AgSpeak™

Vol. 3, No. 2

Engineering New Products to Make Your Life Easier

WATERING • FEEDING • HOUSING • VENTILATION

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VAL-CO

VAL-CO® offers top quality products for animal protein production, but we are about more than just equipment. We also offer knowledge, expertise, and innovation in the field. And because both great products and great operators are required for outstanding performance, we are always striving to share our know-how with the people who choose us.

We work to develop industry experts throughout our company. By asking our people to continually learn and grow, we foster a culture of constant improvement in products, services, and support. Through training events, white papers, blogs, and publications like AgSpeak, VAL-CO shows its commitment to helping dealers, growers, and integrators succeed through access to the latest information.

Our sales, tech support, and engineering teams are in the field daily, sharing knowledge to help growers raise the best livestock. We partner with other industry specialists and offer our support to the newest additions to the industry – students and young leaders.

We are sharing more than just our own expertise in this issue. You will also hear from heating specialists at Roberts Gordon.

VAL-CO is committed to bringing you the both the best products and the information you need to succeed.

Phil Risser
President & CEO
Valco Companies, Inc.

Is Duck Farming Overlooked?

by Ericka Mongeau

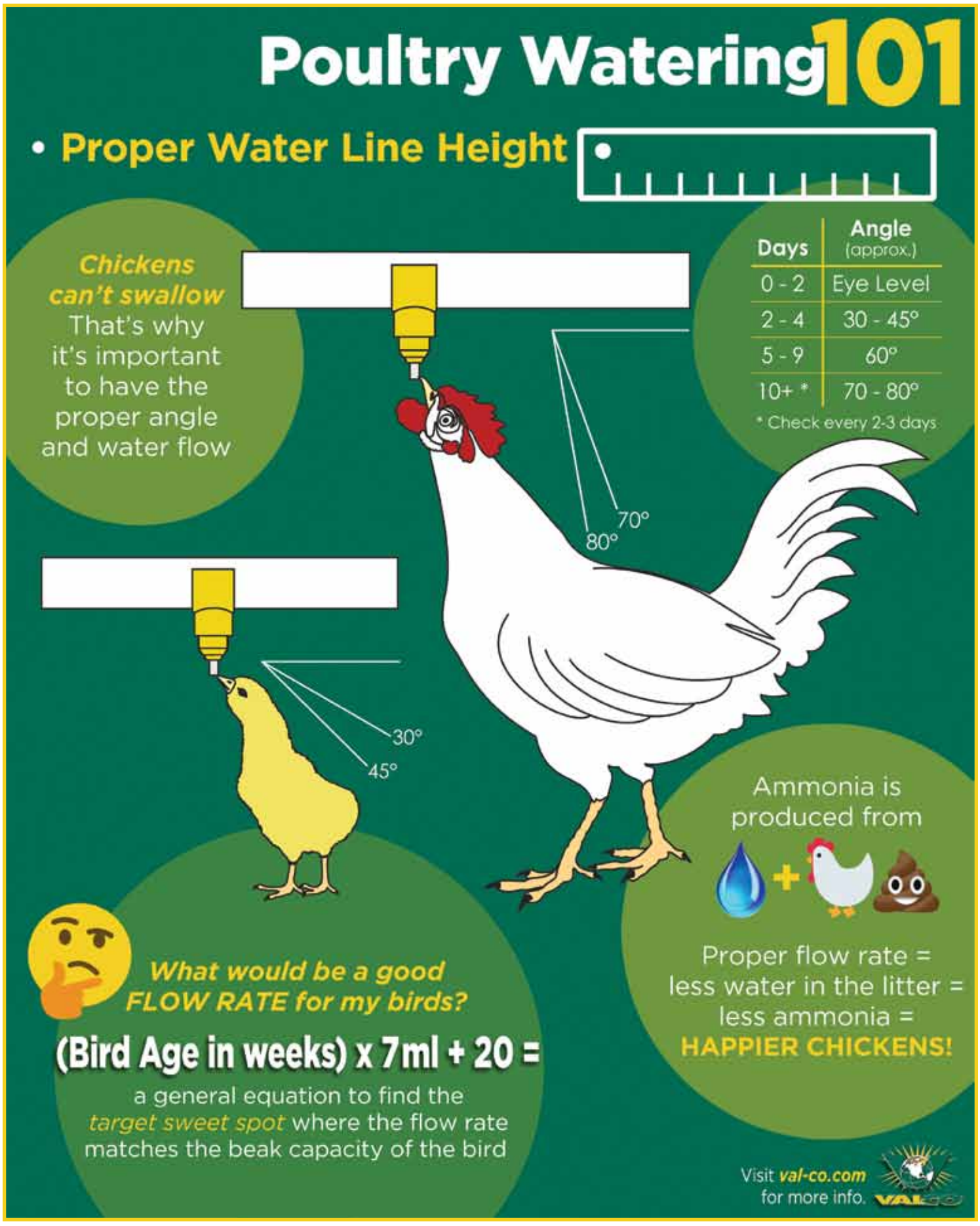
Duck farming doesn't receive much attention, especially compared to the chicken business, but ducks are a thriving niche in the poultry industry.

In the US, duck has largely fallen by the wayside as a dietary staple. As a result, most modern consumers wouldn't be able to find duck meat, even if they went looking for it. Similarly, duck eggs have also fallen off the consumer radar. Domestic ducks tend to be fattier than broiler chickens. They have a much darker breast meat, similar to that of a turkey leg, and duck legs are darker yet. Likewise, duck eggs are larger and fattier than chicken eggs. Duck eggs have a larger yolk than chicken eggs. They're rich in Omega 3 fatty acids, have 3x the cholesterol, and more albumen. The albumen has more protein than that of a chicken egg, making them great for baking, resulting in lighter, fluffier cakes. Professional bakers know this, and actively seek out duck eggs wherever they can be found.

In many cases that is from backyard farmers who have some ducks on hand to supplement other endeavors. Many of these have found that if they have duck eggs or meat to sell, it will be bought – evidence of a market demand that is not being tapped to its fullest potential… yet.

There are a few emerging duck farms in the US. Whether you are looking for meat or for eggs, it'll cost a bit extra. Because ducks are larger and convert food to meat less readily than chickens, they require more feed. Feed is the biggest expense in raising a duck, and that cost is passed on to consumers. But if you value great nutrition and delectable baked goods, duck meat and eggs are well worth the price.

***And now... an infographic from your* Poultry Watering Specialists**

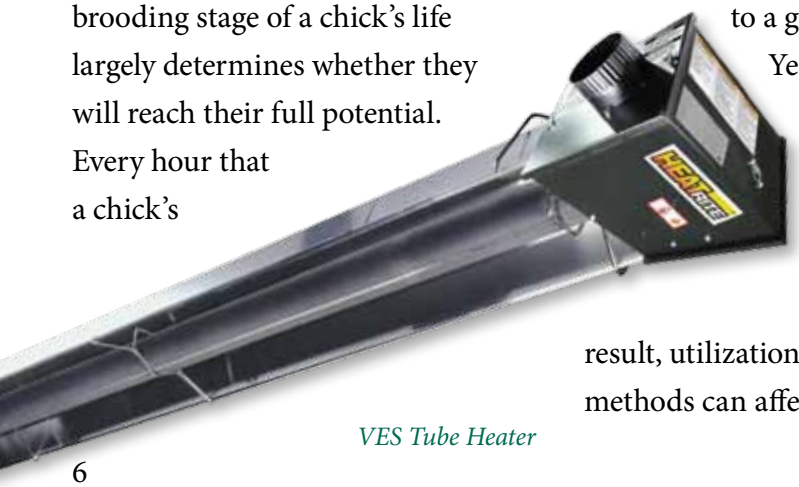


Sign up for our AgSpeak blog – email us at marcom@val-co.com

Optimize Chick Performance with Gas-Fired, Low-intensity Infrared Heaters

by Dan Schindler of Roberts Gordon

Integrators and growers are continually evaluating and implementing automated technologies to produce birds more efficiently. The management of poultry houses during the early brooding stage of a chick's life largely determines whether they will reach their full potential. Every hour that a chick's environment is less than optimum reduces growth rate and increases feed conversion. Costs to both the grower and the integrator can be high if the brooding environment does not ensure that birds get off to a good, healthy start. Yet, heating and electricity costs continue to be large expenses encountered by growers. As a result, utilization of efficient heating methods can affect the bottom line of both growers and integrators. In recent years, gas-fired, low-intensity infrared heating has grown quickly in popularity over traditional heating systems in agricultural applications because energy savings of up to 50% can be achieved. Momentum for this technology increases as energy costs rise and integrators and growers spread the word.



VES Tube Heater

Many gas-fired, low-intensity infrared heaters are listed with Canadian Standards Associations International (CSA) in North

America, Europe and Asia. For a product to appear on these lists, and therefore qualify for the CSA claims, the product must meet the standards for consumer safety, health and environmental requirements and in some cases, energy saving criteria. The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) has also acknowledged the fuel saving characteristics of gas-fired, low-intensity heating over conventional heating systems in the HVAC Applications ASHRAE Handbook.

However, in the poultry industry, gas-fired, low-intensity infrared heating remains, to some, unfamiliar or misunderstood. When applied and installed properly, correctly maintained and utilized, integrators and growers can enjoy an improved growing environment and obtain significant fuel savings over traditional heating systems.

How does infrared heat work in a space?

Unlike air heaters, low-intensity infrared heat gently warms animals, people, floors and objects, NOT the air. These objects, in turn, absorb, and release heat in the space through re-radiation and convection. Since objects act as heat reservoirs, recovery time is much quicker, less energy is needed, thereby reducing fuel costs. This allows infrared heat to create a comfortable environment, even when air temperature is low.

Some benefits of low-intensity infrared heaters include:

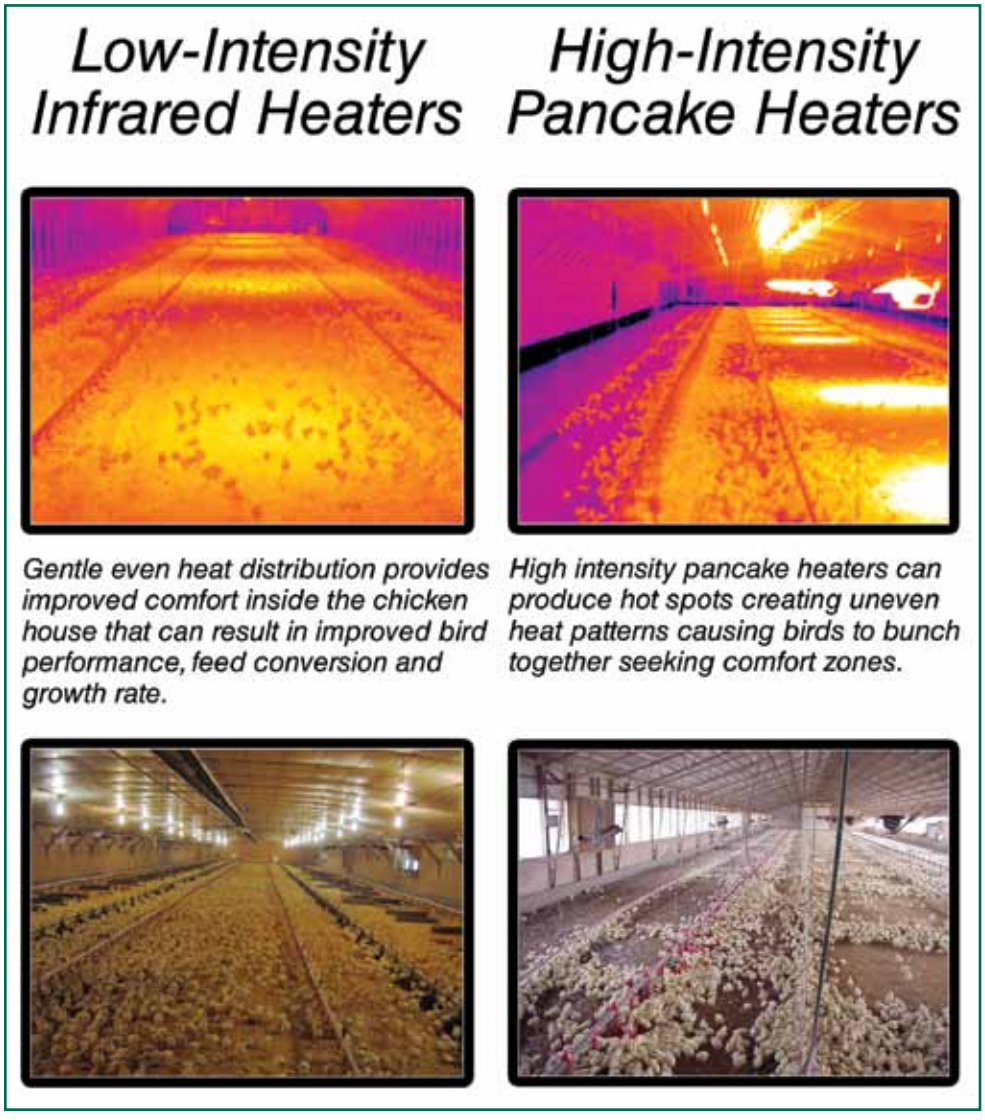
Provides clean, comfortable, draft-free heat
Gently warms the space and its contents, rather than blowing dirty air around the barn.

Gives peace of mind
Field proven and installed in commercial/industrial buildings and poultry barns for decades.

Reduces energy consumption
Even floor temperatures in short amount of time and greater comfort at lower temperatures compared to warm air heaters.

High-intensity infrared vs. low-intensity infrared

High-intensity heaters, identified sometimes as "Pancake Heaters" or by an open flame and high temperature (1,800°F) ceramic surface or grill, is more suitable to localized station heating or "spot" heating. In addition, since high-intensity heaters involve an open flame they consume valuable amounts of oxygen and add moisture to the house environment, requiring extra ventilation and can cause the heaters to cycle on more frequently, resulting in increased energy costs.



Low-intensity equipment is identified by a flame contained within a tube or network of tubes at a reduced temperature (maximum 900° - 1,200° F). Although both forms of radiant heat produce radiant energy, the radiant energy produced by low-intensity heaters has a greater effect on energy absorption and heat distribution providing a much more effective and consistent heat pattern throughout the barn. High-intensity heaters have a tendency to create hot and cold spots throughout the barn thus affecting the environment potentially reducing growth rate and overall chick performance. This is evident by the photos shown on the previous page.

In addition to a more even and gentle heat distribution, low-intensity infrared heaters have a long heat exchanger that allows the heat to spread over a much larger area optimizing conditions throughout the barn and increasing productivity and efficiency.

Roberts Gordon pioneered the gas-fired, low-intensity infrared industry and has years of experience with many applications. Although the gas-fired, low-intensity infrared tube heater has been widely used in industrial heating applications, its application in poultry house heating is new and unfamiliar to some in the poultry industry. Tube heaters have proven to be an incredibly efficient means of transferring heat into the floor of the poultry house where the birds are located.

For more information on how tube heaters could help you, please contact your local VAL-CO dealer or visit ***val-co.com*** *to find a dealer near you.*

Hot Weather Management: Heat Stress, Cool Cells, and Effective Fogging

by Ericka Mongeau

Poultry farmers are no strangers to extremes, especially extreme temperatures. Perfect growing conditions might only exist a few days out of the year, and the rest of the time is spent trying to manufacture the perfect environment. Peak summertime temperatures can be detrimental to flocks, so its imperative that effective cooling strategies are used. To do this well, first understand how birds naturally cope with heat stress, as well as, the relationship between heat and humidity.

Adult chickens are homeothermic, meaning they produce and dissipate heat to maintain a constant body temperature. The deep body internal temperature of a chicken ranges between 105-107°F (40.6-41.7°C) . They can withstand fluctuations fairly well, but their upper lethal limit is 113-117°F. If producers can keep chickens within, or as close as possible to, their thermoneutral zone, then productivity will remain relatively consistent. The comfort zone for poultry is about 90°F (32°C) at hatching, and it declines to 75°F (24°C) by four weeks of age, before leveling out.

Chickens can be fairly adaptable when it comes to heat stress. They lack functional sweat glands, but still manage their heat loss through circulation and respiration. Birds will first increase blood flow to the surface of the body in an attempt to lose heat to the air. They will often be seen lifting their wings to expose more body surface. When this proves inadequate, chickens resort to panting, where the cooling effect takes place in the lungs and airways as air is evaporated off the air sacs.

Scan the QR Code or visit http://val-co.it/WP-HWM to download the complete White Paper.

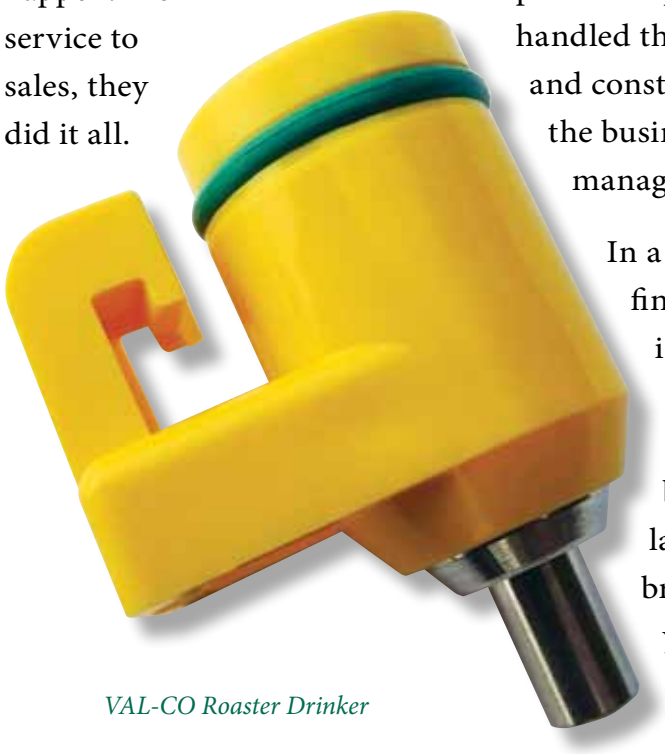
Grower Spotlight

Doug & Russell Dickinson

Farming families dominate animal agriculture in the US and brothers Doug and Russell Dickinson are no exception.

A team since childhood, Doug and Russell often helped on their uncle's poultry farm. Early morning feedings and working on holidays never deterred them. Rather, they grew a fondness for the poultry industry, and built their lives around being poultry experts in their community.

The brothers always knew they wanted a farm and to work for themselves, so they spent years gaining the industry experience they would need to make it happen. From service to sales, they did it all.



VAL-CO Roaster Drinker

Brothers, Doug (left) and Russell (right) Dickinson

Finally, in 2006, the team purchased Wayne Agribusiness, and started their own dealership.

The brothers grew their dealership, R & L Poultry Service, to three locations between 2006 and 2018. A true partnership at work, Russell handled the contracting and construction side of the business, while Doug managed the operations.

In a move that would finally start them into farming for themselves, the pair sold their dealership, bought a nice plot of land, and built 12 new broiler houses. Their years of industry experience made them familiar with a lot of equipment, and they chose the best equipment available. All of the houses are equipped with 14" FUZE® Feeders and the Val watering system.

They chose the FUZE because its larger diameter offered more feeder space than most other options. "It sits down in the litter just perfect. Chicks can get in and out easily, and they get off to a great start. The Val drinking system complements the feeders. "The Val drinkers have always been a leader, there's no question. From a maintenance perspective they are easy to work on, fix, replace, and maintain. But for the birds, there is no better trigger drinker. They are light enough for small chicks to actuate and

hold water perfectly so bigger birds get enough to drink."

What's their favorite thing about the industry? It's one big family. "We built our businesses around helping people. We've built relationships and connections with people in every area of the industry and those relationships are present no matter what role we're in."

Pigs

African Swine Fever

For most of the 20th century, African Swine Fever had been comfortably concealed in Eastern and Southern Africa. First described in Kenya in the 1920's as an acute hemorrhagic fever, African Swine Fever was noticed in domestic swine after they had come into contact with wildlife, primarily warthogs.

With globalization and industrialization came the spread of disease. The first case of African Swine Fever in Europe occurred in Lisbon, Portugal in 1957, which occurred on a farm nearby the airport that had fed its pigs airline food scraps.

Localized incidences of the disease have since been reported across Europe, Asia, and the Caribbean, as well as isolated incidents in Brazil. In 2007, delays in recognizing the illness in Georgia resulted in an epidemic spread through the Caucasus and parts of Russia.

While mostly eradicated following each of these outbreaks, the disease remains a lingering threat to the global hog market. Recently, confirmed cases in Russia, China, Belgium, Poland, and Romania have resulted in mass culls. A continued spread - especially through China, the world's largest producer and consumer of pork - could result in complete disruption of the global hog market.

African Swine Fever is a looming reality for hog producers everywhere. The disease is highly contagious. There is no vaccine. There is no cure. It is transmitted through direct contact. Direct contact includes pig to pig, ingestion of infected meats, contact with fomites (humans, vehicles, equipment), and in some areas, tick bites or flies. ASF is not harmful to humans, however, it is a hardy virus, making the human factor the most likely vector.

The virus can survive for several weeks in cold or warm weather, in pork products, on surfaces and on transport vehicles. It can survive traditional meat preparation methods, including cooking and smoking. It doesn't die with rot, and it doesn't stop when frozen.

Because pork is a key protein source, as well as a source of income, it is imperative farmers take preventative measures. The best form of protection is to understand the nature of the virus and the take every biosecurity step possible.

Keep people off your farm, or request they use farm overalls and footwear. Limit feed deliveries or the delivery of replacement stock. Use separate entrances and exits for personal vehicles, or employ a vehicle-operated disinfecting system. Disinfect housing and equipment between herds. Wash in and wash out of barns. If this isn't an option, wear protective clothing, and wash your hands. Never feed hogs food scraps. Keep wild boars away from the farm. And try to limit the rodent and pest loads on the farm.

Should infection occur in your area, be on the lookout for these signs:

- **High fever**
- **Loss of appetite, depression**
- **Limb discoloration, appearance of bruising**
- **Hemorrhages on ears and abdomen**
- **Unsteadiness while standing**

You may notice groups of infected swine lying together, shivering, breathing abnormally, and sometimes coughing. If not caught early and culled, pigs will eventually go comatose and die. The cycle from infection to death usually takes 6 – 12 days. The only way to be sure the disease spread is halted in a herd is to mass cull. Be sure to have a plan in place for euthanasia and disposal if this becomes a reality.

For more useful information from VAL-CO, scan the QR Code or visit val-co.it/blog

In The Spotlight

Employees

Name:
Brian Phillips

Position:
National Account Manager

Where were you born? Ellisville, MS

Hobbies: Boating, hunting and sports with my boys

Favorite family tradition: Yearly Christmas vacation in the mountains

First Job: Sales with an oilfield service company

Biggest pet peeve: Clutter, I like things clean, neat and done in an orderly fashion. And people driving slow in the hammer lane.

Describe yourself in 5 words: Christian, honest, headstrong, compassionate, blessed

If you could share a meal with anyone, living or dead, who would it be and why?

My Pawpaw Phillips. He was a great man of faith and wisdom. I would like to have the opportunity to talk to him now that I'm older and have a greater realization of his wisdom.

What changes have you seen in your years in the industry?

In my years I've seen the industry move from a more hands-on family farm to an automated business investment. Rising housing cost has required most families to have at least one member if not both family members to work off-site jobs. Technology has also helped encourage growers to be less hands-on due to sophisticated levels of automation. Secondly over the years I've noticed a great increase in bird growth efficiency. Birds grow at far greater rates than they did many years ago. This has caused us to be ever adaptive to their husbandry needs to accommodate these differing growth rates.

What excites you about your work and makes it easy for you to come to everyday?

Every day is a new challenge in doing our part to feed a hungry world. One thing that remains constant is that animals and growing practices are ever changing. I find satisfaction in helping customers find successful solutions to these challenges that they face.

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Products

Aurora IR™ High Pressure Brooder

The **Aurora IR Brooder** is just under 11" tall and was designed to help growers get vehicles through their houses between flocks, without getting in the way. At the same time, the Aurora IR Brooder uses infrared heating technology to quickly and efficiently warm the chicks and floor rather than wasting heat on the air that rises above the brooding area. Also available in a **High Pressure** model, which uses a smaller supply pipe to help reduce cost, with aluminum or galvanized canopies. Ships fully assembled for easy installation, or unassembled (KD) for international shipments!

Hemisphere® Z-Pro™ Mixing Fan

This **patented technology**, developed for whole house air mixing, dramatically reduces temperature variations in the facility by moving a large volume of air with minimal drafts. The innovative low profile (12" tall) design makes it perfect for low clearance ceilings. The **Hemisphere Z-Pro** controls circulation through the entire building volume to eliminate dead spots while improving heat distribution. The special material coating that is on the Hemisphere Z-Pro has been proven in many conditions, making this mixing fan ideal for swine, layer and floor bird applications.

New Drinkers for the World Famous Watering System

Low-Flow PFA Nipple Drinker

This drinker is for day old to full grown birds with flow rates similar to VB150BN, and has our Precision Feather Action for easy activation by chicks even after debeaking. This **Low-Flow PFA** can be used in antibiotic free barns to help control the amount of moisture in the litter.

Breeder Nipple Drinker

The new **Breeder Drinker** is available in both **Standard Flow** - for larger breeders with flow rates similar to VR150H & VR150HPFA - and **Low Flow** - for smaller to medium breeders with flow rates similar to VB150BN. The drinker is activated by pushing up on the trigger pin only; side action will not activate the drinker, which reduces water splashing as active birds bump and brush against the trigger pin.

Congratulations to our 2018 Titanium Dealers

VAL-CO

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302-343-9541 • marydelag.com

Poultry Supply LLC

Pocomoke City, MD
443-437-7285 • poultry-supply-llc-md.hub.biz

Zeiset Equipment

Manheim, PA
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