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Notes & Quotes

INSIDE THIS ISSUE

November/December 2018

A huge Thank You to all our customers and visitors who took the time to come visit us at our Open House in October. You helped make it a success.

We enjoyed seeing everyone and were glad you took the opportunity to see our facilities and meet our staff.

Thank You

Our Mission

Your trusted partner; creating superior products for healthier soil, plants and animals. Healing the earth and feeding the world

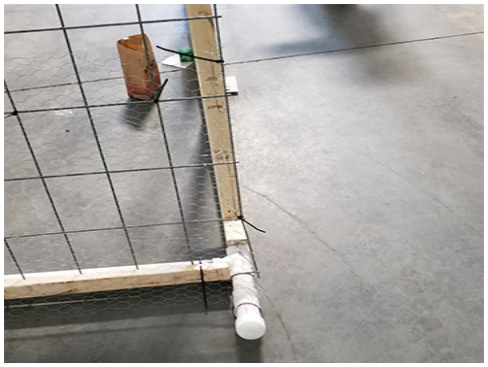
- Better Naturally!

That Didn't Work!
by Jeff Pennay

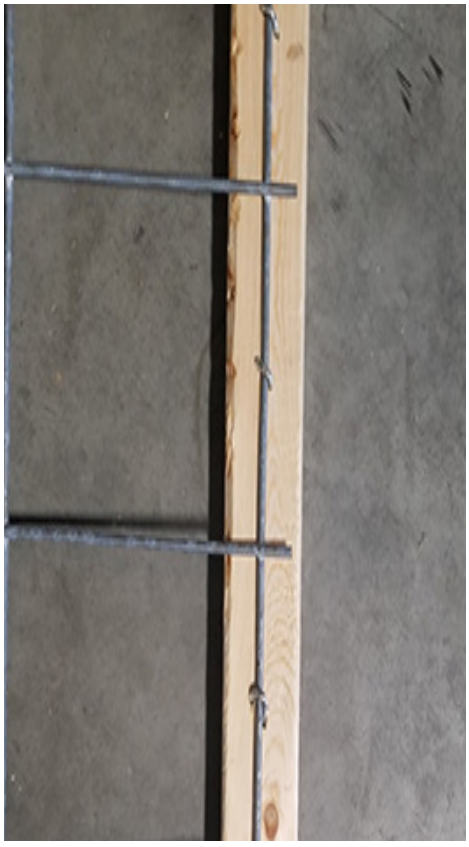
As you read this article, you will notice that I have used the word, "I", a lot. I have done this because the design was my responsibility. But make no mistake about it, there is no way that this project could have been completed without the dedication and hard work of Alyssa, along with additional help from Sage, Brandon and Jeff Mattocks.

Alyssa recently started a field trial centered around the Soy Free Protein Crumble. We discovered that we needed another chicken shelter. I was tasked with the design and construction of this shelter. I got the bright idea of using PVC rather than a wood frame to try to make the unit lighter and easier to move. I started with a plan to make the unit 8' x 10'.

I used 2" PVC for the framing. It was quite easy to assemble the basic framework using, ten-foot sections, "Ts" and 45-degree angles along with end caps. I secured the pieces using PVC Primer and Cement. I then inserted screws into the connections to better secure the joints. I even created a raised tip at the end of each runner to make the structure drag along the pasture more easily.



With the frame constructed, I was feeling a little full of myself. Then reality set in, and this is where the fun started. My initial intent was to cut grooves into the pipes and insert my cattle panels into the pipes. After discussing this idea further with my cohorts, we decided that doing this would cause us to lose most of the strength that the pipes would have. Back to the drawing board. Then we decided to attach the cattle panels to 2x3 boards and bolt the boards to the pipes. The first side went fairly well. The 2nd side was a different story.



The cattle panels are so rigid that we couldn't get them truly perpendicular to the horizontal pipe - so the bolts ended up angled, one so bad that it dug into the dirt.

Well, now we have a hoop house with no ends on it and nothing to keep it shaped properly. We had no structure to support the top or to fasten the chicken wire to, let alone support the feeder and waterer. There also was no framing for the door. Here comes the wood again… I quickly realized that I needed to build a wooden frame on top of the PVC to fill the need. I attached a 2x3 board to the PVC so that

I had something to screw my framing members to. I have a background in home building, so of course I over-built it. I ended up removing some of the members that I initially installed to reduce weight and was able to both resolve the framing issues and incorporate a door into the design.

We finally got the structure built, only to discover that it takes two men and a boy to move it.

The good news is that the birds seem very pleased with their new home.

As you review the pictures, please keep in mind that this is the first chicken shelter that I have attempted. I hope that this article saves at least one of you from the horrors that I have suffered through with this project. I should have listened to Joel Salatin, who has said many times that if he has learned anything over the years, it is, "Don't use PVC to build a chicken tractor!"

Managing the Inventory by Seth J. Epler

When this article arrives, we will be well into the autumn season and on our way into the winter. By this time, everyone has their inventory completely calculated for the next year. Well, if everything were perfect, that would be the case. There's a never-ending list of things to get done in any household or farm. And often times, some things just do not get accomplished. That is just the way it goes. So let's take a short bit of time to go over why our inventory is so important.

First of all, keeping an inventory on the farm translates straight into a stronger system of record keeping. It is amazing how many farmers have told me how easy it is to see the importance of record keeping once they really started doing it year after year. These were mostly folks who transitioned into a certified organic operation where you have no choice but to keep those in-depth records. It didn't take long for those folks to realize how better record keeping made them better managers in general. And let's be honest here - the most important part of farming, working, or in our lives in general is how all of us continue to work on being better managers.

Continuing on, everything on the farm should be calculated into an inventory. If it is that fifth-cut dry hay, there should be a weight and an exact count of each bale. Do you know your silo capacity off the top of your head? Feed inventories are of extraordinary importance. I have seen many farmers run out of silage because their inventory was not properly calculated. It helps our animal nutrition department out in a huge way to know your feed inventory when calculating rations. The more "right on" your inventory is, the more prepared you should be when you are in a bind. And this really relates right back to strong record keeping, year after year. If those accurate records are there to go back to, it should be easy to figure out "how much of what" you will need to be successful the next time around. Another great reason for accurate inventories is that it allows you to have a better plan as to what inputs you may need. You may have purchased eight five-gallon containers of Fertrell #3 this season. If you would have known that was about how much you would have used, you could have saved money by getting a barrel in the beginning. At this time of year at Fertrell and many other companies, there are early order discounts. Those savings really can add up. Having an accurate inventory allows for smarter planning. Lastly, if your inventory is good, you will know what you have!!!! Too often, customers of mine will say "I am not sure if I have that - I have to check." If they don't know they have it, they certainly are not making use of it! If you have got it on the shelf, there is a reason for that. I have seen a lot of spilled jugs or ripped bags that get wasted because they get lost in the shed. So keep up on your inventory and continue to be a better manager.

Farmer Marketplace

Equipment:

Poultry Processing and Production Equipment - Ashley, Pickwick, Poultryman pickers and scalders. Vacuum packing machines, shrink bags, knives, kill cones and any equipment for poultry processing. We ship anywhere; Jim McLaughlin, Cornerstone Farm Ventures, Wilkesboro, NC 336.818.2682 or on the web at www.cornerstone-farm.com

Farms:

Well established grass-based business for sale. 60+ acres improved pasture (90 acres total) with 4000 ft. pressurized water lane system, pond. Good high tensile fence. 45 head finishing quality cattle, 40-50 hogs, feed and bedding. All field and sales equipment. Bank barn, covered winter feedlot, hay storage. 10,000 tons gravel (optional). Mineral rights included. Customer list (retail, wholesale, custom) strong contacts for eggs, lambs, meat birds, maple syrup, honey. Updated 3 bedroom century home with stone patio, outdoor brick oven and gazebo. www.millergrassfed.com Contact us at millergrassfed@aol.com (T0917)

Holiday closing:

The Fertrell Company and plant will be closed for the holidays on the following days:
Christmas: December 21st - 25th, reopening on December 26th
New Year's: December 31st - January 1st, reopening on January 2nd

Question & Answer Corner

Do goats have any special salt needs? Fertrell goat ration says to use salt, TM (trace minerals). I got some salt from Orscheln, and it is American Stockman salt. The bag says "for all beef and dairy cattle, sheep, pigs and horses". So, why no goats mentioned? *Goats have salt needs, too. They are a "minor species" and are often absent from the labels on many products. Sometimes it is simple oversight, but other times it is done specifically because the product is not appropriate for goats. Short tangent: You'll also find this when you are dealing with medicines, like worming products. Look elsewhere than the label for appropriate dosing instructions. This consortium is a great resource: www.wormx.info*
Regarding salt - I suggest folks provide free choice salt for all species: ideally a plain white salt as well as a Redmond type salt. They will often make a choice between the two. It's quite interesting to see how that unfolds. Keep the salt separate from the other components that you are offering. Let them take salt when they need salt, mineral when they need mineral, kelp when they need kelp. Yes, the goats do have salt needs outside of what is in the grain mix. It will fluctuate throughout the year depending on temperature, lactation, gestation, maintenance, and development. Free-choice salt should be offered to almost all animals and is especially important for livestock that are exposed to the elements.

News from the front:

Just a friendly reminder: The sales tax exempt form must be submitted with your first purchase. If product is being shipped, please submit your form at the time the order is being placed.
Due to PA Department of Revenue regulations, we are required to charge sales tax if we do not have the form on file. Once the form has been received, your account will be set up as tax exempt and all FUTURE orders will not be charged sales tax.
Thank you in advance for your cooperation.

Now Available at Fertrell SINCE 1946 Better Naturally!

Dr. Paul's

-The entire line of tinctures, boluses, and alternative health treatments from Dr. Paul's Lab
-These products are approved for use on organic farms as health treatments (always check with your certifier before use)
-Any product or product size that we don't stock can be drop-shipped directly from Dr. Paul's
-Entire in-stock product line is available through our e-commerce store as well
-We are currently compiling a "how to use" list that will be available soon!

-Thorvin's Kelp Meal is harvested from Northwest Iceland, on the edge of the Arctic Circle, in the pristine Breiðafjörður bay, which is an organic harvest site.
-The fresh harvest is immediately brought to a dryer, near the harvest area, so they don't lose any of the nutrients in transport. And their dryer is powered by geothermal hot water, a renewable resource.
-Thorvin Kelp is Certified Organic and OMRI-Listed.
-Available in 50 lb. bags

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Buffer Blend

The rumen can take up to 30 days to adjust to a new feed change. Using Buffer Blend during feed transition periods helps to ease the stress on the rumen. Buffer Blend will help to ensure ongoing performance and production without any slumps when transitioning between fermented feeds. Feed at a rate of 1-4 oz/head/day. Can be fed free choice or mixed in grain rations.

Discount valid on orders placed, paid for, and shipped between November 1-29, 2018. No other discounts apply. Discount applies before shipping. Cash or check only. Please contact your local Fertrell representative for pricing.

Feeding Soy-Free Feed to Muscovy Ducks by Mike Badger

Muscovy ducks are typically thought to be a hardier, all-purpose duck on the farmstead. In issue 103 (January/February 2018) of the Grit magazine, I wrote about Stanley Reiff's duck breeding program. Writing that article inspired me to give Muscovy ducks another try.

My original intent was to hatch ducklings and feed them the new soy-free protein source from Fertrell. The hatching failed, so to complete my feeding trial, I sourced a batch of ducks from Fifth Day Hatchery.

Sourcing the feed ingredients

Fertrell provided me no-soy protein crumbles and the vitamin and mineral premix. I purchased certified organic corn and triticale (a substitution for wheat) from a local grower and feed manufacturer (Abram Zeigler).

I worked with Jeff Pennay at Fertrell for the ration work, and he gave me a formula based on what I told him I could source. At the time, I thought I could source brewers yeast for the additional Niacin. I was wrong about that. In order to accommodate the additional Niacin in the ration, I purchased 500 mg capsules of Niacin from the pharmacy. I used a food chopper (from Pampered Chef) to pulverize the capsules; a crucible would also work to grind up the tablet into powder.

You can't really have too much Niacin, so the rule of thumb was to top dress the feed liberally. The additional Niacin is one of the most noticeable differences in feeding ducks compared to broiler chickens. Ducks have a higher Niacin requirement, and if you fail to meet that requirement, the ducks will develop leg problems.

The additional challenge with the formulated ration was the inclusion of linseed oil. I had flaxseed oil on hand (I use it to condition my cast iron pans), and Jeff Pennay said that would be a suitable substitution. I mixed the oil into the starter ration as I fed because I wasn't sure how long it would take me to get through that first batch of feed, and I didn't want my oil turning rancid before I fed it out.

To mix the feed, I measured the ingredients into a 35-gallon tote and mixed it up using my hand-powered ice auger.

One of the personal appeals of this trial was to test the feed out, but it was also to see how easily I could mix small batches of feed for myself. I have multiple disappointing feed experiences that revolve around the sources of protein and vitamins/minerals. It's always been my goal to have something I could easily control yet be easy to produce.

Feeding Program

The ducklings consumed one batch of starter ration in approximately four weeks (3.3 lbs. per duck). After that time, I fed the grower ration until slaughter. At approximately 8 weeks, I offered whole triticale free choice in the end of the trough feeder. The birds had access to granite grit at all ages and stages of development.

The ducks, like most poultry, avoided eating the fine powder that settles to the bottom of mash feeds. As the soy-free protein crumbles pulverized and broke down into a fine particles, it would settle to the bottom of the feeder along with some of the vitamins and minerals. Many times, chickens can be encouraged to eat their fines by withholding feed for an extra hour or two. The ducks would just graze more instead of cleaning up the feeder; I would collect the small amount of fines and add them to the top of the fresh feed.

Hardiness and Health

I intentionally culled one duck at three weeks because it was not thriving; it was less than half the size of the flock. There were no other health related observations of note. The ducks were vigorous and foraged well.

Beyond the one cull, the flock did suffer some predation from a persistent raccoon. The feed conversion data has been normalized to account for the predation at seven weeks.

Performance

The hatchery expectations at 12 weeks were four pound dressed hens and eight-pound dressed drakes. I processed these ducks at 11 weeks because of my processor recommendations.

Feed data at 49 days (7 weeks):
- Average live weight: 4.6 lbs.
- FCR: 2.8:1

Feed data at 77 days (11 weeks):
- Average live weight: 7.7 lbs.
- Average feed consumption: 17.7 lbs. per duck
- FCR 2.3:1

Yield Data:
- Straight run average carcass size: 5.3 lbs.
- Hen average carcass size: 4.3 lbs.
- Drake average carcass size: 6.4 lbs.
- 69% yield (with neck, heart, liver)
- FCR: 3.3:1 (feed to carcass weight)

The hens appear to have outperformed the hatchery expectations, as I was able to dress four pound hens in one week less grow out time. The drakes likely are slightly under performing the hatchery expectations. With an extra week of grow out, I project the average drake weight would be in the mid-seven pound range.

An important note about the processing. At 77 days, these Muscovy ducks were processed without wax; however, pin feathers were just becoming evident on the plucked hen ducks. The drakes had none; the processing window was perfectly timed.

Cost Accounting

Feeding a soy-free ration is more expensive, in terms of purchasing the feed; however, in this case, I was going to be sourcing each processed

component individually (e.g., cracked corn and protein supplement) and mixing the final ration myself, which means I was not going to be paying for the mill's labor and expense to manufacture the feed. I wanted to know how much the ration was going to cost me in relation to my normal certified organic feed.

My cost of ingredients:
- Certified organic cracked corn: $0.30 / lb.
- Certified organic ground triticale: $0.28 / lb.
- Soy-Free Protein crumble: $0.65 / lb.
- Vitamin and Mineral Premix (Poultry Nutri-Balancer): $1.00 / lb.

When I run the cost of the ingredients through my ration, the starter feed is approximately $0.45/lb. The grower feed is approximately $0.41/lb. The protein and vitamins were based on cost from Fertrell. Prices are fluid and should be used as a trend line.

If you were to purchase this ration from a feed mill, it would cost more, but this cost per pound is comparable to what I pay for certified organic feed using roasted soybeans and Poultry Nutri-Balancer.

The following table breaks down how much feed was consumed per duck on average at each stage:
- Starter: 3.3 lbs. for a total cost of $1.49
- Grower: 14.5 lbs. for a total cost of $5.95
- Triticale: 4.2 lbs. for a total cost of $1.18
- Total average feed cost per duck was $8.62

This isn't a study in the economics of mixing feed, but for smaller flocks that want to create a specialty feed with ultimate control of the ingredient source, trading time to source and mix ingredients could yield an out of pocket expense close to existing bagged organic feed prices.

Conclusion

The basic questions at the beginning of the trial were how well would the ducks perform and would there be any health issues with the soy-free ration.

The ducks performed well. As noted, the hens dressed at the hatchery's expected weight range with one less week of feeding. It is possible the drakes would have gained enough weight to match the genetic potential, but that result will have to wait for another time.

The answer to, "Will they grow," is "yes."

Mike Badger originally published this article in the Grit, the bimonthly magazine of the American Pastured Poultry Producers Association (apppa.org 888-662-7772)

Quality Stored Feed
by Alyssa Walsh

As winter approaches, the switch to stored feeds begins. During this change, feed quality needs to be considered to maintain the health and production of your livestock. Your animals are relying on you to provide quality feeds to help them stay healthy and continue to meet performance expectations.

To maximize feed quality, be sure to store all feed away from direct sunlight and in cool temperatures, ideally below 77°F. We know this isn't always manageable. Stored feed already has a higher risk of being infected with molds and toxins, so if you are storing feed and can't keep it in a cool, dry place, you need to get your grains tested, especially considering all the rain we have received this past year. Fungal growth, mycotoxins and nutrient destruction can be caused by pockets of moisture as low as 16%, when temperatures are right. Testing for molds and toxins and acting as needed (with Redmond Conditioner or Fertrell's Kelp Conditioner) will help prevent a decrease in feed conversion. Levels of just 2ppm of mycotoxins in grains can result in a 10% or greater decrease in feed efficiency.

Also, certain nutrients in stored feeds can deplete over time. Vitamins A, D, and E, along with the B vitamins are less stable and deplete in stored feeds. Additionally, your livestock won't be getting the added benefit of the vitamins and minerals that are found in pasture. Because of that, it's important to adjust the vitamin and mineral premix to meet the animals' needs. For example, switching from Grazier's Choice to Cattle Choice will balance the loss of vitamins and minerals that cattle were getting from pasture during the grazing season. This will help ensure your animal is getting the micronutrients needed to stay healthy and continue to perform during the winter months.

Additional items of concern:
- Oxidation of nutrients will destroy unsaturated fats, essential fatty acids, Vitamins A, C, D, biotin, and lysine. This will cause an off flavor and a loss of activity of fatty acids and vitamins.
- Light will degrade riboflavin, which is essential for many processes, including normal cell growth and function.
- Insect and rodent damage. Having a safe, effective rodent control program will help decrease your risk of fecal contamination in stored feeds.
- Grinding, flaking, and crimping of grains releases oil from the germ, which will oxidize within days or weeks after processing, decreasing palatability and nutrient content.

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2018 Early Order Fertilizer Discounts

November - 6% Off , December - 5% Off

Gold SS 2-4-2 Super N 4-2-4
Super K 3-4-7 Blue N 5-1-1
Custom Blends
Applicable Blends

Orders must be placed and paid for by the last business day of the month for discount. No other discounts apply. Discount applies before shipping. Minimum order of 1000 lbs. (mixed pallets allowed) on standard blends and 2000 lbs. on custom blends.
Qualifying blends are allowed with added Zinc, Boron, and Sulfur. Cash or check only. Orders must be delivered by March 28, 2019.

Blue River Hybrids Fall Discount Schedule

Cash/Prepay Discount
November 7% Off, December 6% Off all seeds. To receive the cash/prepay discount all checks must be in the Fertrell office by the last business day of that month.

Early Order Discount (Corn & Alfalfa Only) November - $3 off/Bag

The Early order discount applies only to corn and alfalfa seed. The order must be placed by the last business day of that month to receive the discount.

If both the Prepay and Early Order Discounts are taken then the Early Order Discount is applied first to the seed order.