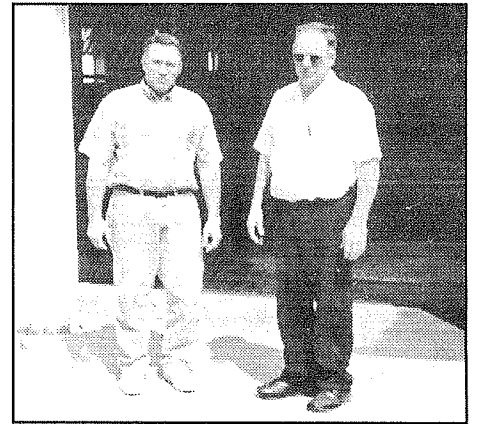
Before we started feeding Growers in early March, 1996 our February, 1996 herd average was 20,865#, 3.8 fat, 3.2 protein, 14.0 month calving interval, and the average body weight of all milking animals was 1190 pounds.

Our November, 1998 herd average was 23,399 pounds, 3.9 fat, 3.4 protein, and the milking animals averaged 1310 pounds. This is a 2534 pound increase in milk and a 120 pound increase in average herd body weight in two years and ten months. Current herd calving interval is 13.9 months. We milk 2 times a day with less than 2% of the herd receiving BST.

We did install a stray voltage system in October, 1996 and an ultra violet light in the water system in March, 1998. To be fair these changes have had a positive effect on overall herd increases, but in my opinion Growers fed as a mineral supplement vs. dry mineral has had the largest effect on vet costs and forage-to-concentrate ratio.

Vet costs in 1994 and 1995 on the dry mineral program were \$18,463.01. Vet costs in 1997 and 1998 on the Growers Program were \$13,572.55 - a savings of \$4,890.96. This amounts to a 26% reduced cost over a two-year comparison.

Our forage-to-concentrate ratio on the dry mineral program was; forage 40% , grain 60%. On the Growers Program as of December, 1998 our ration is 55% forage and 45% grain. This is an estimated cost savings in



Aaron Widrick on left and John Sensenig,
Growers District Manager for Central NYS

concentrate of \$8-\$12,000 per year. Grain costs effect these numbers.

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ON THE ROAD AGAIN - SPRING & EARLY SUMMER, 1999 HOPE TO SEE YOU

Growers Nutritional Solutions will set up and staff booths at the farm functions throughout the nation this year. It's a great time to stop in and review your fertilization program, hear about new developments at Growers or just chat with the folks who make it all happen - your friends and neighbors.

- March 26-28 '99 Pennsylvania Beef Expo
State College, PA
- April 9-10 N.E. Ontario Ag Conf. & Show
New Liskeard, ON
- June 29 - July 1 Michigan Ag Expo
East Lansing, MI
- July 13-15 Wisconsin Farm Progress Days
Lancaster, WI

FRANKLIN REPORT

By Wilbur Franklin, Director of Research
The Great American Hoax

Soil testing to determine fertilizer needs.

Unfortunately for farmers most soil testing has been used as a tool to push fertilizer sales. The real needs of the soil are not addressed.

On the other hand, the results of the Growers Soil Test, a no-charge service of the Growers lab, has no bearing on the amount of Growers Nutritional Solutions recommended for the crop.

85 Percent of the Growers test is to determine if the soil has enough calcium to react with other elements in the soil and to buffer toxins in the soil profile. With the other 15%, we determine whether excess magnesium is interfering with the true needs for calcium.

We then look at potash to see if it is too high in soils adding too much potassium for good quality forage production. At the same time we look at cation exchange capacity (CEC) to see how much base we have to work with. And lastly we will look at organic matter to judge how much salts can be buffered.

This means going to the field with your probe, soil bags, and two small buckets. Take samples from one or two fields you intend to apply limestone if needed. Take four to six plugs per field mixed in bucket No. 1 for topsoil and the same but deeper, 15" to 18", mixed for subsoil. Put a small amount of the mixed soil into bags labeled "field No. 1 topsoil" and "field No. 1 subsoil".

It is truly amazing, that a 50 year review of our testing documents a regular and ever increasing need for soil calcium additions, and when these requirements are met, farming profits improve. It is also interesting to know that our Growers Soil Test is compatible with the natural laws of chemistry, physics, biology, and plant physiology.

Our data shows a \$9.50 to \$11.00 return in crop value for every \$1.00 per acre spent on calcium which goes hand in hand with Marvin Gooding's 25 year limestone comparison in our result book. Granted his return is \$26.54 for \$1.00 per acre limestone investment, but I see nothing wrong with beating the average.

With very little success, farmers keep trying quick fix materials that are suppose to do a better and quicker job than calcium, but it is easy to see why they ignore the calcium our fore fathers learned to be profitable in the 17 hundreds.

It is because our supposed leaders in agriculture still have not defined the distinctions and benefits of different calcium sources. We have calcitic limestone which is high in calcium and low in magnesium, dolomitic limestone which is lower in calcium and higher in magnesium, hydrated or burnt limestone, and several by-product materials that can be used for agriculture. They scientifically analyze the materials but do not explain their uses and how they can profit farmers. All that is done

is to add scientific jargon which can only confuse many farmers.

As we sit on the side lines watching GPS develop, we see it proving our point that you don't need all that fertilizer. Nothing new. On January 4, 1969 Dr. J. Benton Jones, at the time a professor at the Wooster Ohio Research and Development Center, published an article in the Ohio Farmer Magazine about too much N.P. and K. being recommended and used. He was fired soon after the article appeared. The same idea of commercial fertilizer excesses was reaffirmed by Dr. William H. Mitchell, also a college ag professor, in an article he published in the March/April, 1984 issue of New Farm Magazine. He was more careful though. He waited until after he retired before releasing his findings.

Because the thinking of Dr. Jones and Dr. Mitchell was not followed we now have EPA developing restrictions on over-fertilization.

The following preface from an earlier book shows concern for this very problem. We endorse this thinking, which gives some insight into why the Growers Soil Program and Growers Nutritional Solutions are truly different from all the others.

PREFACE BY THE EDITOR

If a man has spent the greater part of his life as a teacher of agriculture and an experimenter, and has been a successful farmer at the same time, and has had the advantage of much travel, his opinions upon farm methods should be invaluable to his fellows. If, in addition to all this, he has had a philosophic turn of mind, and has persistently inquired into the reasons and results of all that he has seen, it would seem to be nothing less than a public misfortune if he should fail to leave some of his wisdom in permanent and consecutive form. At any rate, this has been my chief thought in persuading Professor Roberts to write this book. The book is, therefore, a personal one. It sets forth the author's philosophy of the means of maintaining the productivity of the land; and since the productive power of the land is the first and fundamental consideration in farming, it must follow that this book comes as near to being a treatise on agriculture as any single volume can be. It appeals to me with especial force, because it so well combines the best teachings of science with the philosophy of farm-practice. It is the ripened judgment of the wisest farmer whom I have known.

I confess that I have looked with some apprehension of recent years, for there is danger that this knowledge may overshadow the importance of accustomed farm-practice, and lead the farmer to demand specific rules for each perplexity and to depend upon the Experiment Station and the teacher for his farming. The most important mission of the Experiment Station, at the present time, is to lead the farmer to understand more fully the underlying reasons for the common things

which he does. It is not too much to say that very few farmers really know the philosophy of plowing. The Experiment Station can, for the most part, work out only general principles and methods, and the farmer must modify and apply them as best he can; for each farm is a local problem, and each farmer must be an experimenter. When this conception of the Experiment Station work is fully apprehended, the farmer should become more self-dependent; and the necessity of working out a philosophy of his own, and of giving more careful attention to every detail of the tilling of the land and the husbanding of his home resources, will become more and more apparent. The farmer must approach the problem of maintaining the productiveness of his land from several directions, for the subject is a large one. He can use King's book of rational science, and the present volume will aid him in approaching it from the farm side.

There are those who look for the time when agriculture shall be reduced to a rigid science, which shall be governed by a well-defined series of rules and precepts. But that time will never come! Happily, there is one vocation in which men engage which can never be bounded by methods or precedents, one occupation which is as elastic and untrammled and unconventional as the blowing of the wind, the falling of the rain, and the singing of the birds! The fact is that there is no science of agriculture. The occupation is a business and an art founded upon the interplay of many sciences, of which chemistry, botany, physiology, physics and climatology are chief; and these and all the business methods are coordinated by good judgment and skillful management. There can be no textbook of agriculture, as there can be of botany or physics. Many of the so-called manuals of agriculture are really agricultural chemistries; they treat only one subject out of the score or more which many be considered to be fundamental. Chemical analysis--although of the greatest value in given instances--cannot tell what the land will produce: it can only tell what it contains.

Farm-practice, therefore, is not the less important because we now have so much new light from science. It is a common saying that farmers are adhering too closely to the ways of their fathers, and the statement is undoubtedly true; and yet it must be remembered that we need not so much a revolution of farm-practice as we do an improvement of it. There is danger that in the bewilderment of the multitude of new facts, we forget fundamental reasons and the importance of understanding the common things. The farmer should be a philosopher. I like to think of him as having been so thorough and timely and resourceful with his work, that he can sit on the fence at least one day in the week and enjoy the fun of seeing things grow.

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GROWERS SURVIVES WISCONSIN DROUGHT

By Jim Halbeisen,
Assistant Director of Research

Ben Bechtel from Radisson, Wisconsin sent me pictures of two corn fields from his area. The neighboring fields have similar soil types, but they use very different fertility philosophies. The one approach is the Growers Program with high calcium limestone while the other uses the institutions' dry fertilizer and dolomitic limestone. Both fields went without rain from July 6 to August 10. The better looking corn was raised with Growers 10-20-10 starter and foliar spray and yielded 155 bushels per acre, while the drought damaged corn on dry fertilizer yielded 109 bushels per acre.

This is quite typical of the yield difference between the Growers approach and of the institution's in a very dry season. We at Growers Nutritional Solutions believe the heavy use of commercial fertility elements together with the higher amount of Mg found in dolomitic limestone creates a salt load in the soil environment that is harmful to the crop.

Many agronomists agree and report that water absorption becomes more difficult for plants in dry soils and in soils with higher salt concentrations. Dry soils inhibit the plant's water absorption by increasing what is called "matric potential". Higher salt loads in soils inhibit water absorption of plants by increasing what is called "osmotic potential". However, soil physicists have found through experimentation that in dry conditions the real problem is the lack of soluble calcium. Soil calcium is not only important for regulating water content in the plant, but it also controls the plant's absorption of other cations and anions as well. So, if the calcium content in



34 days no rain — Growers 10-20-10 & High Calcium Limestone.



34 days no rain — Dry Fertilizer & Dolomitic Limestone.

the soil is not high enough the plant will be stressed from the lack of water and from improper quantities of caustic ions absorbed. Thus, the lack of calcium explains the wilting and overall lack of vitality of the institution's field. Another problem also recognized by soil physicists is that soils high in K (potassi-

um), Mg (magnesium), or both, decreases the plant's ability to absorb calcium. So, going into a dry period on a soil overloaded with K and/or Mg, expect the plant's ability to absorb Ca to be reduced, and in turn, its lowered ability to absorb water and regulate nutrient uptake.

Franklin Report

Continued From Page 2
Cornell University
L. H. Bailey
Ithaca, NY March 1, 1897

The book got away from me, but it did not apply to today's agriculture. The Preface is important because it deals with our need to rethink our priorities in today's farming.

More farmers are starting to work with our Growers Program and in doing so, they are moving away from the high tech concept and returning to the fundamental wet process research that was pursued by Dr. V.A. Tiedjens and Dr. William A. Albrecht. Going back to the basics of the art of farming and adding a few fundamental laws of Chemistry, Physics, Biology, and Plant Physiology makes farming easier and more profitable. Healthier soils produce healthier crops and livestock. In addition, as Growers customers, they will be in good shape environmentally because they are not over fertilizing their crops.

EASTERN ONTARIO FIELD DAY

By Rodger Haggett

The Growers Field Day held August 19, 1998 on the family farm of Charles and Christine Forman of Seeleys Bay, Ontario, turned out to be a great success despite the distraction of exceptional weather for combining and straw baling.

Charles has been on the Growers Program since 1991 and it has proven to work very well for his cash crops and his 33 cow dairy operation which has been averaging over 70#/cow/day. Up until now the Forman's have been using dairy and poultry manure for their nitrogen needs, but this year, because of his cash crop expansion, he reluctantly had to purchase some extra nitrogen. To avoid that he is making changes in his operation. This year he seeded barley and under seeded with a red clover mix. At the time of our field day the clover was ready to chop. The barley had already been combined off. Charlie plans to take a cutting of the clover mix in the spring



Growers Field Day at Charles Foreman Farm

and hopes the residue will serve as his nitrogen source thus eliminating any commercial N needs for his no-till corn.

For our field day we dug a trench about four feet deep and found corn roots down as far as 38 inches. Charles averaged four tons of dried corn per acre with only about 4 gallons Growers on the seed and some nitrogen. He was unable to do any foliar feeding this year because of the excess rainfall.

The field of soybeans we looked at was not
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Value Of Feeding

Continued From Page 1

In today's modern dairy operations cull rate has reached a level of 25-40%. This high rate has become very costly due to the rapid turnover of herds every 2 1/2 to 4 years. Growers fed cattle live longer than the average which allow us additional heifers to sell for dairy replacements. Holstein cows don't reach full milk potential until 4-6 years of age, and the mature age of milking animals is where to most profit per animal is realized. Growers fed cattle can make this happen and are another opportunity and benefit to feeding Growers as a mineral supplement.

Since our Valmont Dairy started feeding Growers we noticed considerable reductions in the following herd health problems:

Retained placenta (Valmont Criteria is after-birth dropped within 24 hours or less. If not by then, it is considered retained) for normal calving (twins and other abnormal calving not included in these numbers). In 1997-109 calving - 6 didn't clean = 6% average. 1998-85 calving - 6 didn't clean = 7% average which is considerably below the Lewis County average.

Foot problems have been reduced; such as lameness, greasy heel, hairy heel warts, foot rot, swelling of leg joints. Other problems have been helped like cystic ovaries, occurrence of milk fever, ketosis, downed cows syndrome, relative digestive problems, and displaced abomasum. These improvements and other observed changes in our dairy herd

Eastern Ontario

Continued From Page 3

his best field, but it averaged 51 BU per acre. On his total of 80 acres of beans his average was 53.6 BU per acre at 11.8% moisture which would calculate out at 55.3 BU per acre at 15% moisture.

Many thanks to Growers Director of

we believe have occurred due to Growers quality, balanced nutritional, purity, and nearly 100% availability.

We find our cattle are healthier and have much less stress which reduces calving difficulties such as twisted uterus before calving, backward calves, calving assistance, and pre-fresh UDDER EDEMA. Valmont Dairy has observed a considerable reduction in this area. In some cases as much as 50% reduction. We find we must check calving dates because the animals will calve undetected due to lack of pre-fresh udder size. This benefit has many positive bottom line advantages such as reduced teat injury, lost center ligament, occurrence of mastitis, udder chaffing and sores. These benefits keep cattle in the milking string for many more years.

Manure reduction is best observed and understood from experience. Valmont Dairy has seen at least a 20% reduction in manure over the past 2 years. At the same time we observe cattle contentment, calmness, less nervousness, silky hair coat, brightness of eyes, and improvement in quality of hoof growth.

Preparing this report has been very good for me, because the feeding of Growers has had many accumulative effects which sneak up on you unnoticed. Looking back I'm realizing now the improvements Valmont Dairy has gained over the past 2 years and 9 months are due to the usage of product.

Looking to the future, component-pricing angle is due to take effect nationwide October, 1999. Healthy, balanced cattle will pro-

Research Wilbur Franklin and his wealth of knowledge for making this day the great success it was.

A special thanks to the Forman family for making their farm available, and to Charlie for sharing his success in the use of the Growers Program. He made a great contribution to the day.

duce higher component milk and higher milk production per cow.

Also, a note of interest is that on December 17, 1998 we doubled our 3 oz. feeding rate of 6 oz. to all high producing cows and 1st calf heifers. Early indications are favorable with increased milk production at currently 2-3 pounds per cow. We plan to continue the 6-oz. rate due to the positive results. According to our vet the fresh cows' uterus are properly draining out and are quickly getting back to normal size. They are coming in strong in heat 30 days or less after calving which is now normal rather than the exception and is another of the substantial benefits to feeding higher rate of Growers to recently fresh milking cows. Increase amounts of Growers fed to fresh cows above the 3-oz. rate can be determined by the quality of forage, level of production and understanding the Growers product. The best nutritionists available are the cattle standing in your barn. They are talking, but are we listening?

Using Growers as a mineral supplement has tremendous potential for profit in your herd.

The Growers Solution

Editor, Jennie Henry

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