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Tobin' Talk

Jason McNaughton

The last month has proven to be a big one for Standard Nutrition in Canada. On September 22, 2009 Standard's team in Manitoba welcomed Barry Palka and Darren Ruchkall from Focus Feeds to our consulting team. Focus Feeds holds a solid market share of consulting business with layers, broilers, and dairy producers in Manitoba. They have also worked closely with turkey producers and those pioneering the aquaculture business in the province. Aside from their vast knowledge, Barry and Darren have brought a great nutrition program and many product lines with them to our company, which has nicely enhanced the program that Tracy Speirs (Nutritionist) has built during her tenure with Standard. Everyone within Standard in the US and Canada are excited about the opportunity to work with Barry and Darren as their business outlook has always been so similar to that of Standard.

Shortly following the amalgamation of Standard and Focus, we made the decision to give up the Dawson Road location, and are moving forward with an addition of Standard's current Winnipeg Location on Lagimodiere Blvd. This location is the more versatile of the two allowing for dock or ground level loading, and also having the ability to load out bags, totes, and bulk product.

On October 1st, our team saw another addition in Cam Ives, who has join our consulting group with a focus on turkeys, layers, and broilers. Cam is also very experienced on the swine side of the business from her many years spent within the industry on the formulation and consulting side. My first farm visit with Cam tells me that she really knows her stuff and will be a great benefit to her clients.

Lastly, Richard Ruchkall will be making his return to Alberta after a brief hiatus to the West Coast. Richard will join the Standard Consulting team in Alberta on November 1, 2009 after he and Monique settle in to their new home North of Calgary. Richard may be one of the most experienced Poultry Consultants anywhere and we are truly delighted that he has chosen to represent Standard in Alberta. Richard's resume is impressive. Most of you will remember him for his days with the Pinnacle Nutrition, or his time as Chairman of the Canada Turkey Association. Richard will focus on turkey, layer, and broiler operations through out Alberta and will definitely add strength to any operation working with him.

Craig's Corner

Craig Anderson

I have received several calls as of late as to whether or not to lock up feed needs as we move forward from here. Today is October 9th, and the October crop report was issued this morning with numbers that were essentially neutral all around! I personally drove through Iowa and Illinois two weeks ago, and the crops look fantastic all the way through these states and even through Kentucky! The stands are great in both corn and beans, yes SOME of the crops are behind, however, most of the fields looked as though they would be ready for an October 10th frost date, as we are to receive tonight. I visited with a farmer in Kentucky who shared that this was his best corn crop EVER, he had already harvested his crop, this man was in his seventies!

I think the question becomes, is this crop yield driven or demand driven? We have seen a rally in corn this week of 25-35 cents a bushel, even before the crop report. Some think we have enough demand to pull prices higher despite the 13 billion bushel crop yet in the field. Others feel that yield will out-strip demand to the extent we will have a significant softening of prices in the next several months. What camp are you in? What about the week dollar, and all the consequences of the recession, and the unexpected interactions of the Federal Reserve? One's thoughts here regarding all of the above and more will determine how aggressive one becomes in locking up feed needs moving forward. Which scenario is correct? I would venture to say it will probably be a combination of the two! Good luck as you put together your recipe for purchasing your feed needs!

Turkey Talk

Jim Plyler, MS

Don't Let Rodents Nibble Away Your Profits—Part 1

Damage by Rodents:

Did you know that a single rat eats as much as 20 to 40 pounds of feed a year? Multiply this by 1,000 and you can experience a loss that will impact feed conversion that will affect your bottom line, especially with current feed prices. It has been estimated that rodents can increase poultry feed usage by as much as 2%. When the weather cools, mice and rats move indoors and can wreak havoc on not only feed conversion as well as jeopardizes bird health and damage facilities.

Rodents spread diseases to flocks by contaminating feed, water and the birds living area with urine or droppings. Rats and mice do not have bladders, so they continuously urinate and defecate on everything they contact. Rats and mice are linked to poultry diseases such as salmonellosis, colibacillosis, coryza (bordetella), pasteurellosis (fowl cholera), mycoplasmosis, hemorrhagic enteritis, capilariasis, and ascaridiasis. Rodents are often vectors that carry over disease organisms from one flock to the next flock. Even if the facilities are cleaned and disinfected, if rodents are present, they jeopardize sanitation efforts by keeping diseases active on a farm due to their ability to harbor pathogens.

Since the upper incisor teeth of rodents continue to grow throughout their life, mice and rats chew constantly to keep their teeth from becoming to long. This means that insulation, wood, curtains, electrical wiring and even metal objects can be damaged.

Rodent Reproduction and Habits:

The most common rodent pests in poultry houses are the house mouse (Mus musculus) and the Norway rat (Rattus norwegicus). Rats mature in four to six months while mice mature in six weeks. Mice produce as many as 8 litters per year with up to six young per litter while rats produce 3 to 7 litters with as many as 18 young per litter. This means that within a year, forty-two mice and sixteen rats can produce 4,000 rodents!

Mice usually nest within 10 to 30 feet of their food source, but rats will travel miles in search of food. Rodents are typically shy creatures that like dark hiding places. They prefer to travel along walls and stay away from open areas. Mice can crawl through openings the size of a dime and rats can contort their bodies to squeeze through openings the size of a quarter. The Norway rat will burrow under foundations or footings and can dig tunnels up to 48 inches deep with several entrances. Mice can live without a source of water, but rats need about ½ to 1 ounce of water daily. Rodents are nocturnal and prefer to feed at night.

Don't Give Rodents an Invitation to Stay:

Maintain a minimum three-foot space around the outside of poultry barns that is free of brush, trash, weeds and all vegetative growth. The more bare ground or short grass next to buildings, the less likely rodents will build nests or burrow under footings. Clean up spilled feed near feed bins or feed pans and keep medication room's tidy and clutter free. Keep unused equipment stored away from production facilities. Keep dead bird disposal area clean and dispose of dead birds on a daily basis. If rodents don't find the living arrangements attractive and convenient, they won't stay.

Turkey Health Update

Colin Kirkegaard, DVM, MS

Coccidiosis

Fall is prime time for coccidiosis in all species of livestock including the turkey. Cool, damp conditions (typical fall weather) hasten the formation of sporulated oocysts which are the infective stage of coccidiosis. It's important that we keep this in mind as we walk our barns this time of the year and be on the lookout for breakthroughs in our coccidia control programs.

Infection occurs when the birds eat the infective (sporulated) oocysts (eggs). Once in the intestine the coccidia invade the lining and destroy the cells normally used for the digestion and absorption of nutrients. If the infection is severe enough, the destruction of the lining can result in diarrhea and hemorrhage. Loose, bubbly droppings with or without evidence of blood and mucus are commonly seen from birds undergoing coccidia infection. Production losses occur from weight loss, poor feed conversion, and reduced growth.

Coccidiosis spreads from bird to bird through eating or drinking contaminated feed, water, litter or other material containing coccidia. The main source of infections is the turkey itself. A bird with active coccidiosis discharges great numbers of oocysts in the droppings. Then as the flock pecks into the litter, millions of oocysts may be taken in with each beakful. A bird that has recovered from coccidiosis may carry and possibly discharge oocysts for months. Furthermore, oocysts can survive in moist soil for a year or more.

Controlling coccidiosis in the most cost effective manner is the cornerstone around which healthy turkey flocks are built. E. coli septicemia and necrotic enteritis are often secondary diseases seen after coccidiosis has gotten out of hand. Walking the barns on a daily basis and evaluating the condition of the droppings for evidence of coccia infection and then taking the appropriate action(s) are key in producing a healthy and profitable flock.

From the Field

Brad Magill

Swine Management Consultant

As I look outside this morning and see the early snow fall it reminds me that it is time to get out my calculator and dust off my ventilation book. I work with ventilations systems almost every week and as I get into the fall I find it necessary to still open back up the book and re-calculate what the minimum setting for fans and inlets are. Before we begin to set the computers for winter settings we also need to take the time and make sure that the equipment and facilities are ready to operate at these lower settings

All holes and cracks need to be filled. Air that enters any place besides your inlets is uncontrolled. I recently was working with a producer on getting his barn ready for winter. With close inspection we found a ½" crack for 20' along the sill plate 6" off the floor. This potentially is a lot of uncontrolled air entering the barn and if we had not gotten down to the floor and inspected this we would never have found this air inlet. The second part of getting your facilities ready is to make sure those inlets (both primary and secondary), and fans/louvers are clean and in good working condition. As we pull less cfms, the inefficiencies of this equipment can become greater especially if they are not clean and working.

I find it important to take the time now to refigure or review the ventilation program because the environment is a major element to successful production. The cfms of each of your fans, the rating of the inlets and the minimum cfm requirement for the type of animal that you are housing are numbers that you need. When running the numbers I always start with what are the minimum ventilation levels. Understanding this is important because under normal conditions you will never go below this level. Depending on the environment you may be adjusting above this level. Remembering several other key points will continue to help trouble shoot ventilation issues. If a heater is running, fans should be in minimum ventilation. Actually, we should be at minimum ventilation for 5-10 minutes before and after a heater runs. For most ventilation systems fans should not be turning on and off on a regular basis.

The inlets operate to distribute air evenly across the barn. You can figure the air speed out of an inlet but, in the simplest term, the goal is that you can feel the air in your face when you are at least 10' and preferably 15' from the inlets. If air movement is higher than this generally we are moving air too fast and vice versa. If we are not achieving this we are not mixing the air properly before the air is getting to the pigs. Depending on your type of inlet, at lower cfms you may need to even lock closed some inlets on certain cold days during the winter. During the changing temperatures of fall and into winter in general we want to be less aggressive with turning on fans. For example on a stage 1 variable fan you might stay at minimum speed for 1° over set-point and then ramp your speed to 100% over the next 1 or 2°.

Finally as the temperatures outside continue to change you need to know how you are going to change your ventilation. Sometimes that can be daily, especially if you're dealing with small pigs. As you are in the barn you take the time to watch the animal's behavior, monitor hi-lo temps, and check the equipments operation. When something does not seem right, take the time to talk with the manager. If you have any question concerning ventilation please contact your Standard Nutrition consultant.

Nutritionally Speaking

Darrelle Embury, MS

Predicting the Feeding Value of New Crop Grains

This is the time of year when many swine producers are testing new crop grain to determine its feeding value. Typically, grains are analyzed for crude protein and energy content as these nutrients vary due to growing conditions and have the largest potential impact on swine diet formulation.

The most expensive nutrient when formulating swine diets is energy so accurately accounting for the energy content of your grains is important. In addition to submitting grain samples for laboratory analysis to estimate energy content, bushel weight is sometimes used as a predictor of energy content of feed grains. However, there is evidence to show that bushel weight is not a good indicator of the energy level in barley for example. Laboratories estimate the energy content of your sample using a calculation based on other analyzed nutrients from the laboratory test. Each laboratory may use a slightly different equation to perform the calculation and this may explain some of the variation in energy results from one laboratory to another. Different energy calculations (equations) use various combinations of crude protein, fat, fibre, starch, sugar or moisture analyses to determine Digestible Energy, Metabolizable Energy, or Net Energy values. The chosen equation used for the calculation as well as the accuracy of the numbers being used in the calculation will influence the overall level of confidence that we can have in the energy result. The sample sent to the lab needs to represent the entire lot of grain and submitting more than one sample will help ensure an accurate value is determined.

Changes in protein content of grains may also warrant reformulation of diets. Depending on the magnitude of the change in crude protein content, the amino acid values assigned to your grains may also need to be changed. Your Standard Nutrition Consultant can assist you in determining the appropriate laboratory test and can help with interpretation of the test results.

Poultry Nutrition Corner

Tracy Speirs, MS

Large Particle Calcium in Layer Rations—Why is it Important?

The typical layer diet contains about 4 % calcium and assumes a feed intake of 100 g/day to provide 4 g of calcium to the laying hen. Of this 4 g of calcium only 40-50% is used in shell formation and as such the egg contains about 2 g of calcium. Thus calcium is a very important nutrient to the laying hen. Within laying hen rations we use fine particle calcium and large particle calcium and the question may be asked, why is this?

Fine calcium is readily dissolved in the proventriculus (stomach) and available for absorption in the small intestine. Large particle calcium (2-4 mm) is stored in the crop and gradually ground in the gizzard prior to being dissolved in the proventriculus. Calcium absorption in the small intestines during times when shell formation is not occurring is about 40%. During this time calcium not required for normal functions is stored within the bones or excreted.

During times of shell formation the absorption increases to about 72%. However, beyond 40 weeks of lay, calcium absorption in the bird is typically reduced overall. If inadequate calcium is available in the gut at the time of shell formation the bird will pull calcium from the bones to meet the demand for shell formation. This in itself is not a problem however, if the calcium is not replenished, the bones will become depleted and cage layer fatigue can occur and/or shell quality suffers. Eggshell formation mainly occurs during the dark period in a 24 hour day and it is during this time period that birds are not eating. Thus it is important to have large particle calcium in the bird so it is available during this critical time.

There are different recommendations regarding the ratio of large particle calcium to fine calcium. My recommendation is to feed 2/3 as fine calcium and 1/3 as large particle calcium up to 40 weeks of lay. Beyond 40 weeks I would recommend to feed 1/3 as fine calcium and 2/3 as large particle calcium. There are various sources for large particle calcium including oyster shell and shell and bone builder. Both contain equivalent calcium levels and in my experience give similar shell quality. There are other poultry grits available that have a calcium component but they may also contain heavy trace minerals that maybe detrimental to bird performance and health. Like all feed ingredients, use a good quality calcium source.

For further information regarding calcium recommendations or feeding layer chickens, please contact your local Standard Nutrition Consultant.

Nutritionally Speaking

Chris Mateo, Ph.D.

Breaking it Down with Enzymes

Dietary enzyme supplementation in monogastric animals has been utilized for decades. A number of target substrates for different enzymes have been identified and tested such as starch, non-starch polysaccharides (NSP), protein, fat, and phytate in grains and oil seeds. The main premise of utilizing enzymes is to improve nutrient digestibility and feed intake. Nutritionist match a specific enzyme to a specific substrate in particular feedstuffs (eg., xylanase for arabinoxylans in wheat; glucanase for beta-glucans in barley; and phytase for phytate in plant ingredients).

We know that there exists an inverse relationship between fiber (NSP) content of carbohydrates (CHO) and energy digestibility. Therefore, the addition of enzymes to digest the fiber fraction in CHO sources such as wheat and barley would improve the energy digestibility in those feedstuffs. However, it must be noted that different CHO ingredients may have a wide range of NSP content and may be a factor in enzyme efficacy. Reducing CHO ingredient particle size which relatively increases surface area may also improve energy digestibility in combination with enzyme supplementation.

There a couple of approaches nutritionists consider when incorporating enzymes in feed formulation. One may utilize enzymes to anticipate an increase in feed conversion or formulate diets to a reduced nutrient content and consider the nutrient "uplifts" provided by the enzyme to the meet nutrient requirements for that diet. The latter approach would typically result in a lower feed formulation cost due to the reduced inclusion of ingredients that provide the targeted nutrient content per se, as well as, compensate for expected variation in specific ingredient quality.

That being said, the use of enzymes may also allow the inclusion of more alternative feedstuffs or by-products in monogastric animal diets. Enzymes have not only been used in swine diets to improve the cost per unit of gain, but also to address specific environmental concerns as well. Specifically, adding phytase in grower and finisher diets to improve phosphorus digestibility reduces phosphorous excretion in pig manure.

For cocktail (or even specific enzyme) products, you want to make sure the amount of enzyme units and activity for each enzyme in the mixture is at a concentration that is efficacious. While there are a number of benefits associated with enzyme supplementation, one must also consider the cost of incorporating these different enzymes in the diet.

Please contact your Standard Nutrition consultant for further information on evaluating what specific enzymes would be beneficial in maximizing the nutrient digestibility of your commonly used feedstuffs in your on-farm diet formulations.

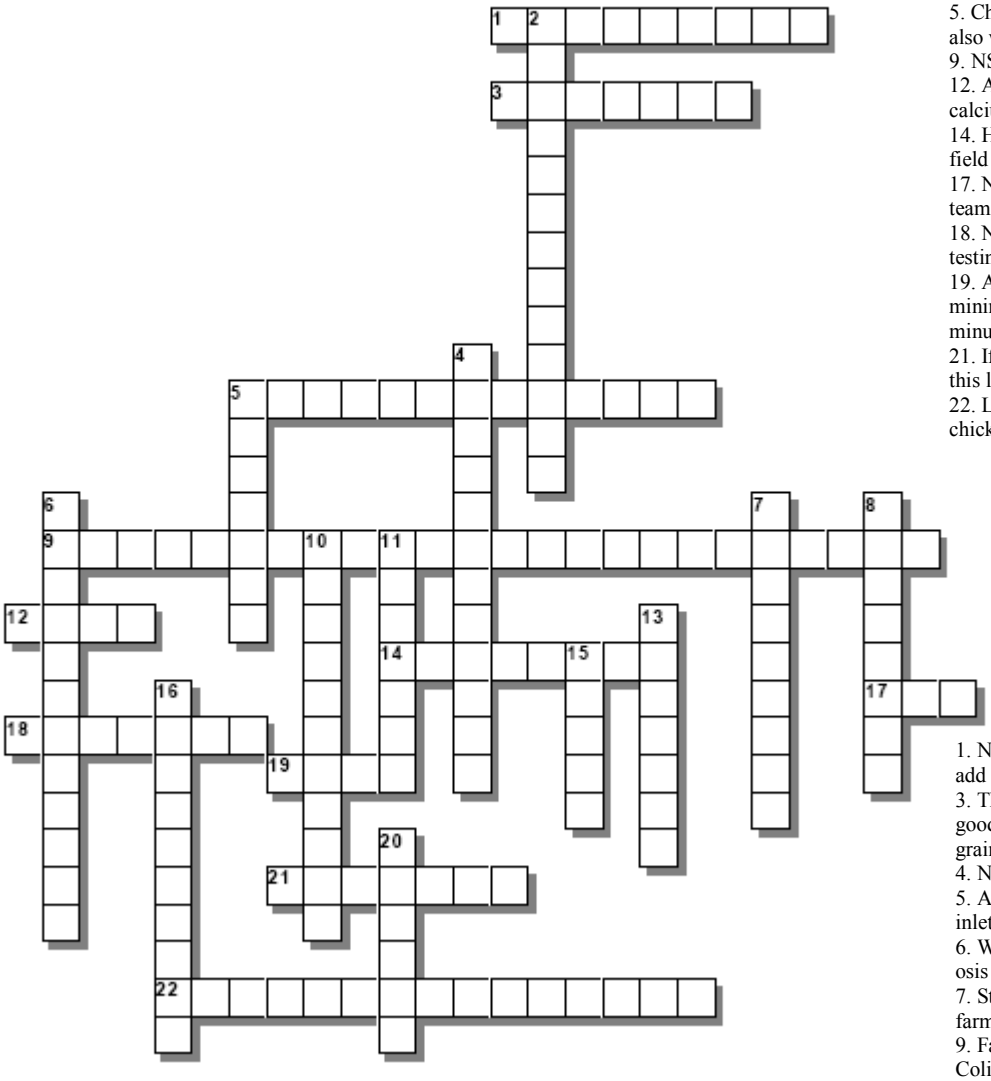
Editor's Corner

Michelle Tjardes, Ph.D.

As you may have noticed, we are making changes to our newsletter again this month. With the addition of our new poultry program now on both sides of the border, we are expanding our size to allow for a more detailed focus on our poultry nutrition and management area. We are also wanting to add some fun to our monthly newsletter. We will be adding word searches and crossword puzzles every month. As you can see from last month's addition, we did a mystery "location" instead of colony. From time to time we will switch that around to keep challenging our readers.

We take a lot of pride in our newsletter and welcome suggestions at all times. If you have a suggestion or comment please feel free to contact me at the Omaha Office (402-393-3198). Thank you for your continued support by reading our newsletter!

Crossword Puzzle



Across

1. Rodents carry these which jeopardize sanitation effects
3. Nutrient Tracy discussed in her article.
5. Changes in protein content of grains may also warrant this according to Darrelle.
9. NSP stands for…
12. A typical layer diet contains this much calcium.
14. How many bushels of corn are still in the field according to Craig?
17. New member of the Canadian consulting team October 1.
18. Name one nutrient Darrelle suggests testing new crop grains for.
19. According to Brad, we should be at minimum ventilation for at least this many minutes before and after a heater runs.
21. If a heater is running, fans should be at this level of ventilation
22. Location of calcium absorption in the chicken according to Tracy.

Down

1. Nutrient we are breaking down when we add a xylanase to the diet.
3. There is evidence to show that this is not a good indicator of the energy level of your grains.
4. New Poultry Consultant in Alberta.
5. Air that enters any place besides your inlets is….
6. Where does a bird with active coccidiosis shed the disease?
7. State in the USA where Craig spoke with a farmer about the corn crop.
9. Fall is the prime time for this according to Colin.
10. Enzyme that breaks down phytate according to Chris.
12. Chris talks about breaking down nutrients with this feed additive.
14. Number of litters a mouse will produce each year.
15. One production loss due to coccidiosis.
17. One item that can be chewed by rodents according to Jim.

Possible Answers:

Arabinoxylans, Bushel Weight, Calcium, Cam, Coccidiosis, Droppings, Eight, Enzymes, Five, Four, Kentucky, Minimum, Nonstarch Polysaccharides, Pathogens, Phytase, Protein, Reformulation, Richard, Small Intestines, Thirteen, Uncontrolled, Weight Loss, Wiring

The Mystery Colony

This month's mystery colony is in southern Manitoba. If you can't figure it out, call your Standard Nutrition Consultant and have them give some hints.

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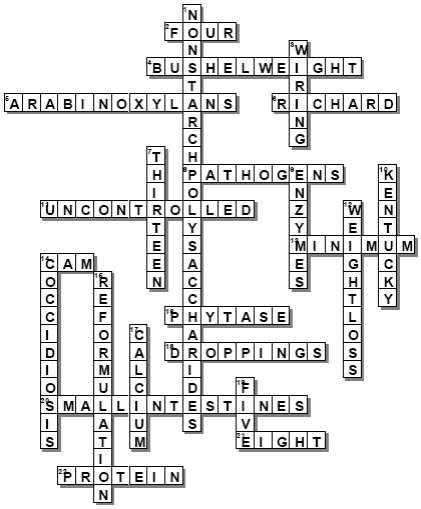

November 2009