

A Friend of Nature Since 1946

**Fertrell®**

## Notes & Quotes

### Notes from Dave Mattocks

**W**atching the leaves turn color and fall is just one reminder that another season is coming to an end. Fruit trees and gardens will become dormant in many areas to regroup and prepare for another growing season. I marvel at how these things happen with seemingly the right timing. Life will come again to the perennial plant. The seed will sprout, bringing forth life to the species yet another time. Increased yields ensure that there will be sufficient seed for ongoing reproduction.

There are many marvelous wonders displayed before us in every season of life. Too many times we are too busy to appreciate the miracle of life and the provision made to perpetuate it. We are rapidly approaching the time set aside for giving thanks - a time that our early forefathers felt was important to acknowledge and celebrate prior to the start of the new growing season ahead. It is a good time to reflect back over the year and consider all that has been our lot.

Many may have experienced great losses in the past year yet have found the strength to carry on. Faith is the key to moving on in life, knowing that there is a power we can draw from when heartaches come. This power can carry us to new heights and achievements.

Healthy, positive attitudes provide us with the needed motivation to accomplish preset goals. Looking for any and all gains will diminish the negatives and open doors to higher achievements. Too often we fail by not being grateful for who we are and what we have experienced. Reality is that if we are appreciative of good happenings, more will follow.

If we will adopt healthy habits and attitudes, our lives will be productive and satisfying. As ones who make continuous contributions to our society, let us find a cause to be thankful; thankful for the harvest, thankful for life, sowing seeds that will generate peace, health and happiness.

At this time I personally would like to wish you and your family a joyous, peaceful holiday season, I would also like to thank you for your loyalty throughout the past year.

"It is a good thing to give thanks unto the Lord and to sing praises unto thy name, O most High!" Ps 92:1



**November / December 2015**

### INSIDE THIS ISSUE

<b>Field Trial Summary, Cover Crop Comparison:</b>	2-4
<b>PCO Awards Outstanding Organic Leaders</b>	5
<b>News from the front</b>	
<b>Unexpected Weather Closings</b>	
<b>Open House Success</b>	6
<b>Marketplace</b>	8
<b>Welcome New Dealers</b>	
<b>Deliveries in wintry conditions</b>	9
<b>Upcoming Events</b>	
<b>What Is So Important About Boron?</b>	10
<b>Are You Looking For Something A Little Different?</b>	12
<b>Highly Pathogenic Avian Influenza (HPAI)</b>	13
<b>It's Not about Fertilizer</b>	14
<b>Shipping Memo</b>	15
<b>Holiday Hours</b>	



## Field Trial Summary, Cover Crop Comparison: by Casey Rogers

### Overview:

This summer I had the opportunity to run field trials based on the most common questions our customers have posed. By far, the most common question asked was “What cover crops work best for poultry”? So we gathered up all the cover crop suggestions, figured out which ones would grow (and would keep for multiple weeks) here in south central Pennsylvania, and started at it. We chose 4 cover crops and tried to represent multiple geographies and heat zones in order to be as geographically diverse as possible. We ended up planting an alfalfa/orchard grass combo, turnips, kale, and buckwheat.

We started with 80 chicks in the brooder all being raised on an organic 20% broiler feed. At 3.5 weeks, the birds were moved to pasture and split into four equal groups. Each group was placed in a 4.5 x 8 ft. moveable field pen atop a specific cover crop that would act as their only source of pasture for the duration of the trial. The birds were given unlimited access to fresh feed, water, and grit and were moved daily onto a fresh section of cover crop. During July, which was largely when these birds were out on pasture, the temperature averaged 85 degrees F, with the lowest being 71 degrees and the highest being 93 degrees. Overall, the cover crops made it through even the hottest points of the summer; however the turnips in particular did start to show signs of leaf burn.

Out of the four groups, the kale group was the most successful both in terms of profit as well as overall personality of the birds. That group utilized more forage and less bagged feed in order to produce a high-yielding carcass weight and a greater profit margin. However, it should be noted that kale is an annual so it will need to be replanted every year, whereas the alfalfa/orchard grass is a perennial mix so farmers can input the labor on the first year but then get up

to seven years of regrowth. This should be taken into consideration when deciding which cover crop was, in fact, more successful. Farmers can get a regrowth with kale in the same growing season after the chickens have gone through it, but they will still have the additional labor costs on an annual basis.

The cost of production includes the cost of the 20% broiler feed (\$27.53 / 50 lb bag), the current cost of water per gallon in Bainbridge, PA (\$0.011 / gallon), an assumption of 40 minutes/day in the brooder and 15 minutes/pen/day at a rate of \$12.00 per hour of labor (a time log was kept throughout), and an average sale price of \$4.00/lb. carcass weight. For labor, it was determined to cost \$2.40/bird in the brooder and \$4.20/bird in the field with a field prep cost of \$10.00/row. The cost of the cover crop seed was determined to be insubstantial to the overall cost analysis (the maximum cost was 5 cents/bird for this scale). The Feed Conversion Ratio (FCR) is the amount of feed consumed to gain 1 lb. of body weight. It is more important to look at the FCR for carcass weights than it is live weights because the carcass weights are what producers get paid based off of. The biomass was calculated based on samples pulled from each pen before and after the birds had access to the forage, then averaged to represent the entire allotment of the field that the birds had access to. This was then divided to show a per bird consumption basis of each forage. The birds were 52 days old when processed (24 days in the brooder, 28 days in the field). The table below shows the average per-bird numbers for the trial from the brooder to processing.

### Biomass:

In terms of biomass, the cover crops varied significantly as to what was left. The alfalfa grass was left largely intact minus the top leaves being clipped, although there were patches where the grass had been



PER BIRD	Alfalfa/Orchard Grass	Turnips	Kale	Buckwheat
Feed	9.33 lb.	8.65 lb.	8.67 lb.	8.89 lb.
Water	19 gallons	20 gallons	21 gallons	19 gallons
Live Weight	5.50 lb.	5.60 lb.	5.38 lb.	5.32 lb.
Carcass Weight	4.25 lb.	3.88 lb.	4.20 lb.	4.00 lb.
Weight Difference	23%	31%	22%	25%
FCR (Live)	1.69 lb.	1.54 lb.	1.61 lb.	1.67 lb.
FCR (Carcass)	2.19 lb.	2.29 lb.	2.06 lb.	2.22 lb.
Cost of Production	\$12.46/bird	\$12.09/bird	\$12.11/bird	\$12.20/bird
Profit	\$4.54/bird	\$3.43/bird	\$4.69/bird	\$3.80/bird
Forage Consumption	0.20 lb.	1.14 lb.	1.57 lb.	1.80 lb.
Biomass (Total)	18.76 lb. Before 14.84 lb. After	24.64 lb. Before 2.84 lb. After	38.64 lb. Before 8.68 lb. After	37.52 lb. Before 3.08 lb. After

completely removed. Opposite this, the turnip plot was turned into a virtual mud pen daily. The kale still had significant amounts of forage left, though it was obvious the birds thoroughly went through and clipped most of the bigger leaves. The buckwheat flowers and leaves were all eaten, so only the stems remained and those were matted down on the ground. The forage consumption numbers listed in the chart above are estimations based on what was observed. There is no way to quantify whether these numbers are accurate, so the numbers are considered educated guesses based on the numbers that were recorded before and after the chickens had access to the paddocks.

**Soil Impact:**

The impact to the soil also varies with each cover crop. I asked one of our agronomists here at Fertrell, Dan Dalton, about the impact of the cover crops on the soil after the chickens had been run through them and here's what he had to say: The alfalfa/orchard grass will have added nitrogen and carbon to the soil, as well as supported microorganisms through root die-off after grazing with chickens. It will have also held onto, and likely helped to breakdown, the manure deposited by the chickens. Additionally, it will have prevented ero-

sion and helped to suppress weeds. The turnips will add carbon to the soil as well as gathering/retaining/releasing nitrogen, phosphorus, and potassium in the soil as they decompose. They will improve the soil tilth by aerating the soil with their tap roots and will help to suppress pathogenic nematodes and weeds when they were alive. The kale will have added carbon to the soil and supported microorganisms through root die-off after grazing. The stems will be a nice source of biomass/organic matter and will help to bind some of the nutrients from the deposited manure. Kale is also good at suppressing soil pathogens and will have prevented some weeds from developing, especially since there was a good canopy of leaves. Finally, the buckwheat will have added carbon to the soil and supported microorganisms through root die-off after grazing. The stems will be a nice source of biomass/organic matter and will help to bind some of the nutrients from the deposited manure. Buckwheat is very good at solubilizing phosphorus and there will be some residual P that is left in the roots and stems that will be available to soil microbes and future crops. In addition, it also scavenges potassium from the soil, making it available to future crops. Buckwheat is excellent for suppressing mid-summer weeds through canopy cover, which



## Field Trial Summary, Cover Crop Comparison con't: by Casey Rogers

prevents weeds' seeds from germinating. It is also an excellent source of nectar for pollinators.

### Applying Scale to the Trial:

In order to apply this study to a larger farm scale, you must consider the total area and how labor, etc. would differ if you were looking at this based on an entire acre instead of just a small plot for one field trial. To this point, the alfalfa/orchard grass combination appears to equal itself with the kale group. Considering labor, acreage and fertilizer inputs, the alfalfa/orchard grass combo would need the labor in year one. However, after this the field would require significantly less time and input to regrow annually. The kale group requires more inputs up front and would require replanting every year. Both groups regrow after the chickens are run through them, however the kale would only be expected to regrow once or twice during a season whereas the alfalfa/orchard grass would be able to regrow up to 6 times per season. Applying this to raising chickens, in theory you could run 2-3 groups of chickens on the same plot of kale throughout one season; however you could run up to 6 batches of chickens on the alfalfa/orchard grass combination. It may be that if you are utilizing a small amount of acreage for a larger amount of birds, the alfalfa/orchard grass combo works better.

In addition to the crops themselves, the cost of raising birds with the alfalfa/orchard grass combination was only slightly higher than raising the kale birds. While they did take more grain feed, the carcass weights were very similar in the end, and therefore, the profits were very close. This indicates that on a larger scale, your profits would most likely be similar using either cover crop once labor was taken into consideration.

### General Observations

Of note was the personality of the birds in the various pens. The birds in the alfalfa/orchard grass group had less protection from the sun and were noticeably hotter than the other groups. They were also the muddiest group of chickens and the least likely to get excited about moving forward to new pasture. The turnip group loved the bugs that came with the turnips, however it is undetermined if they really were excited for the turnips themselves, particularly in the latter part of the trial when the turnips began getting leaf burn. The kale group was easily the most excited group to move forward on a daily basis, and they were also one of the more vocal groups when I approached the pen. Finally, the buckwheat group loved making 'hidey-holes' in the buckwheat stems as soon as the pen was moved to fresh crop. Granted, that was my personal least favorite pen to have to move because by mid-summer, the buckwheat was as tall as my waist. I eventually had to trample the outer edges of the buckwheat down in order to be able to pull the pen on top of it. The buckwheat birds were the cleanest of the chickens by far though, with the buckwheat acting almost as a slatted floor that allowed many of their droppings to hit the soil without getting on the birds.

### Follow-Up

Future studies will aim to assess a different batch of cover crops, study the effects of trap crops in relation to chickens, or start to experiment with various cover crop blends. If readers have any questions on the process or the results of this trial, please feel free to email Casey@Fertrell.com or call the Fertrell office at 800-347-1566 ext. 224. For photos of the trial set-up, the birds in the various cover crops, and the processing day for this group, please visit the Fertrell Facebook page.

## PCO Awards Outstanding Organic Leaders

PCO hosted its 2015 Annual Meeting and Awards Ceremony this year at the PA Organic FarmFest and recognized those who have contributed so much to further organic food and farming in Pennsylvania and the mid-Atlantic. Pennsylvania's Deputy Secretary of Agriculture Hannah Smith-Brubaker set the stage and led the awards ceremony followed by a keynote presentation by Executive Deputy Secretary of Agriculture Michael Smith, who spoke on trends and opportunities for organic food and products in the marketplace.

2015 Award recipients include: Landie's Candies, Outstanding New Organic Processor Award; Noah & Rebecca Peachy, Outstanding New Organic Farmer Award; Sara & Ned Fogelman, Going the Extra Acre Award; Maple Hill Creamery, Sustainability Award; Dickinson College Farm, Organic Research and Education Award; Farmer's Pride, Inc., Outstanding Organic Producer Award; Trickling Springs Creamery, Outstanding Organic Processor Award; Eric Burkhart, Outstanding Volunteer Award; Conklin Farms, Inspector Appreciation Award; Profeta Farms, Staff Appreciation Award; Al Johnson and Brian Magaro, Hall of Fame Award. 2015's PCO Annual Award winners full biographies are posted on our website at [paorganic.org/awards](http://paorganic.org/awards).



## News from the Front:

THANK YOU!

We want to thank all of our customers for the new and/or continued business this past year. It is your loyalty and success that keeps us in business and provides jobs for our employees. We thank you and hope you had a bountiful harvest.

We also want to thank all attendees for taking the time to visit our open house in September. It was YOU who made it a success! It was nice seeing everyone.

In the upcoming months, our sales staff will be out of the office at trade shows and out on the road more often.

We will appreciate your patience if you are not able to reach just the person you called for. Someone else may be able to assist you. (Or you may leave a voice message).

Please check our Fertrell face book page as well as this newsletter for meetings in your area.

---

## Unexpected Weather Closings:

For the safety of our employees, we will be closing our plant and office on days when road conditions are unsafe due to inclement weather. Please do leave a message on our answering service to enable us to get back to you as soon as possible.

**Our staff's phone extensions are:**

**Animal nutrition :**

Jeff Mattocks ext 229, Casey Rodger ext 224

**Agronomy:**

Dan Dalton ext 256, Monica Pape ext 255

Orin Moyer ext 227

**Local Sales :**

Don Brubaker ext 225, Seth Epler ext 222

**Orders:**

Lynn Hartman ext 230, Beth Knaub ext 223

Theresa Tredway ext 221

## Open House Success: by Seth J. Epler

First of all, Fertrell would like to extend a huge thank you to all who were a part of our big day. From Florida to Indiana to Washington, around two hundred people from all over the map visited Fertrell's home base this past September. Despite monsoon-like rains, Fertrell's first open house in quite some time was a huge triumph. There were plenty of puddles (and a few vehicles that needed to be pushed out of the mud), but that didn't stop the fun!

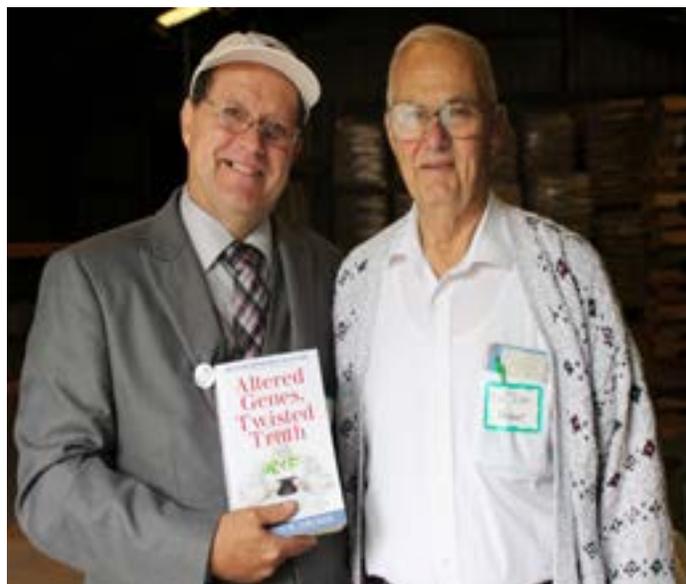
The day started off with a meet and greet of all the Fertrell staff. There were tours of all our facilities to show off the fertilizer as well as the mineral supplement lines. Also, there were field walks focusing on our pasture-raised poultry and hay trials. Our visitors also had the delight of meeting with a few vendors who were there to lend their support. Organic Valley, GMO Free Pa, and the American Pastured Poultry Association were in attendance to promote their missions and get to know the Fertrell family.

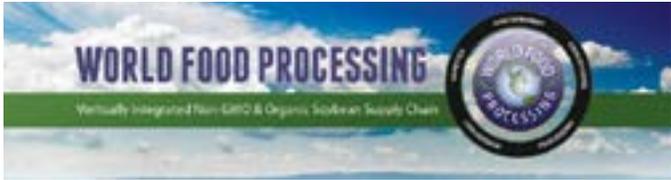
After that, the rains started falling, and they fell hard and fast. But that was just fine, because it was just in time for everyone to sit down and listen to the first guest speaker of the day, which was Dr. Don Huber. Dr. Huber is a plant pathologist and focused his presentation on his research on GMOs and the harsh effects that they, and the chemical sprays that come along with them, are having on the world we all live in. As members of a community that is opposed to GMOs and Roundup & other chemical sprays, this presentation helped us all open our eyes to some of the more scientific aspects of GMOs and the damage that they are causing to soil and livestock.

After a delicious lunch of Organic Prairie grass fed hot dogs, graciously donated by Organic Valley, we all settled in to listen to Dr. Richard Olree for the second part of the day. Dr. Olree provides nutritional consultation to people all over the world.

This includes much time spent with some plain communities in his home state of Michigan. He focuses on trace minerals, or more importantly the lack of them, in the human body. He then continued to go into how the food that is consumed, much of which comes from GMO ingredients, can greatly effect human health. Again, his presentation fell right in line with the concerns our organic agricultural community has with current conventional farming practices. There are a lot of reasons why we believe in the natural and organic way of agriculture. And both of these speakers helped reinforce all of these beliefs.

Once again, Fertrell would like to express our gratitude to everyone who took their very important time to join us at our open house. Thanks to both Dr. Huber and Dr. Olree, GMO Free Pa, Organic Valley, APPA, and to the whole community of organic agriculture and all of its supporters. I hope everyone had as much fun at Fertrell's open house as we all did, and that everyone has dried out by now! Thanks Again!





World Food Processing is the leading non-GMO and organic soy, pea and corn breeding company, vertically integrated into procurement, grain conditioning, ingredient processing, and food formulations.

Our Feed Ingredients Include:

- Non-GMO Soybean Meal
- Organic Soybean Meal
- Non-GMO Corn
- Non-GMO/Organic Soybeans



Contact us today at 507-263-3779 or via email at [afrescoln@worldfoodp.com](mailto:afrescoln@worldfoodp.com)!



DVD on Diversifying Pastured Poultry Production  
5 Disc set

Topics Include:

- Duck Production
- Guinea Hens
- Turkey Production (2 discs)
- Special Nutritional & Health Needs for Waterfowl, Turkeys & Guineas

Order online at [apppa.org](http://apppa.org). \$35 including shipping.



PO Box 85 | Hughesville, PA 17737 | 888-662-7772

NATURAL TRACE MINERALS



**REDMOND**  
**NATURAL**

**OMRI™**  
**Listed**

*100% Natural*  
*Over 60 Trace Minerals*

Real Results. Naturally.™

[www.redmondnatural.com](http://www.redmondnatural.com) **1.866.735.7258**



## The Farmer to Farmer Marketplace

### Hay, Forages, Grains and Livestock:

**PCO certified Feeder pigs** - 8 weeks old, Duroc- Yorkshire crossed. Call 610.488-7673 (T0915)

**Young milking goats** - ½ Nubian , also young billies several months old; 1 Nubian billy out of reg. herd 3 years old. Stephen F Stoltzfus Sr, 1055 Blain Road, Blain PA 17006 717.536.3122 (T0915)

### Red Sexlink layers raised on pasture

Contact: Stephen F Stoltzfus Sr, 1055 Blain Road, Blain PA 17006 717.536.3122 (T0915)

**Tamworth Feeder Pigs** - Owens Farm in Sunbury, ready to go in October and November. Born on pasture from pastured sows. No tail docking or needle tooth clipping. Tams do great in winter. Give them shelter, water (open dish is fine: they don't tip it in cold weather), and bedding, they'll weather all conditions. Purebred, not registered. \$125 ea. 570-286-5309 info@owensfarm.com. (T0915)

### Equipment:

**Poultry Processing Equipment** - Ashley, Pickwick, Featherman, Poultryman pickers and salders. Vacuum packing machines, shrink bags, knives, kill cones and any equipment for poultry processing. We ship anywhere; Jim McLaughlin, Cornerstone Farm Ventures, Norwich, New York 607.334.2833 or on the web at [www.chickenpickers.com](http://www.chickenpickers.com) (P0107)

**Tea brewers** - one is a 275 gal, never used, all parts included. The second one is a 75 gal, used some. Both are in excellent condition. For information contact Alvin Fisher 717.847.3397

**Barley Sprouting System** - 500 - 600 lb capacity. Perfect for small dairy or other animals. Heating, Watering and fan all goes along \$2900 or make offer. Phone 610.806.2287 (T0915)

**Manure pack ripper** - aerator \$1000 Phone 610.806.2287 (T0915)

**Microsystem for sprouting barley.** New condition. Four tiers of six-foot channels. Can sprout 60 pounds of feed per day. \$1400. Call 717.847.0072 to inquire. (T0715)

---

## Welcome New Dealers!

**Cottonwood Farm LLC** - 755 Locust Lane, Tuscumbia, AL 35674, 256.762.1760 [cottonwoodfarm14@gmail.com](mailto:cottonwoodfarm14@gmail.com)

**Powell Feed & Milling** - 181 West Main St, Green Forest, AR 72638, 870.438.4608

**Marion County Feed** - 801 Hwy 62 West, Yellville, AR 72687, 800.279.5646

**Powell Feed & Pet Supply** - 123 N Olive St, Harrison, AR 72601, 870.741.5634

**Powell Feed & Fuel** - 344 Hwy 21 North, Berryville, AR 72616, 870.423.4245

**Powell Farm & Home** - 1629 East Main St, Siloam Springs, AR 72761, 479.524.6175

**Powell Feed & Fertilizer** - 9095 Hwy 62 East, Flippin, AR 72634, 870.453.4400

**Powell Huntsville Feed & Milling Inc.** - 304 Labarge Ave, Huntsville, AR 72740, 479.738.6814

**Four Seasons Landscaping** - 231 Metcalf # 101, Avon, CO 81620, 970.390.9145

**Inland Bays Garden Center LLC** - 38320 Muddy Neck Road, Frankford, DE 19945, 302.539.1839  
[ibgardencenter@yahoo.com](mailto:ibgardencenter@yahoo.com)

**Pastured Life Farm** - 6944 210th Place, O'Brien, FL 32071 386.269.0580, [pasturedlife@gmail.com](mailto:pasturedlife@gmail.com)

**Mervin Creek Organics** - 1906 W US Hwy 2, Gulliver, MI 49840, 734.276.9932, [wlee0463@yahoo.com](mailto:wlee0463@yahoo.com)

**Woodside Farm & Feed** - 4171 N 39 Rd, Manton, MI 49663, 231.824.9447

**Oakleaf Flower & Garden**, 1541 S 4th Street, Highlands, NC 28741, 828.526.8000,  
[oakleaf@oldedwardsinn.com](mailto:oakleaf@oldedwardsinn.com)



**Silver Star Excavating and Landscaping LLC** - 285 Mishler Road, Suffield, OH 44260, 330.699.9186 ohjphillip@gmail.com

**Sana View Farms** - 280 Roaring Run Road, Champion, PA 15622, 724.417.6695, janest@sanaview.com www.sanaview.com

**Bonte Co.** - 2314 Bliss Ave, Chattanooga, TN 37406, 423.421.2543, stevebontecoe@gmail.com

**Golden Oak Milling Company** - 325 W Reynosa Ave, De Leon, TX 76444, 254.893.2025 Kcaraway@cctc.net

**Henpecked Farm LLC** - 20253 Teman Road, Beavertown, VA 23015, 804.855.4087, phfarmandfeed@gmail.com

**Valley Springs Farm** - 4834 Sweet Springs Valley, Gap Mills, WV 24941, 304.772.3099, vsf@pcfremail.com

## Deliveries in wintery conditions

### Local deliveries:

For the safety of our drivers, we will not attempt to deliver to an unsafe lane.

Please open your driveway wide enough to allow the truck ample room to enter, turn around and exit your farm.

Please remove or mark any obstacles that may get covered by snow, thus causing damage or injury.

If necessary, mark ditches, culverts and lane edges to avoid getting stuck in soft ground.

If possible, have some kind of material on hand to provide traction in the event of icy conditions.

### All Deliveries:

With the possibility of icy roads over the next several months, please consider ordering enough product for an extra week, should wintery weather and road condition delay trucking.

Thank you!

## Upcoming events:

For additional events which were not available at time of press, please check the Fertrell Facebook page --- Thank you!

**November 6th - 8th 2015** Maine Farmers Exchange conference, Point Lookout Resort, Northport, ME info: mofga@mofga.org or 207.568.4142

**November 6th - 8th 2015** Carolina Farm Stewardship Assn. Conference, Durham, NC Info: Info@carolinafarmstewards.org or 919.542.2402

**November 13th 2015** - RI Pasture Raised , South Foster Volunteer Fire Company, Foster , RI

**November 18th 2015** Turkey Processing 600 N 2nd Street, Bainbridge, PA 17502. Lunch will be provided. \$20.00 registration fee per person. Space is limited, call 800.347.1566 to register. Wear work clothes & closed-toed shoes!

**December 2nd - 4th 2015** - 8th Annual Young Farmer Conference, Stone Barns Center for Food and Agriculture in Pocantico Hills, NY Info: yfc@stonebarnscenter.org or 914-366-6200 x134 Casey Rogers & Jeff Mattocks, speakers

**December 9th - 11th 2015** - 42nd annual Acres USA Conference, Windham Grand, 600 Commonwealth Place, Pittsburgh, PA, 15222 Info: kathy@acresusa.com or 512.892.4400

**December 12th - 15th 2015** - PA Organic Conference, Harrisburg PA

**January 8th 2016** - Poultry Producers Meeting, Miller's Natural Foods, 2888 Miller Lane, Bird In Hand PA Please RSVP 1 week prior to meeting dates by calling 1-800-347-1566



## What Is So Important About Boron? by Dan Dalton

As researchers and agronomists have explored the importance of various macro and micronutrients, it has become obvious that plant nutrition is more complex than was previously thought. One such advance in this area has been the recognition that boron plays a very important role in the health and function of crops. While only a small amount is necessary, maintaining appropriate levels can help boost yields and quality.

Within the plant, boron provides for several key functions. These include:

1. balancing sugars and starches
2. translocation of sugars, carbohydrates, and potassium
3. pollination and seed production
4. cell division, nitrogen metabolism, protein formation
5. cell wall formation
6. cell membrane function
7. maintaining proper internal water balance

When we look at each of these functions, it is easy to understand that having enough boron in our soils is key to growing healthy crops. Looking at the list above, we can see that much of the important work of moving resources through the plant (numbers 1 & 2) are tied to boron, while the overall function of plant cells (numbers 4 thru 7) also need boron to work properly.

We know how important boron is in the soil, but how much of it is actually in the soil, and how can we get it to our plants? Total soil boron levels vary greatly from location to location, but levels typically range from 20 to 200+ pounds per acre (10-100ppm). Unfortunately, most of this is tied up in moderately or highly insoluble minerals and is not available to plants. What is available to crops is in the form of inorganic borate, which is attached to calcium, magnesium, or sodium or is in the form of decomposing organic compounds.

It is also important to know that boron can be made more or less available through the conditions in the soil. A pH of 7.0 or above will reduce the availabil-

ity of boron, as will a pH below 5.0. Leaching from heavy rainfalls and low soil moisture from periods of drought will also reduce the accessibility of boron to your plants. One of the biggest pools of all nutrients in your soil is soil organic matter (SOM). Low SOM, especially on coarse or sandy soils, often leads to little or no boron availability to plants. Signs of boron deficiency typically can appear in the growing points - the flowers and fruiting parts of the plants. In alfalfa, boron deficiency will show up as yellowing in the young leaves, while in corn it may result in poor pollination.

Several crops are highly responsive to boron applications. They are listed below. The bolded crops are the most responsive to boron.

- Field crops: Alfalfa, clover
- Tree crops: Apples, Citrus, conifers, peaches, pears
- Vegetable crops: **Beets**, broccoli, Brussel sprouts, cabbage, carrots, **cauliflower**, **celery**, corn, lettuce, onions, peanuts, sweet potato, tomato, **turnip**

While boron is essential for plant growth, it is also possible to have too much of a good thing, and with boron it can be easy to add too much. Toxicity can occur below 50 ppm in sensitive crops, while tolerant crops may be unaffected up to 200 ppm. It is very difficult to spread boron as an individual nutrient, particularly in dry form. To ensure that it is evenly spread, it is best to include a boron application with other products that have a greater volume, such as dry fertilizers. If you find yourself with toxic levels of boron, it is easiest to grow tolerant crops and allow rainfall to leach away the excess nutrient back to sufficient levels over time.

If you are running low and have a soil test to show this, we can provide our standard blends with increased amounts of boron to help correct a shortage. For those who need to foliar-apply boron, we also offer 3% liquid boron that can be applied to crops.



**Fertrell**

**Special Discount  
until the end of 2015!**  
**6% off** BY NOVEMBER 30  
**5% off** BY DECEMBER 30

# Fertrell Seed Corn

## Hybrid Seed Corn For Today's Farmer

*Superior Genetics from the  
oldest name in the Industry.*

*Please call for a dealer near you.*

The Fertrell Company ▪ 800-347-1566 ▪ [www.fertrell.com](http://www.fertrell.com)

## Are You Looking For Something A Little Different? By Don Brubaker

You have laying hens, and your customers are telling you that they have friends that would like to buy your eggs but can't because they are allergic to chicken eggs. Do you remember ever hearing that there is a silver lining in every situation? Why not try quail eggs? Quail are smaller birds that eat less feed and produce a smaller egg. And people with an allergy to chicken eggs can eat quail eggs. With their higher price tag, it may well be the opportunity that you are looking for.

### Breed

So where do I start? What is the best breed? Everywhere I turn, Coturnix is mentioned as being great layers. You could say that Coturnix is like the Cornish Cross of broiler breeds. There are at least six breeds of quail that fall under the breed name Coturnix. All differ in size and color -- British Range, Tuxedo, English White, Manchurian Golden, Pharoah D1 and the Australian Speckled Fawn. Of these, the Pharoah D1 is the best egg layer. Coturnix are not as flighty as some of the other breeds, so their housing will not be as dusty for you. These birds will start laying at 6 to 8 weeks of age.

### Housing

Be sure to provide at least 1/2 sq. ft. per bird on wire and up to 2 sq. ft. on shavings with adequate ceiling height to prevent injury to the birds. Most producers recommend a ceiling height of 8 to 10 ft. Floors can be made of wire mesh as long as the spacing is no more than half inch squares, or you can just use shavings on a concrete floor. Pen sizes and shapes can range from small rabbit cages to large pens with outdoor access to grass. Just keep your outdoor access covered so your quail will not fly away.

### Egg production

If you are looking to have fertile eggs for meat pro-

duction and/or replacement stock, you should maintain a three-to-one ratio of female to male birds. Females will lay up to an egg a day depending on the time of year and light conditions. Quail breeders should provide their birds with 16 to 17 hours of light daily for the best results.

### Feed and Water

Quail should be started on a 28% ration up until they are six weeks old. They should be grown on a 17% ration until they reach breeding age and will do just fine on an 18% layer ration. Starter size grit should be offered at all times to help with digestion along with aragonite for egg shell quality. Water is your single most important nutrient - keep it clean at all times. The feeder and waterer style is simple; just use Cornish Cross chick starter feeders and waterers.

### Egg Quality

It takes five quail eggs to equal one chicken egg but on the bright side, they are five times more nutritious. Quail eggs can be eaten raw, fried, and pickled, to name just a few ways you can enjoy them.





## Highly Pathogenic Avian Influenza (HPAI)

There have been several meetings across the state on HPAI and its potential to affect Pennsylvania poultry farmers. This virus took out roughly 10% of the laying flock in the US last year as well as thousands of turkeys, and it is expected to return this year with more severity. It is also expected to hit Pennsylvania and other east coast states for the first time this year. We want our farmers to be as prepared as possible in the event that the virus does hit Pennsylvania, thus causing the need to make adjustments to deliveries, visits, meetings, etc.

The most important things you can do to protect your farm include the following:

Have a biosecurity protocol in place that limits exposure to other poultry flocks. **THIS DOES NOT MEAN YOU TAKE YOUR BIRDS OFF PASTURE.** It means that you make sure you know who is on your farm and interacting with your birds and that visitors follow disinfection procedures before they go anywhere near your birds.

Know where you can wash trucks, equipment, and anything else that goes in or out of the farm without potentially contaminating the rest of your property.

**DO NOT SHARE EQUIPMENT.** This includes bird crates, egg cartons and field equipment. Shared equipment is the primary means by which the virus spread last year.

Use Lysol. Lysol disinfectant is considered to be one of the most effective ways to kill this virus. Heat kills it as well, as the virus thrives in cold, wet conditions (like manure!).

Boost your flock's health by making sure the birds are kept in clean, warm and dry shelters throughout

the winter. Any decrease in flock comfort and health will increase your flock's susceptibility to the virus.

The most common symptoms of HPAI include: severe numbers of sudden death; decreased egg production; swelling or purple discoloration of head, comb, eyelids or hocks; diarrhea; severe lethargy or neurological signs such as head tilting.

If you suspect HPAI, **DO NOT HESITATE TO CALL YOUR STATE'S 24-HOUR HOTLINE:**

PA Hotline Number 717.772.2852

Fertrell is monitoring the movement of this virus closely, and we have been in attendance at every meeting held on the topic. We are in the process of coming up with emergency plans on our end for deliveries, shipments, visits, and meetings in preparation for a viral outbreak. If your farm is placed into a quarantine zone, we will have a plan in place to make sure you continue to receive product as efficiently as possible.

If you have any questions on HPAI, please do not hesitate to call the office or email Casey.

## It's Not about Fertilizer: by Monica Pape

I wrote an article several months ago saying I was on a mission to get to know all of you – not necessarily in person, but through phone calls, emails and maybe even visits. Theresia has often warned me to be careful what I wish for. Suddenly I find myself doing more traveling in a short amount of time than in the entire past 16 years of my career as a stay-at-home mom. Maybe that's why we're called stay-at-home moms! That being said, I am definitely not complaining. I am extremely grateful to meet you, be invited to your homes and farms, and to spend time together with you.

As I travel from place to place and meet a lot of great people either selling or using Fertrell, I have been asking them one question. Really, I ask a lot of questions. Sometimes I don't know who is learning from whom. The question I have been asking as it relates to this article is, "Why do you use Fertrell?" There are all kinds of fertilizer companies, even easier and cheaper ways to get products. "So why Fertrell? What do we have that they don't? What is it about Fertrell that not only compelled you to choose to use it in the first place, but also makes you continue to use it?"

When you ask a question, you have to be prepared for the answer. I thought I would get responses like "My dad used it so I use it," or "Aunt Bessy said to use it, and if Aunt Bessy says to do something, you do it!", or "It was the only fertilizer on the shelf"...ha! We all know that's not true. I expected to be talking about the fact that our fertilizers feed the biology, the very life of the soil, and discussing the principles behind that. I was prepared to talk about the chemistry involved with each ingredient that makes up our blends and the reactions that take place between them and the components of the soil.

Here are the answers I did get. I have had the pleasure of working with Mr. Tarman and his wife Mary Ellen from Elizabethtown, Pennsylvania. Mr. Tarman

plants up to 500 garlic bulbs a year. He believes that our Fertrell products work. He likes the fact that our products feed the soil in order to feed the plant. He likes the fact he can call the Fertrell office and get answers to his questions.

I had the privilege to travel with Jeff to Florida. Once again, I think I heard....be careful what you wish for! We spent several days meeting with dealers. While visiting a dealer from the Bradenton area, her comments regarding Fertrell products were "If you get people to use them right, you will have a customer for life because Fertrell products work, and they see the results." This dealer takes the time to explain the correct use of our products and follows through with education about them.

Since working at Fertrell, I've had the best time talking to and working with people on the phone. I recently took time while traveling to a convention in New York to visit farmers and dealers that I have had previous phone conversations with. My first stop was in Millerton, Pennsylvania, where I met with the sweetest couple who have been farming for several years. I spent some time answering questions the woman had about her greenhouses, and once again I turned the tables and started asking them the question..."Why Fertrell?" Without any hesitation, the answer was they chose Fertrell because of the knowledge their dealer is willing to share with them and the support they get from their dealer and staff from the main office.

From there I went to Livonia New York and had the honor of meeting a farmer that has been working with Dave and Orin for several years. I spent some time talking with her about some projects she is working on and then asked her the same questions I have of everyone else. We sat on a bench overlooking Lake Conesus, and this lady told me that her loyalty to Fertrell was due to the fact that Dave treated her like she was just as important as a large scale farmer. She said that Dave always answered her questions, no matter how crazy

they may have seemed, to bring her to a better level of understanding, improving her knowledge so she could ask better questions, which, over time, made her a better farmer. She said that when she was working with Orin, he said one thing to her that will stay with her forever, which was “We want you to have your best year. “, after which he laid out a plan for her to follow and succeed with. She said she gained the confidence she needed by knowing that her success was important to Orin.

Over the next several stops I kept asking and listening. There was a common thread throughout the entire trip...service, knowledge, support and results. It all starts with people. Not once did I hear anything about the fancy packaging, or marketing materials, or the great pens and trinkets. It was all about the people - the ones who answer the phone, answer the questions, share their knowledge, make the fertilizer, bag the fertilizer, and sell it. You see? It’s more than fertilizer. It’s like minded people coming together, working at their part for a common goal of caring for the earth. I feel we are given the privilege to be stewards of the earth, no matter if you live in the city, the suburbs, or the country. From farmers to backyard gardeners, corporate executives to blue collar workers - everyone can work together toward this shared goal of protecting God’s green earth.

People ask me if my husband hunts. I think it’s because we live in Pennsylvania, although I’m not really sure. I explain to them that he does hunt, but only for car parts in junk yards. Even my husband plays a part in taking care of the earth by cleaning it up, one junk yard at a time, and organizing it in our garage (neatly at least).

Fertrell is about fertilizer, hence the name.

But it truly goes beyond that --- Fertrell is about the people.

## Shipping Memo: by Beth Knaub

Isaiah 63:7 “I will mention the loving kindness of the LORD, and the praises of the LORD, according to all that the LORD hath bestowed on us, and the great goodness toward the house of Israel, which he hath bestowed on them according to his mercies, and according to the multitude of his loving kindnesses.”

We here at Fertrell, trust that you, our customers, have enjoyed the blessings of God’s goodness, mercies and loving kindness throughout this past year.

Reminder: Due to month-end inventory, there will be **NO SHIPPING OR RECEIVING THE LAST DAY OF EACH MONTH**. We apologize for any inconvenience this may cause and greatly appreciate your cooperation. We will make any effort to get orders out prior to month-end to avoid delays of product deliveries.

**THANK YOU** to everyone for your cooperation in coordinating your shipments. Spring and summer shipments were relatively smooth this year. Knowing the needs of each delivery ahead of time and keeping eye on proof of deliveries while signing off surely paid off!

---

## Holiday hours:

The Fertrell Office and plant’s holiday hours will be as follows:

**Thanksgiving:** We will be closed Nov. 26th through Nov. 29th, reopening on Nov. 30th at 7:30 AM (Please note, there will be no shipping due to inventory on the 30th).

**Christmas:** We will be closing Dec. 24th at noon, reopening on Dec. 28th at 7:30 AM.

**New Year’s:** We will be closed Jan 1st through Jan 3rd, reopening on Jan 4th at 7:30 AM.

A Friend of Nature Since 1946

**Fertrell®**

PO Box 265  
Bainbridge, PA 17502

Phone: 717.367.1566  
Fax: 717.367.9319

**69 YEARS!**

PRSR STD  
US POSTAGE PAID  
ALABAMA MAIL SERVICE  
DECATUR, AL 35602

**Fertrell**

## Fertrell North Atlantic Kelp Meal

- *Sustainably hand-harvested*
- *Quality assured*
- *Minimally processed*
- *Certified Organic*
- *Available for both soil and feed applications*

Box 265, Bainbridge, P.A. 17502, 1-800-347-1566 Tel: 717-367-1566  
[www.fertrell.com](http://www.fertrell.com)



Fertrell Kelp Meal is sustainably hand-harvested

**Manufactured by Acadian Seaplants Limited**  
• *In Business for Over 30 Years* •

Acadian's manufacturing facilities are certified Safe Feed/Safe Food (SF/SF) and GMP/HACCP, through the FeedAssure™ program. These certifications provide third-party assurance that Acadian adheres to the highest standards of product quality and safety.

