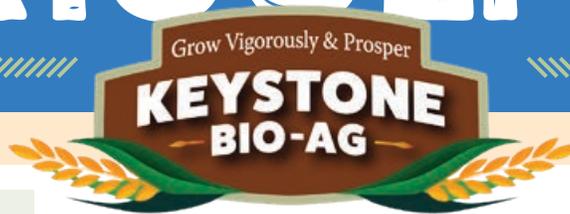


REGENERATING AGRICULTURE

A Keystone Bio-Ag Newsletter



Volume: 4 / January 2020

SEASONAL CALENDAR

JANUARY

- Order your Keystone Greenhouse Media
- 5% prepay discount ends January 28.

FEBRUARY

- For best service, get your recommendations now and order your products before our busy spring rush.
- Feb. 10: Dairy and cash crop Meeting with John Kempf at Solanco Fairgrounds, Quarryville PA
- Feb. 11: Produce and Orchard Meeting with John Kempf at Solanco Fairgrounds, Quarryville PA
- Watch for Garden Package Special.

MARCH

- Regular deliveries begin in Lanc. Co.
- If you haven't already, get that tight soil subsoiled once conditions are right.

On Reflections and Goals

Welcome, this finds us at the beginning of a new year: the end of another growing season. A time of thanksgiving, a time to give back, a time to reflect on the season just past.

Right now I am reviewing 2019 production goals, and see that expression sweet onions are the only crop that met and actually exceeded the goal by 33%. They produced 1000 boxes per acre, my goal was 750. This didn't just happen overnight, it took focus, planning, persistence, sap tests, and evaluation.

For the 3 years prior my goal had been to grow Quality consistently and wait to push for size until Quality is better understood, so those 3 years we got around 550 boxes of very sound onions but kinda small. Then last winter I decided - here goes, let's see how big they can get.

My next big project is focusing on Hay production. My goal is 10 ton per acre at 13% moisture. This year we were at 5 tons, half of acreage being new seeding.

The hay drier setup worked very well, we did all small bales from 7-10 acres at a time. Stacked them in the barn with a 4 foot crop drying fan at one end, leaving a 2 foot wide by 4 foot high tunnel then closing the other end with about 6 feet of bales and blowing air into the tunnel for about 8 days. We would cut one day and bale the next, and boy does it come out nice, green and clean and sweet. We completely sold out before 4th was ever cut.

We strongly encourage all of you to separate income per crop and the expense that goes with it. Then goal for next year, so you can review, evaluate, improve.

Because of limited space I can only hit the high points here, so feel free to call.



Samuel L. Zook

Hay barn-cured with fan



GROWING TIPS FOR HIGH PRODUCING, QUALITY TOMATOES

We get asked the question quite frequently, “What is the yield potential? And what are some limiting factors in growing high yielding tomatoes?” To answer the first question, I think we would all be surprised what the yield potential is on tomatoes. Take corn for example: corn has a genetic potential of 1100 bushels, and we harvest only 17-20% of that number. The very same holds true of tomatoes, so here is a list of things that I have observed in the field that we should class as high priorities if our goal is high yielding, quality tomatoes.

1. Management is the most important piece, which covers a wide range of very important decisions (which have a big impact on our plants) that we as growers need to consider, including but not limited to, variety selection, monitoring nutrients with sap analysis, weed control, mulching, subsoiling tight soil, etc. Always choose the most fertile fields on the farm, especially if building high tunnels or greenhouses, not just where it fits best. And make someone responsible for each crop: it can be easy for Dad or the farm manager to push certain crops on the back burner - in that case, make it a dependent's or an employee's responsibility, and offer a premium if it's a job well done.
2. Managing fertility is a huge factor as well, and I do believe that there is more than one right or wrong way to make fertility recommendations, but here is one example of a super good recommendation: do soil tests every year to monitor some of the basics, pH, organic matter, base saturation, etc. Apply a good dry blend pre-planting,

(ask your KBA consultant for specific recommendations) but here are a few things to pay attention to, especially calcium, the most needed and also the trucker of all minerals. We need potassium for fruit fill, and phosphorus, magnesium, and trace minerals for various other functions. Last but not least, we also need biology. Biology trumps chemistry.

We have been taught calcium versus potassium. Which is good, and which is bad? I believe the answer is neither one. Instead, the question is, how do we time these two minerals? Calcium release coming from soil is important for early plant / root development, and also for fruit quality, as up to 90% of the fruit's calcium absorption occurs at the cell division stage, which happens for 2 weeks right after blossoming and pollination. This is when most of the calcium enters the fruit. But if potassium is high, it lowers the calcium uptake.

Potassium is one mineral that we don't fully understand; it is very soluble and very competitive, but plants can't do without it, and the fruit is dependent on it for sizing, test weight, etc. If I walk into a tomato crop and plants are starting to look diseased and stressed, (which often happens at 2nd and 3rd cluster) a good, simple terminology is that the plants are dehydrating. Potassium is an electrolyte, therefore having a high energy response. If a person goes to the hospital (could be for multiple reasons), one of the first things they use is potassium.

Back to the point, how do we manage calcium and potassium in continuously fruiting crops? Here is one way:

- Lots of calcium (preferably releasing from soil, then spoon feeding with HoloCal) through the entire season. Keep boron and manganese levels adequate, and keep soil moist enough. Calcium and boron both move with water.
- When 2nd cluster is ripening, start adding some water soluble potassium sulfate 3-4 times per week, 2-3 lbs. per acre per application.
- When 3rd cluster ripens, take a hedge trimmer over the top once a week for 2-3 weeks (don't worry as much about calcium during these weeks) and keep pushing potassium sulfate for fruit size.
- When you stop cutting the new growth off, start pushing calcium and Accelerate (bloom stimulant), and lower the potassium rates. Watch temperatures as too high heat will restrict calcium, boron, and manganese in new leaves.
- Repeat the cycle as needed.
- For biology, add 1 qt. Rejuvenate and 1 oz. Product 10 per acre in the drip weekly.

A few notes: One thing I want to make clear is that lower rates and more frequent applications will give you more consistent fruit. Pick low humidity, sunny days to do pruning. Remove all clippings. This management protocol works best for indeterminate tomatoes. It can also be used for more crops, like vine crops such as squash and pumpkins.

- Alvin Peachey

DAIRY NEWS AND NOTES

Applause, to those of you who have weathered the last couple of years in the dairy business. Any more it needs to be approached more like a business, not as much just a way of life. Better milk prices would fix a lot of things. But in this article we will focus on things we can control at the farm level. I have a passion for good, well balanced, dairy cows. A cow will not out live her weakest trait. If you are milking cows, you might as well milk a good one. The difference between an OK cow and a good cow is big. Some consultants look at stalls, is each stall producing to its potential? Whichever way you look at it the question should be, what is the most limiting factor in bringing that stall to its potential? In my opinion too many times it is the lack of a well-balanced cow. Paying attention to detail should begin when selecting an animal to fill that stall. There are Holsteins, Jerseys, grazing, conventional, buying replacements or raising, the list goes on. In every category a well-balanced animal has a better chance at bringing that stall to its potential. How will you improve your chances in getting that balanced cow? The best tool that I know of at this time is, AAA, animal analysis association. Or work with someone that understands the triple A system, Stolhaven Genetics 1-888-672-4328 or Triple Hill Sires 1-855-955-2100. If you chose to use a herd bull, chose well as your choices will have a long term effect in your herd.

How feeding Xcite can benefit your herd: by increasing microbial protein in the rumen, allowing less as fed protein, the microbial protein that is formed in the rumen is a very high quality protein in that it supplies those amino acids needed by the cow. It requires less energy per pound of milk produced. That is one way to get a positive energy response by feeding Xcite.

Milk urea nitrogen (MUN) is an indicator of ammonia levels in the rumen. Excess ammonia is converted to urea in the liver - this all takes energy that could have been utilized in milk production, reproduction, or better body condition. This is why herds feeding Xcite experience extremely low MUN levels without losing production. Xcite has three different carbon sources, which will bind molds & toxins, Xcite will also stimulate rumen biology - offsetting the negative effect caused by molds & toxins. After feeding Xcite you will usually see more activity in the manure pit - more bubbling. Call your KBA Rep to see how Xcite could benefit your herd.

- Dan Stoltzfoos

GROWING TIPS



ROW CROPS

Use the Rejuvenate program to loosen soil. Subsoil if soils are tight. If pH is more than 6.3, Gypsum or Super Sequence may be a better fit than high cal lime.



DAIRY

We now have calcium silicate which is used as barn dry. Good for the fields. Grips nice in the cow stable. Feed Xcite if you have mold and mycotoxin issues.



PRODUCE

Do you have your 2020 production goals together? What were your yields last year? What were some of the limiting factors? Get your plan together now before your busy season.



ORCHARD

If you haven't done so already, get your dry blend spread according to a soil test. Keep in mind that calcium release must come from soil if you want superior fruit quality.



GREENHOUSE

Fix any sagging tables used to start seedlings. This will promote even watering and germination. Order your potting soil. Refer to seed catalogs for optimal germination temps.



GARDENERS

What's the use of having a garden if you don't do it right? Order a soil test, and use the KBA Garden Package. Make sure to subsoil tight soil. Gardens imbalanced with high potassium need NutriBlend.

FARM SPOTLIGHT: GROWING 25 LBS. TOMATOES PER PLANT



By using the tomato growing protocol outlined in this newsletter, this Pennsylvania farmer achieved growing 25 lbs. of tomatoes per plant, despite the fact that they were started a couple month later in the season than normal. When frost came, he said that with the fruit that was still hanging on, he believes that he could have achieved a whopping 40 lbs. per plant if he would have planted earlier. Quality was also superior.

ARTICLES INSIDE:

- **Of Reflections and Goals**
- **Growing Tips for High Producing, Quality Tomatoes**
- **Dairy News and Notes**
- **Farm Spotlight: Growing 25 pounds Tomatoes per Plant**

Our mission is to educate, encourage, and empower farmers to produce healthy crops by supporting them with the products and information needed to make regenerative agriculture successful.



430 Voganville Road
New Holland, PA 17557
717-354-2115

Please contact us if you no longer wish to receive our quarterly newsletter.

Presorted Std.
US Postage
PAID
Lancaster, PA
Permit #1385

— DEALER LIST —

Dan Stoltzfoos
717-661-7343

Lebanon • Northern Chester
Also does Dairy consulting

Alvin Peachey
717-935-2413

Franklin • Huntingdon
Juniata • Mifflin • Perry

Dennis Keener
570-412-2195

Columbia • Lycoming • Montour
Northumberland • Union Counties.

Willow Bank Seeds
814-933-9720

Clinton • Centre County
(Kings Agriseeds Dealer)

Clarence Brenneman
814-634-9168

273 Pleasant Hill School Rd.
Meyersdale, PA 15552

2020 Winter Meetings

The Regenerative
Agriculture Seminar will
be held on Feb 10 and 11 at
Solanco Fairgrounds.

Speaker: John Kempf

Watch your mailbox for a
postcard with more details.

THANK-YOU!

to those of you that took
advantage of the 10% prepay
program. It distributes
our work load and makes
deliveries more efficient. We
passed the savings on to you.

- The KBA Team

2020 Crop Programs Available

- Alfalfa and Forage
- Asparagus
- Beans, Peas
- Chard
- Celery, Celeriac
- Cole Crops
- Eggplants
- Field Corn
- Garlic
- Hemp
- Greens, Lettuce
- Onions
- Peppers
- Potatoes
- Rhubarb
- Root Crops
- Strawberries
- Sweet Corn
- Sweet Potatoes
- Tobacco
- Tomatoes
- Tree fruit
- Vine Crops
- Zucchini

Please contact your local consultant.

For garden goodies with

**Flavor and Nutrition, Try
the garden package**
on special in February.

More details coming in the mail.

**People love the taste of the
vegetables grown with the
KBA garden package.**

Call KBA to
discuss using
Cycle or Cycle
Plus for your
2020 dry corn
starter.