

The Mystery Colony

This month's mystery colony is in South Central South Dakota. If you can't figure it out, call your Standard Nutrition Consultant and have them give some hints. Last month's colony was Forest River Colony.

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Tobin' Talk

Jason McNaughton



Many of the speeches and articles over the last 12 months have been focused around the increases to our cost of production in raising meat. The most ghastly predictions have become reality with no promise that tomorrow shows any relief. We must face this new reality as the playing field changed. We live in different times now, where \$5 corn may be a great buying opportunity. The key is that this is a new reality in which the price we receive for our meat is lagging behind. With next spring and summer futures trading at profitable levels, getting there is the main challenge we face today. An integral part of facing reality is realizing that those around us including our suppliers face the very same challenges. The only exceptions are those that have stock piled ingredients or other inputs that may assist them through these difficult times. But even these businesses will face the increased future costs. In a short time these new costs will roll off our tongues without hesitation. The value of food has risen around the world and North America will be no different. We may be more self sufficient, but our ample resources and export potential, our food will follow the same upward trend as it has on other continents. Will this ever correct? My guess would be yes, although its hard to imagine how the current fundamentals must change for us to ever experience the food costs we've seen over the past fifteen years. More and more undeveloped countries with high human densities have rapidly emerging middle class people who will demand a higher level of nutrition than their ancestors could afford. These countries production practices will not likely meet this new demand (at least initially), which will bring competition for the food we produce. My guess is we may need to get used to saying \$7 corn??!

Don's Deal

Don Deleurme



As summer progresses for the most part, crops are looking a lot better than last year at this time so let's keep our fingers crossed are good fortune continues. After the last newsletter we have been able to get a different view of the future in the hog industry for the next year. As we all know the near future tells us all that we are looking at continuing difficult times but at a later date the prices are what others have been predicting for the last 10 months, a lot higher than what we are facing today.

In having discussions with hog producers, many are contemplating as to where the price of hogs will have to be, so they become and maintain profitable once again. Some individuals were aggressive in booking commodities when prices were reasonable way back and continue to see the benefit today in making those painstaking decisions back along. Those were some great deals! For most producers this past year has shown how the commodity market can fluctuate and by not making those decisions of booking inputs for lengthy periods of time properly can cause significant losses. For those who have the capability of forward booking hog prices, again there is a difficult decision to make. Will the prices remain at what they are telling us or do you take a chance that the price may be greater. What one needs to think about is that can you afford to book some prices or are you in the position that you cannot take another year like this past one.

Craig's Corner

Craig Anderson



Due to the increase in commodity prices, The National Pork Producers Council met in Washington D.C. the last week of June. Their mission was to inform key members of congress and the administration of the serious situation facing the pork industry. NPPC is asking for five things.

1. Penalty-free release of non-environmentally sensitive land enrolled in the CRP program.
2. Support the request by Texas Governor Rick Perry to waive the renewable fuel standard.
3. Eliminate the blender's tax credit.
4. Eliminate the import tariff on ethanol.
5. Waive farm program rules to allow a harvestable crop to be planted yet this year on acres that have not been planted, or have been lost due to weather.

The first point could involve about half of the 34 million acres enrolled in the CRP, allowing the release to take place August 1st. This would allow for winter wheat plantings this fall, meaning additional wheat would be available next June. The NPPC group felt very encouraged, in that much attention and listening was given to the group. Congress and the White House agreed to pursue the alternatives presented. Contact your representative.

Nutritionally Speaking

Darrelle Embury, MS



Nutritional Methods for Reducing Nitrogen and Phosphorus Excretion

Environmental concerns are a key issue for a number of Canadian provinces. The nutrients that receive the greatest amount of attention for their contribution to environmental pollution are nitrogen and phosphorus. Nutrient management regulations in Manitoba are being implemented to protect water quality by regulating land application of phosphorus and nitrogen. This contribution to the newsletter will discuss only the nutritional methods for reducing phosphorus and nitrogen excretion by the pig. Many other factors will contribute to the overall success of any nutrient management plan.

Pigs consume protein and break it down into amino acids to be used by the body. Nitrogen makes up part of these amino acids. Different forms of nitrogen are excreted by the pig as a product of metabolism. Ammonia is a form of nitrogen that is present in hog manure and contributes to pollution and odor issues associated with livestock production. Phosphorus is a mineral that is used for bone growth and a number of other body processes.

Overfeeding of protein and amino acids contributes to excess nitrogen excretion in the manure. Nutritionally we avoid overfeeding amino acids by understanding the requirements of the pig throughout its life. Phase-feeding allows us to give pigs a series of diets to meet their changing nutritional requirements and avoid overfeeding of nutrients. Split-sex feeding programs can be used to feed gilts differently from barrows thereby meeting their different requirements for growth. These two feeding strategies also provide economic

savings to pig producers. Equally important is the use of quality protein sources that are highly digestible. Diets should be formulated using digestible amino acid values to more closely match the pig's requirements. Research has shown that reducing overall protein content of the diet (by up to 2%) and supplementing with synthetic amino acids has no negative effect on pig performance, while reducing nitrogen excretion. There are a number of feed additives (ex. enzymes) available to improve nutrient digestibility. As well, proper control of feed particle size will improve the pig's utilization of feed and reduce overall nutrient excretion.

Phosphorus present in feed ingredients is not completely available to the pig. Up to 50% to 80% of the phosphorus in feed ingredients is present as phytate and unavailable to the pig. This phytate-phosphorus passes through the pig and is excreted in the feces. Avoiding excess dietary phosphorus and formulating diets based on available phosphorus reduces phosphorus excretion. Use of phytase allows for reduction in the total amount of phosphorus supplied in the diet while making more of the existing phosphorus in the feed ingredients available to the pig. As a result, pigs can be fed diets that are lower in total phosphorus to reduce phosphorus excretion while maintaining animal performance.

By implementing the above nutritional strategies it is possible to reduce nitrogen and phosphorus levels in swine manure and address some of the environmental concerns associated with the livestock industry.

Swine Health Update

Colin Kirkegaard, DVM, MS

Erysipelas: Acute form often seen in summer



Swine erysipelas is an infectious disease caused by the bacterium, *Erysipelothrix rhusiopathiae* that is found in most hog farms. Up to 50% of the animals may carry the organism in their tonsils or intestines thus it can be shed in the saliva, feces or urine. Consequently it is always present in either the pig or the environment.

Disease is relatively uncommon in pigs under 8-12 weeks of age because of maternal antibodies provided from the sow via the colostrum. As such the disease is most likely to express itself in late growing-finishing pigs, non-vaccinated replacement gilts and sows. The organism multiplies and invades the blood stream to produce a septicemia. Although the level of immunity present determines whether the clinical symptoms of the acute, subacute or chronic forms of disease will be expressed, the acute form is more seen during the summer months.

The acute form usually appears with the rapid death of one or more 50-200 pound pigs. Affected animals are depressed,

have rectal temperatures of 104 to 105 degrees F and maybe stiff, lame and reluctant to move. They will squeal when handled or forced to move. Skin discoloration (pink, red, blue or purple) of the ears, snout, jowl and underbelly maybe seen and are characteristic of a septicemic disease and requires immediate treatment. Recovered animals may develop diamond-skin patches, chronic arthritis or heart lesions over a period of several weeks or months after the initial outbreak.

Penicillin is the drug of choice for treatment of acutely affected pigs and can be used concurrently with antiserum. Regular vaccination using injectable killed bacterins or oral, low virulence water products are effective at raising the level of immunity in a herd. However they do not necessarily provide complete protection. Viral infections can lower immunity and some strains of erysipelas are more pathogenic than others.

Nutritionally Speaking

Michelle R. Tjardes, Ph.D.



Low Crude Protein Diets—Advantages, Disadvantages

Turkey, like pigs do not have a protein requirement, they require amino acids. Thus, you can improve nutrient absorption and decrease nitrogen excretion by turkeys by lowering the crude protein concentration in the diet.

How is this done? By utilizing crystalline (pure) amino acids such as lysine, methionine, and threonine, nutritionists lower the crude protein level but still meet the amino acid requirements of the turkey. It is important to understand that since crystalline amino acids are pure amino acids, they are absorbed quicker and more efficiently the protein from ingredients like SBM, etc. by the turkey because they do not need to be broken down in the gut for absorption. Thus, key advantages of utilizing crystalline amino acids include: improved absorption of important nutrients for growth, less waste or less nitrogen excreted into the environment and sometimes lower diet costs. It is important to evaluate the

financial impact of utilizing crystalline amino acids. At times of high protein costs (SBM, MBM, etc.), crystalline amino acids can decrease ration costs.

However, there can be disadvantages of use of crystalline amino acids. First, if the amino acids cost more than your protein source, use can increase the cost to finish your turkeys. Additionally, if your diets are not balanced to the correct amino acid ratios, growth and feed efficiency can be compromised. Overuse of crystalline amino acids can result in the imbalance or deficiency of the other amino acids that we cannot supplement (e.g., arginine, valine).

Lowering crude protein has benefits, but will require close consultation with your nutritionist. If you have questions on lowering the crude protein level of your turkey diets please contact your Standard Nutrition Consultant.

Turkey Talk

Jim Plyler, M.S.

Standard Nutrition Turkey Consultant



The Importance of Drinking Water

Water is probably the most important nutrient any animal must intake to maintain life. Water is something that is often neglected and is one nutrient if not monitored that can contribute to poor performance. The turkey consumes 2-3 times more water than feed. So you can now see how important good clean sanitized water, plays in producing top performing birds.

Monitoring water is more than just having an analysis completed on your water periodically. You should have a water sample, submitted to a reputable laboratory twice yearly. You should submit a sample in high water usage times like hot weather when consumption is high and foggers are being heavily utilized, and another during high rain fall/run off or in the winter time. We normally request the laboratory to check the mineral content, pH, and to do bacteriological test. Some things a water analysis can tell us include high iron in your water most likely means you have high bacteria counts or high magnesium levels will cause symptoms like diarrhea or wet litter.

Then we come to the daily monitoring which you can do at the farm. The pH and ORP meter is not expensive and if you are using bleach or chlorine gas, each operation should have at least one meter. Your ORP level should be maintained at 750 to 850 mV (conductivity). We can measure free chlorine with strips purchased at pool supply or animal health distributor. The water in the drinkers farthest from the incoming water supply is the best place to test. The chlorine level should be maintained at 3-5 ppm. Turkeys like water that is acidic or a pH of 6 to 6.5. It is okay to have a lower pH of 5 to 5.5 just remember that we can have a problem with

fungal bloom if our pH is held low for an extended period of time, without an adequate water sanitation program. If you use concentrated stabilized hydrogen peroxide the residual level should be 25 to 50 ppm, and if you use chlorine dioxide then your residual level should be maintained at .08 ppm. Sanitizers have pros and cons, so you have to decide what works best and is the most economical for your operation.

You can have the very best water sanitation program and still have issues with bird health or performance. Water line/water system sanitation is essential when the barn is empty, and a two (2) step process will be required. We need to be able to high pressure flush and purge the water system. Then fill the system with a good concentrated sanitizer and let it remain in the system for at least 24 hours before high pressure flushing. Activate nipple drinkers and/or dump bell type drinkers, so sanitizer flows through all drinkers. If you utilize a secondary watering system make sure it gets totally sanitized. Filters, regulators, pressure release nipple stems and equipment used to medicate will need to go through this sanitizing process. Bio-film and algae bloom are hard to remove from most water systems, especially if you have years of build up. So be tenacious!

The second step will require that a good strong acid treatment be utilized, to remove scale, fungal bloom and mineral build up. The same steps are followed as with sanitizing. High pressure flush system after the second step and leave system empty to dry or fill with 3-5 ppm of chlorine, flush just before poults arrive and continue daily flushing with young birds, so proper sanitized water is being supplied at all times.